

# Seeking Legitimation from Stakeholders in the Implementation of E- Procurement- The Case of the Government of Mauritius



By

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## Declaration

I, Idah Mohungoo, hereby declare that this thesis is my own work, and all sources have been acknowledged through proper referencing.

IDAH MOHUNGOO

Part of this thesis has already appeared in a publication as follows:

Mohungoo, I., Brown, I. & Kabanda, S. (2020). A systematic review of implementation challenges in public E-Procurement. *Proceedings of Responsible Design, Implementation and Use of Information and Communication Technology:19th IFIP WG 6.11 Conference on e-Business, e-Services, and e-Society, I3E 2020*. Skukuza, South Africa, April 6-8, 2020, Proceedings, Part II 19. Springer International Publishing. 46-58. [https://doi.org/10.1007/978-3-030-45002-1\\_5](https://doi.org/10.1007/978-3-030-45002-1_5)

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## Abstract

Legitimation of organizational activities by stakeholders is necessary for an organization's survival. If stakeholders consider organizational activities and the ensuing changes as desirable, appropriate, and acceptable, they will endorse their support and acceptance accordingly, and hence grant their legitimation. The implementation of information systems is among the key organizational activities that stakeholders are likely to support and approve if they hold the belief that the proposed systems and the resulting changes will be beneficial for them. Legitimation of large-scale public sector information systems is becoming increasingly important as information systems (IS) failure in the public sector is still rampant, wasting significant amounts of taxpayer money. There is scarce research on such an important issue in the information system domain.

This research investigates the legitimation-seeking process in the implementation of an inter-organizational system, public e-procurement. It identifies the legitimation strategies associated with the activities carried out by the project team to gain the support of the stakeholders including end-users from public sector organizations and suppliers of goods, consultancy, and services from the private sector. The study was conducted in the Republic of Mauritius. The Government of Mauritius entrusted the responsibility of driving the e-procurement project to the Procurement Policy Office which constituted a project team for undertaking the implementation of the inter-organizational information system. The research sets out to understand the experience of both the project team and the end-users who were involved in the implementation of e-procurement in the Government of Mauritius. The research sought to obtain in-depth insight into the meanings and perspectives underlying the legitimation activities of the project team and the perceptions of the stakeholders as the implementation process unfolded.

An interpretive research paradigm, along with an abductive research approach were followed and a single case study method was employed. Data was collected through semi-structured interviews, documentary evidence, and observations.

The findings of the case study reveal successful legitimation of e-procurement in only a few public sector organizations while legitimation failure was noted in several public bodies. Success was characterized by routinization of e-procurement and consistent use of the online bidding module. The project team undertook several legitimation activities as part of their implementation efforts to obtain stakeholders' legitimation. Successful attempts to gain stakeholders' legitimation contributed to the success of e-procurement implementation. A failure to gain stakeholder legitimation led either to a fallback to former methods of procurement or part-usage of e-procurement. The end users of those public sector organizations that experienced only a part-usage outcome did not routinize e-procurement. Instead, they developed a 'comply and complain' scenario and depended heavily on the e-procurement implementation team for assistance for doing online bidding. The study presents a set of legitimation strategies which were employed by the project team. The findings also demonstrate the key importance

of championship within each public sector organization for seeking and gaining legitimation for inter-organizational information systems. This research has shown that obtaining legitimation is essential in implementing a governance-driven information system that will be accepted by stakeholders. As a contribution to practice, this study emphasizes the importance of leaders building their image and reputation before engaging in the process of acquiring stakeholders' legitimation. The research concludes with the development of a modified legitimation activity model outlining practical suggestions for carrying out legitimation activities in inter-organizational information systems projects.

### Acronym Definition

AfDB	African Development Bank
CAPAM	Commonwealth Association for Public Administration
EDI	Electronic Data Interchange
e-PS	e-Procurement system
ERP	Enterprise Resource Planning
G2B	Government-to-Business
G2G	Government-to-Government
GOM	Government of Mauritius
GTM	Grounded Theory Method
ICT	Information and communication Technology
IOIS	Inter-organizational information system
IS	Information system
ISD	Information Systems Development
IT	Information Technology
LAM	Legitimation Activity Model
NPM	New Public management
OECD	Organisation for Economic Co-operation and Development
PPO	Procurement Policy Office
SADC	Southern African Development Community
TAM	Technology Acceptance Model
UTAUT/UTAUT2	Unified Theory of Acceptance and Use of Technology

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# Chapter 1 Introduction

## 1.1 Research background

Changes are happening at a rapid pace in organizations to keep abreast with the highly volatile external environment (Jeong & Shin, 2019). Organizational members tend to oppose these changes because they wish to preserve the status quo that they believe safeguards their interests (Hannan & Freeman, 1986). It is thus important that an organization understands the expectations and concerns of the organizational members who need clarifications such as "What benefits will we receive from the change?"; "Why should we participate in this activity?" "How does this change affect our job, status, and power?" (Swanson & Ramiller, 1997). The success or failure of garnering the support of organizational members towards organizational activities may hinge on the ability of the organization to provide clear answers to these questions and to negotiate in a way that fosters open-mindedness and influences them to change their behaviours (Pfeffer, 1981). If consensus is not reached, delays can be induced in the implementation of the change whilst spending much effort and time to address and settle contentious issues. An organization needs to ensure that activities underlying the change process are either compatible with their members' values and expectations or that the intrinsic norms and behaviours of the organizational members are influenced and altered (Avgerou, 2001). It is not only those strategically placed at the top of the hierarchy of an organization who hold power and resources. Even users at the bottom of the hierarchy may possess varying degrees of power to intervene and resist changes (Nadan, 1997). Therefore, achieving legitimation for organizational changes is particularly important.

Information systems (IS) implementation can be viewed as a classic organizational change (Avgerou & Bonina, 2019). Gaining support and acceptance from key stakeholders is important for successful IS implementation (Avison and Young, 2007). Concerned stakeholders are likely to extend their support and acceptance to IS implementation when they hold the belief that the initiative and the resulting changes seem desirable, proper, and acceptable to them (Kohli & Kettinger, 2004; Jiao & Zhao, 2013). When stakeholders endorse and support organizational activities, it is said that legitimation is granted (Elsbach and Sutton 1992). This aligns with the notion that legitimation is an abstraction of formal and informal approval of stakeholders (Flynn and Du, 2012). From a socio-technical perspective of IS implementation, the introduction of IS triggers changes in the social and organizational components of an organization (Sarker, 1995). Past studies have shown that in this change process, IS implementation entails significant social and organizational issues that cause delays and, in many cases, have been responsible for IS failures (Ginzberg, 1981; Bostrom and Heinen, 1977; Sahay and Walsham, 1996; Luna-Reyes et al., 2005; Creswell and Sheikh, 2013; Melin, Sarkar and Young, 2019, Nguyen et al., 2023). The rate of failures of implementation of information systems remains high. Although the Standish Group noted an improvement in information technology (IT) project success from 29% in 2004 to 31% in 2020, this increase is considered as far from

acceptable (Henny Portman's Blog, 2021; Schmidt 2023) and more efforts are required to achieve IS projects success. Information systems failures are linked with legitimation failures that are encapsulated in social and organizational issues driven by IS implementation (Davis et al., 1992; Berente et al., 2022; Liang & Xue, 2021). For example, in studying the failure of an IS project, Davis et al., (1992) found that the project team's attitude contributed significantly to the failure. The project team assumed that end-users needed instructions and control over their tasks and believed that such guidance and controls would contribute to user acceptance. Based on this erroneous assumption, the project team did not perceive the engagement of the end-users in the stage of user requirements gathering as important. This led to a build-up of end-users' resistance resulting in IS failure. This is a classic example of legitimation failure as the project team failed to seek the support and acceptance of the end-users. Keable, Landry & Banville (1998) recommend that IS project teams engage and collaborate with end-users, developing shared understanding of technological innovation in an organization otherwise a disagreement or legitimation gap can arise between them (Banville 1991; Klein & Hirschheim, 1989; Iyamu, 2015; McCarthy et al., 2021). Other examples of key legitimation issues in IS projects include (1) a lack of attention from the project team on users' perceptions and attitudes towards an information system (Pan et al., 2005; Ewusi-Mensah, 1997); (2) the project team turning a deaf ear to the point of view of concerned stakeholders and instead convincing them to endorse a failing project to save the project team's reputation (Pan et al., 2006; Holgeid & Stray, 2018); (3) a lack of attention to the concerns of the stakeholders who were sceptical about western practices isomorphism which may cause erosion of prevailing cultural norms and values in their country (Venkatesh, Bala & Sambamurthy, 2016). If a project team does not impart sufficient attention to users' perceptions, the IS project will become vulnerable to the problems of a lack of system acceptance and failures (Ewusi-Mensah 1997; Tate et al., 2023).

Likewise, focusing on the public sector context, reducing e-government<sup>1</sup> implementation failure remains high on the IS research agenda (Choi & Chandler 2020). The implementation of e-government systems and recent digitalization efforts in the public sector have encountered numerous organizational and social issues that embed legitimation problems (Pandey and Gupta, 2016; Choudrie et al., 2017; Anthopoulos et al., 2015; Pan et al., 2006; De', 2005; Poulodi et al., 2016; Kuhlmann and Heuberger 2021; Di Guilio and Vecchi, 2023, Tate et al., 2023). The continued prevalence of social and organizational issues in e-government implementations contradicts the long-standing assumption that enforcement of mandatory usage is sufficient to ensure the acceptance and sustained use of e-government systems (Gupta, Bhaskar & Singh, 2017; Hwang, Al-Arabiati & Shin, 2016). Giddens (1984) in his notion of dialectics of power,

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<sup>1</sup> E-government systems include Government to Business (G2B) and Government to Government (G2G)

explains that every human agent possesses some sort of power. Thus, the demand-side stakeholders<sup>2</sup>, that is the end-users, through their varying degree of power can influence IS implementation as well as influencing others in choosing whether to use or not to use IS (Avgerou & Bonina, 2019; Richet, Ngwenyama & Rowe, 2016; Lyytinen & Hirschheim 1987; Hussain & Cornelius 2009). These stakeholders may withhold their support and pressurize the project team to meet their demands before conferring their approval. Rajala and Aaltonen (2020) explicitly note that a lack of legitimation from the demand-side stakeholders has been found to stall the completion of e-government projects, and they pointed out that e-government failure remains exceptionally high.

Examples of causes of various legitimation problems in e-government systems including public e-procurement, are:

- (1) The behaviour of the project team which leads to dissatisfaction and the build-up of strong resistance to change among demand-side stakeholders causing implementation delays and failure (De' & Sarkar, 2010; Anthopoulos et al., 2016; Myers & Young, 2007).
- (2) Stakeholders mistrust certain public sector leaders who have a known track record of failures of IS projects and who are perceived to obfuscate the true vision behind digital innovation to achieve their own interest (Goldfinch, 2007; Nkohkwo & Islam, 2013; Ahmad, Aljafari & Venkatesh, 2019).
- (3) There was opposition of demand-side stakeholders to hidden public sector reform driven by e-government and that was not explicitly revealed and explained by the project team (Gauld, 2007; Myers, 1994).
- (4) End-users resist the implementation of e-procurement that supports the centralization ideology thereby contradicting the current decentralization norms (Dameri, 2012; Somasundaram, 2008).
- (5) A lack of attention of the project team to the concerns of small and medium enterprises (SMEs) for using e-procurement caused exclusion of SMEs in public procurement, thereby compromising the norm of fairness to SMEs (Ortuzar et al., 2017).
- (6) As a governance-driven system, e-procurement mainly aims at leveraging anti-corruption capabilities in public procurement (Neupane, Soar & Vaidya, 2012; Siriluck, 2012), but demand-side stakeholders may have doubts regarding its potential, as IT innovation has given rise to new forms of corruption whereby certain unethical bureaucrats are using their expertise to pursue corruptive practices via IS misuse (Inuwa & Ononiwu, 2020; Addo, 2019).
- (7) Insufficient legitimacy and support from key stakeholders during the early stages of the implementation of a digital government project attracted significant criticism in later stages. This mounting criticism ultimately resulted in legal challenges and hefty claims from citizens (Tate et al., 2023).

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<sup>2</sup> The classification of e-government stakeholders into demand-side and supply-side has been useful for better understanding of e-government implementation dynamics (De', 2005)

Therefore, legitimation remains an important issue in IS implementation, and the understanding of this concept would be useful for any project team during the implementation phase of an inter-organizational IS such as e-procurement. In such an initiative, the project team must deal with multiple demand-side stakeholders to seek their support and acceptance that are crucial for IS success. On the understanding that information systems are social systems (Land & Hirschheim, 1983) and viewing users as social actors (Lamb & Kling, 2003), interaction between the demand-side stakeholders and the project team is clearly essentially a social process that occurs throughout the implementation of IS. Not much is known about this dynamic social process and how and why stakeholders' support and acceptance in the implementation of information system is granted or not.

## 1.2 Purpose of the research

The purpose of this research study is to improve the understanding of the legitimation-seeking process that unfolded in the implementation of public e-procurement in the Government of Mauritius. The Cooper and Zmud's (1990) frequently cited IS implementation model to achieve IS diffusion was useful in delimiting the boundaries of the e-procurement implementation phase. The IS implementation model that was conceptualized by Cooper and Zmud (1990) comprises of six stages namely initiation, adoption, adaptation, acceptance, routinization, and infusion to achieve IS diffusion. In this study, e-procurement implementation is understood to kick-off after the acquisition and the centralized deployment of the software. It started with the progressive IS readiness assessment and IS implementation from one public body to another and culminated with the routinization of the inter-organizational system by the end-users. The e-procurement implementation phase caters for the elements of the last four-stages of the Cooper and Zmud (1990) implementation model involving the adaptation, acceptance, routinization and infusion. Public e-procurement, which was recently implemented in the Government of Mauritius, offered an excellent opportunity to undertake this research. The Government of Mauritius appointed the Procurement Policy Office as the implementing agency to implement e-procurement (PPO Annual Report, 2014).

The main research question is set out as follows:

*How does the project team of the implementing agency seek legitimation from the demand-side stakeholders in the implementation of public e-procurement in the Government of Mauritius?*

## 1.3 Aim and objectives

This research aims to examine the legitimation-seeking process by (1) unravelling the legitimation strategies used by the project team in the implementation process and (2) comprehending the expectations and concerns of the demand-side stakeholders about e-procurement and to focus on their perceptions. The issue of legitimation is concerned with whether the users perceive the e-procurement system as proper,

useful and appropriate; and whether the project team perceive the users' viewpoints as important for the project.

### 1.3.1 The research objectives

Built upon the purpose of this research, the research objectives are set out as follows:

- To make an initial assessment of the e-procurement implementation and determine the expectations and concerns of the demand-side stakeholders of e-procurement in the Government of Mauritius, through their perceptions. Public officers from various public bodies involved in the procurement process as well as suppliers of goods, services, works, and consultancy constitute demand-side stakeholders.
- To investigate how the legitimation-seeking process is understood using the Legitimation Activity Model (LAM) framework (Flynn and Hussain, 2004<sup>3</sup>)
- To understand the legitimation strategies involved in activities carried out by the project team.

### 1.4 Importance of the research

This research will provide immediate benefits to both academic researchers and practitioners. Klein & Hirschheim (1989) and Banville (1991) are the earliest publications which pointed out the importance of examining legitimation in IS projects and its direct relationship with success or failure of IS. After three decades, this area of research remains immature and under-developed. Only a few studies have focused on the concept in the IS realm resulting in just a handful of publications, which have all concluded the importance of legitimation in IS projects (Brown, 1998; Keable et al., 1998; Kohli & Kettinger, 2004; Flynn & Hussain, 2004; Flynn & Du, 2012; Flynn & Puarungroj, 2006; Meissonier et al., 2015). The conceptualization and operationalization of legitimation theory brought by those researchers, particularly Hussain and co-workers (Flynn & Hussain, 2004; Flynn & Du, 2012; Flynn & Puarungroj, 2006) offer a well-structured theoretical framework for examining legitimation issues in IS context. Aligning with their position and from an academic perspective, this research will make an overall contribution to grow the relatively small body of IS research that focused on the legitimation concept in detail in IS implementation.

This is one of the first studies that applies the concept of legitimation-seeking in an inter-organizational system. It aims to enlighten the research community firstly, regarding legitimation problems that impede demand-side stakeholders' support for e-procurement and secondly how legitimation strategies can be used to gain support and acceptance for e-procurement projects. The perspective of this research is also useful in explaining how the stakeholders make sense of the good-governance principles underlying the public procurement process which are inscribed in e-procurement.

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<sup>3</sup> See also Hussain et al., (2004)

From a practical perspective, the findings of this study will be of interest not only for Mauritius but to other sister countries which are implementing public e-procurement. For example, the Government of Botswana has procured an identical e-procurement system from the same software supplier as Mauritius (Chebili et al., 2021). Thus, the findings can serve as a benchmark to other African countries implementing e-procurement. Furthermore, the findings are useful to international organizations which are following the progress of e-procurement in Africa, and they can use the findings as a case study revealing realistic mechanisms for addressing the legitimization problems noted in policy papers. Not only international organizations such as the World Bank, African Development Bank (AfDB) amongst others are closely following the progress of e-procurement implementation but with the growth of social media, the public, non-governmental organizations, and the civil society are also increasingly interested in the outcome of the e-procurement solution and its effectiveness (OECD, 2015).

### 1.5 Contextual basis of the research

This research was carried out in Republic of Mauritius, a Sub-Saharan African country. Mauritius is situated in the south-west of the Indian Ocean, approximately 2,000 km from the east coast of Africa (Government of Mauritius Portal, 2020). The population was estimated to be approximately 1,266,000 as of 1<sup>st</sup> July 2020 (Government of Mauritius Portal, 2020). Mauritius got its independence as a sovereign nation while being a member state within the Commonwealth. Its governance is structured upon a democratic parliamentary framework. On 12 March 1992, Mauritius achieved the status of Republic, and it is considered as a model democratic nation, characterized by transparent, and equitable elections conducted at five-year intervals (Government of Mauritius Portal, 2020). Mauritius is also member state of the African Union and the SADC. Mauritius has a cosmopolitan culture with a unique mix of several cultures. Mauritian people have their ancestral roots in India, Europe, Africa, and China. Their multi-cultural background has nurtured mutual exchanges of cultural practices and values. (Government of Mauritius Portal, 2020).

Over the years, Mauritius has formulated a robust strategy focusing on growth and development, resulting in an attainment of a commendable level of per capita income, which is among the highest in Africa. The nation's development plan has catapulted it from a per capita income of USD 400 in 1968, when it gained independence, to the status of a high-income country with a Gross National Income (GNI) per capita of USD 12,740 in 2019 (Mauritius Business Network, 2022). The strategic national development plan has been built on a combination of political stability, strong institutional frameworks, and a favourable regulatory environment. It has created the foundation for economic development (Mauritius Business Network, 2022). Furthermore, Mauritius has benefitted from open trade policies which have fostered economic growth, gradually shifting Mauritius from a mono-crop sugar-cane economy into a diversified,

competitive and broad-based economy in the late 1980s (EDB, 2020). The country has a relatively high literacy rate of around 90% among people aged 15 or above in year 2021 compared to other African countries (World Bank, 2023).

Over the past decade, telecommunication and ICT infrastructure has rapidly expanded across the country. Mauritius had an ICT development index of 5.88 in 2021 and was ranked first among African countries (Statistics Mauritius, 2021). Approximately 99% of the Mauritian population had access to mobile cellular telephony in 2021 (Statistics Mauritius, 2021). Furthermore, subscriptions to broadband internet which represented 96.1% of the total internet subscriptions in 2021, rose by 11% from 2020 to 2021 (Statistics Mauritius, 2021). According to a Survey of Employment and Earnings among ‘large establishments’ employing 10 or more persons, 99% of these establishments had a computer in 2021, compared with 98.8% in 2020. Of these establishments, 98.9% had internet access in 2021 (Statistics Mauritius, 2021).

Rapid development in ICT occurred across all Governmental institutions enabling the Government to embark on e-government projects. The country obtained a satisfactory E-government Development Index (EGDI) score in 2020 (Statista, 2020). The Government of Mauritius showed interest to implement e-procurement in 2013 and this initiative was supported by the World Bank which offered technical and financial assistance (Marchessault, 2015). The country demonstrated its readiness in terms of ICT infrastructure, finance, internet penetration across the country, human resources, and a willingness to improve its legal framework for public procurement. The e-procurement system was acquired as an off-the-shelf solution from India in November 2013. The customization of the software and related Information Systems Development (ISD) activities started in 2014 and ended by September 2015. The e-procurement bidding regulation was then promulgated in late 2015 before the go-live of e-procurement (PPO Electronic Bidding, 2016). The success of e-procurement is taken seriously by the Government as it has been one of the key performance indicators for the public sector transformation program and the Government is looking forward to achieving a 100% usage (MPSAIR e-Newsletter, 2020a).

## 1.6 Structure of thesis

The thesis has been organized as eight chapters. The second chapter provides a literature review which starts with a description of the concept and perspectives of legitimation, outlining its importance in IS research. This is followed by a summary of past studies in IS that applied legitimation theory and its concepts. The contextual relevance of legitimation seeking is also discussed. Linking legitimation in IS research with e-procurement, the chapter introduces e-procurement, its benefits, and the implementation approach, and identifies the problematic implementation outcomes. A systematic review of e-procurement implementation challenges then follows and highlights potential legitimation issues in public e-procurement implementation.

Chapter 3 describes the emergent theoretical framework underpinning this research.

Chapter 4 outlines the methodology and presents a critical discussion and justification of the research paradigm and the suitability of the research approach adopted to the research topic. The data collection and data analysis techniques are also explained. The full dataset is presented. The chapter concludes with ethical considerations in data collection.

Chapter 5 starts with a description of the case study. The findings are explained in detail along the timeline of the implementation process to expose the legitimation-seeking process that took place in each implementation phase. The implementation outcomes are also explained in detail. The chapter culminates with a qualitative comparative analysis to gain insight into the sufficient and necessary conditions that contributed to the emergence of the different implementation outcomes.

Chapter 6 sets out a discussion of the findings and culminates with the conceptualization of new theoretical concepts in the legitimation-seeking process research field. The different technologies-in-practice structures that tie-up with the interactions of the different social actors and the legitimation-seeking process are described. The chapter continues with an account of the misfits between norms and work practices that were revealed in the e-procurement implementation process within its context. The chapter closes with a summary of relationships between the theoretical concepts that emerge.

Chapter 7 outlines an evaluation of the quality of the research to ensure research rigour.

Chapter 8 describes the conclusions. The research question is revisited, and a summary of the findings is presented. The theoretical contribution of the study and its implications for practice are discussed, followed by a prescription of realistic recommendations. This chapter concludes with the limitations of the study and recommends future research studies in this stream.

## Chapter 2 Literature Review

### 2.1 Introduction

Public e-procurement is studied under different sub-disciplines including e-commerce, public administration, and supply chain management (Vaidya & Campbell, 2016). However, the phenomenon is receiving increasing attention in the IS discipline. Information systems such as e-procurement need the strong collaboration and support of all relevant stakeholders (Ewusi-Mensah, 1997) and one of the key concerns of the project team is to gain the stakeholders' support and acceptance of the initiative (Brown, 1995; Brown, 1998; Flynn & Hussain, 2004; Flynn & Du, 2012; Flynn & Puarungroj, 2006). Although there is a moral obligation on the part of the relevant stakeholders to support and accept public e-procurement system by virtue of its benefits and objectives, resistance to change is likely to happen with IS-induced organizational and social changes (Myers, 1994). Stakeholders may diminish the quality and extent of their contribution if they do not perceive that the IS that is presented to them is desirable, proper, or effective in facilitating their tasks (Elsbach & Sutton, 1992). This may induce considerable delays in concluding the implementation of the IS. Gaining stakeholders' trust, support and acceptance becomes even more challenging, especially when public sector leaders have a track record of past e-government failures impacting their reputation (Goldfinch, 2007). This in turn hampers the establishment of trust relationships which is essential for gaining stakeholders' support (Ahmad, Aljafari & Venkatesh, 2019).

This chapter gives a comprehensive review of relevant extant literature drawn primarily from the IS domain. A systematic literature review process using a hermeneutic approach prescribed by Boell & Cecez-Kecmanovic (2014) (see [Appendix G](#) for description of the process) is employed to present the literature review that informs the theoretical basis of this research. Section 2.2 introduces the concept of legitimation and its two perspectives. Section 2.3 presents legitimation issues in IS. Section 2.4 gives an appraisal of legitimation concepts and theories applied in IS research. This section also explains the key contribution of legitimation-seeking theory of Flynn and Hussain (2004) and a typology of legitimation strategies employed in legitimation research. Section 2.5 expresses the need to focus on the contextual consideration for legitimation-seeking with respect to both the country context and the public sector. Section 2.6 introduces public e-procurement and the rationale behind this initiative worldwide. This is followed by section 2.7 which presents a compilation of its benefits based on empirical studies. Section 2.8 outlines the features of e-procurement and its deployment in African countries. Section 2.9 elaborates on the implementation of the inter-organizational system highlighting the implementation outcome achieved worldwide. Section 2.10 presents a review of e-procurement implementation challenges. The chapter ends with a concise appraisal of the challenges of public e-procurement identifying potential legitimation issues and the opportunity that legitimation-seeking research presents in understanding legitimation issues in public e-procurement. It also

explains how project teams apply legitimation strategies to ensure durable acceptance e-procurement implementation and the stakeholders' responses thereof.

## 2.2 The legitimation concept and its two perspectives

Legitimation has been studied by academics from several disciplines including law, politics, ethics, management, and social science. This section sets out the perspective of legitimation that is employed in this study. In literature, the term "legitimation" and "legitimacy" are often used interchangeably and synonymously (Keable et al., 1998). Several definitions have been put forward for legitimation but basically it implies a process by which organizations, practices or ideas gain social acceptance (Klein & Hirschheim, 1989). Maurer (1971) noted that an organisation attains legitimation by effectively providing justification for its existence to both its peers and the external environment within which it operates. Suchman (1995:574) defined legitimacy as "a generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions". Zimmerman and Zeitz (2002:4) understood legitimacy as "a relationship between the practices and utterances of the organization and those that are contained within, approved of and enforced by the social system in which the organization exist". Berger and Luckmann (1966) referred to legitimation as a process of "explaining and justifying". Pfeffer and Salancik (1978:231) argued that the term "legitimate" can be understood as "one criterion by which rationalizations are selected from the many possible explanations for action. Justifications or rationalizations are selected primarily when they are acceptable explanations in a given social context."

When the management of an organization provides justifications for its actions, it is imperative that these justifications or rationalizations align with the established norms and values within the organization, as well as the societal norms and values within the broader social context in which the organization operates. (Dowling & Pfeffer, 1975). This implies that both the internal audience (internal stakeholders such as employees) and external audience (external stakeholders such as peer organizations, governmental institutions and competitors), are the actors in crafting organizational legitimacy (Elsbach & Sutton, 1992). "Legitimacy is conferred when stakeholders - that is, internal and external audiences affected by organizational outcomes - endorse and support an organization's goals and activities." (Elsbach & Sutton, 1992: 700). Focusing on 'internal legitimacy', Zucker (1987) notes that internal constituents of an organization grant legitimacy when 'social facts' are generalized at the organization level. Regarding 'external legitimacy', external audience provide resources for an organization's survival by assessing the usefulness of the organization's output and the appropriateness of its actions as to whether they are acceptable (Pfeffer & Salancik, 1978).

Public sector organizations tend to imitate their counterparts which successfully implemented e-procurement, and in so doing, these organizations gain “external legitimacy” by demonstrating that they too are trying to improve the efficiency of their procurement process. The World Bank recommended that Sub-Saharan African governments adopt e-procurement as it is claimed to enhance good governance based on its success in developed countries (Marchessault, 2015). Like Ghana and Botswana, the Government of Mauritius acquired e-procurement to demonstrate its commitment to good governance in the public sector. This action has been judged as acceptable and is according to the commonly accepted norms in the external environment of the country. Thus, the World Bank endorsed the e-procurement initiative and has supported the Government of Mauritius by providing all necessary resources to pursue the project (Marchessault, 2015). As recommended by Pfeffer (1981), an organization not only ensures support from its external environment, but should also get the “continued participation, acquiescence, enthusiasm and commitment from the internal organization’s employees and its members”. Stakeholders’ support and acceptance of the e-procurement project is crucial for reaping the benefits of e-procurement in the long run and to then strengthen commitment further by demonstrating concrete results to the external audience (Elbanna, 2010).

Meyer and Rowan (1977) argue that when certain social norms and values are considered as important for an organization’s legitimate practices, that organization must ensure compliance to such respected and accepted behaviors that is essential for its survival. For example, in the public procurement process, the public sector requires employees to display ethical behaviour throughout the process to ensure cost savings and best value for money for all goods and services procured (Williams-Elegbe, 2014). The requirement for ethical behaviour in procurement has triggered the inscription of a set of norms adhering to international standards in the procurement process and these are ultimately translated in the e-procurement initiative.

### 2.3 Legitimation issues in information system projects

This section outlines legitimation issues that have been exposed in Information Systems research including public sector IS. Research on resistance to change and IS failures revealed that insufficient attention to legitimation in terms of lack of support and approval of IS from end-users can lead to resistance to change that induces delays in implementation (Myers & Young, 1997; Lapointe & Rivard, 2005; Illie & Turel, 2020; Bhattacharjee et al., 2018; Bhattacharjee and Hikmet 2007; Brown et al., 2002; McGrath, Dampney & More, 1996; Venkatesh et al., 2016; Strong, Olga & Volkoff, 2010) and even lead to IS failures (Wilson & Howcroft, 2002; Myers, 1994; Southon, Sauer & Dampney, 1999; Liang & Xue, 2021). Meissonier et al., (2015) argue that resistance to change can be interpreted as an attitude resulting from an unwillingness to grant legitimation as they mentioned “à l’inverse les phénomènes de résistances peuvent être interprétés comme des attitudes résultantes d’un manque de légitimité conférée”. In the IS failure cases, the stakeholders often question the rationale of the new information system, which they feel will not be beneficial to them, and they are sceptical about the true motives of project sponsors. McGrath (2000) found

that an IS project failed to meet the expectations of the different stakeholders and the users “expect the system to fail rather than willing it to succeed”.

In many IS studies, user resistance to information system is often the consequence of end-users perceiving a lack of benefits from the system, questioning its rationale, unwillingness to change their work habits and practices, and fear of losing prestige or being disadvantaged by a change in power (Lapointe & Rivard, 2005; Worthley, 2000; Myers & Young, 1997; Keen, 1981; Liang & Xue, 2021). Myers & Young (1997) discussed the hidden agenda of management in introducing a new time-based costing module as part of the IS objectives of the project. The project leader deliberately excluded that module from the initial user requirements and planned to introduce it after the system roll-out on the assumption that the end-users would then be compelled to grant their acceptance to the module. The end-users fiercely opposed that initiative and were reluctant to legitimize it, as it not only posed a threat to their professional status but because they were frustrated about the hidden agenda of top management and the behaviour of the project leader. These social and organizational issues entailed by the introduction of IS may raise doubts in the minds of end-users on whether IS will be beneficial for them.

Focusing on the public sector context, the failure of implementation of public sector large-scale information systems in both developed and developing countries context have been reported in several studies (Choi & Chandler, 2020; Anthopoulos et al., 2016; Gunawong & Gao, 2017; Dwivedi et al., 2014; Gauld & Goldfinch, 2006; Dada, 2006; De', 2005; Luk, 2009; Heeks, 2003; Tate et al., 2023). Implementation failure can be serious and wide-ranging, extending from IS process failure to IS expectation failure (Lyytinen & Hirschheim, 1987). The cause of G2G and G2B implementation failures have been directly linked to the lack of legitimacy that can be mainly attributed to (1) the bad reputation of public sector leaders involved in driving IS projects weakening trust relationship with the stakeholders (Gauld, 2007; Goldfinch, 2007; Nkohkwo and Islam, 2013) (2) concerns of stakeholders about public sector reform driven through e-government initiatives and inadequate public value in the outcome of digitalization of the public sector (Cordella, 2007; Heeks, 2002; Myers, 1994; Ahn and Bretschneider, 2011; Vaidya & Campbell, 2016; Brewer, Neubauer & Geiselhart, 2006; Schiff et al., 2021), (3) resistance to ICT-induced changes (De', 2005; Choudrie et al., 2017; Pandey & Gupta, 2016; Hekkala et al., 2022), (4) IT privacy and security concerns (Mc Cue Roman 2012) and (5) concerns regarding new forms of corruption that have emerged with digitalization in the public sector (Addo, 2019; Inuwa & Ononiwu, 2020). Legitimacy issues in e-government transcend the culture of mandatory compliance that prevails in the public sector.

The reputation of leaders, project sponsors or implementors deserves serious attention where legitimation is concerned. Their reputation has been deeply impacted by a well-publicized account of repeated e-government failures. The history of public information systems is marked with numerous failures worldwide (Rajala & Aaltonen, 2020). Goldfinch (2007) claimed that failures of the public information

system have become a norm. Failing e-government initiatives has heightened resistance to future projects due to the loss of credibility and trust in e-government (Heeks, 2003). A lack of trust between leaders or implementers and stakeholders in e-government implementation has been observed (Nkohkwo and Islam, 2013; Wiredu, 2012). There has been evidence of leaders responsible for escalation of commitment in complex e-government initiatives leading to ‘run-away’ projects (Pan et al, 2006; Lambooj & Koster 2016). All these have had an impact on the reputation of public sector leaders.

In addition, as argued by Goldfinch (2007), public sector leaders tend to over-estimate the transformative power of technology and are unrealistically enthusiastic to adopt large and high investment IT systems whilst ignoring the potential reactions of stakeholders to introduction of innovation in the workplace. Goldfinch (2007) classified such enthusiasm as idolization, lomanism, technophile and managerial fad. This renders stakeholders pessimistic about the core purpose of the adopted system in its capacity to address a particular problem. As cited by Markus (1983:443) “*Organizational participants disagree about the nature of the problem that a system is proposed to solve*”. Stakeholders may lack trust in the project champion or implementers and finally perceive e-government as ‘yet another failure’ (Ahmad, Al-Jafari & Venkatesh, 2019).

Thus, legitimacy of leaders may be at stake with a high rate of e-government failures, potentially undermining stakeholders’ support and approval for a new e-government project. Project leaders who have been held responsible for e-government failures should re-build their reputation to gain legitimacy and to protect the reputation of younger leaders embarking on fresh e-government implementation. This is essential if those leaders are planning to seek legitimation from stakeholders to gain their acceptance and to dissipate the long-held belief that ‘e-government is yet another failure’. As argued by Brown (1998) a leader needs to legitimate himself and his strategies to win stakeholders’ trust and maintain a spirit of motivation and enthusiasm along the implementation process.

Many e-government initiatives embed institutional reforms that are prescribed in Government policies. Cordella (2007) argues that New Public Management (NPM) aims at reforming public administration by reducing the role of bureaucratic institutions in favour of market-like structures enforcing coordination and governance<sup>4</sup> and that such reforms are achieved through the implementation of e-government. Public sector employees may not always endorse public sector reforms driven through e-government which they feel will not be beneficial for them and their organization, expressing their disagreement with the underlying change rather than the technology itself. Barca & Cordella (2004) found that procurement reforms driven by a new

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<sup>4</sup> NPM aims at replacing rigid hierarchical structures typical of public sector with decentralized structure and promotes the adoption of management culture of the private sector in public organizations, applying the market principles of efficiency and productivity. (Cordella, 2007)

technically sound e-procurement system were hampered by institutionalized departmentalism<sup>5</sup> in a large public sector organization, resulting in the rejection of the new e-procurement system which essentially aimed at centralizing all financial and procurement activities of the different departments. Myers (1995) found that educators fiercely opposed a newly developed centralized government payroll system which embedded reform in educational administration.

Furthermore, e-government implementation outcome is expected to reflect public value (Brewer & Nebauer, 2006). A failure of delivering public value in the outcome of e-government initiative can hamper legitimacy from stakeholders. For example, Schiff et al., (2021) found that implementation of an artificial intelligence project in a government institution failed because it was not consistent with public's expectation of fairness and transparency resulting in substantial negative stakeholder reactions.

The legitimacy issues exposed in the literature clearly demonstrate the importance of legitimation in IS projects. Hughes, Rana and Simintiras (2017) claimed that IT project success is contingent upon its stakeholders' support because if stakeholders cease to support a system irrespective of other factors such as project management factors or shortcomings in system requirements, the project can well head towards failure.

To overcome resistance to change and avoid IS project failure, scholars have suggested several strategies that incorporate elements of legitimation-seeking. Examples include: communication and involvement of stakeholders at the ISD stage whilst explaining to them the benefits of IS (Chan & Pan, 2008; Joia, 2007); use of a combination of rational arguments and soft tactics to influence users' perception to mitigate resistance to change and unfaithful use of system (Illie & Turel, 2020); the use of organizational influence processes (OIPs) to gain stakeholders' support and ensure success of IS implementation (Ngwenyama & Nielsen, 2014). OIPs have been particularly useful to gain the buy-in of stakeholders in instances when an organization has suffered from reputational damage due to a track record of past failures. OIPs are also effective where top-management support is weak or where there is no formal authority that can be exercised on stakeholders whose legitimation is required for project success (Ngwenyama & Nielsen, 2014). Along the same vein, Richet, Ngwenyama & Rowe (2016) highlighted how a group of dissent key stakeholders who were knowledgeable about the business process requirements disagreed with the strategic vision proposed by the top management team. The group of dissent stakeholders influenced and engaged other stakeholders in developing a shared understanding and reframed the strategic intent - this was beneficial to the organization. Success in reframing the strategic intent is thus grounded in the success of gaining legitimacy of other stakeholders towards the new idea. Apart from the importance of legitimation elements in mitigating resistance to change, Silva and Backhouse (1997) stressed the importance of legitimation in

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<sup>5</sup> A set of deeply entrenched beliefs and values in a department whereby departmental goals override the broader interests of the organization (Barca & Cordella, 2006)

the routinization and institutionalization of information systems. In the study of Bernardi (2017), Health Information System (HIS) officers who were the end-users attempted to enhance the performance of a Health Information System (HIS) to convince their managers of the benefits of the IS in terms of the value of information for monitoring and planning of activities related to a disease-surveillance and immunization program. These HIS officers were enthusiastic to enhance the data reporting on their program's outcomes and activities to obtain their managers approval and support on "what they had been doing" and their aim was ultimately achieved (Bernardi, 2017). This is an example of the importance of legitimation-seeking to achieve legitimacy of IS and it also demonstrates the power of users at relatively lower level of the hierarchy in driving legitimacy in IS.

## 2.4 Legitimation theory in IS research

### 2.4.1 Precursor of legitimation concept in information system research

The stream of research on user satisfaction and IS diffusion in the implementation of information system may be considered as the main forerunners of legitimation research in IS as they contain traces of the legitimation concept. User satisfaction reflects users' overall contentment with IS (Chin and lee, 2000). It is a better construct in mandatory use environment and focuses on the meaning that individuals attribute to their attitudes and behaviour concerning IS adoption (Scheepers et al., 2006). However, this realm of research tends to focus on user satisfaction at individual level and does not pay due attention to acceptance at group level or organizational level, or inter-organizational level (Meissonier et al., 2015).

Considering studies on IS diffusion in implementation of large-scale information systems, researchers have frequently demonstrated traces of legitimation concepts that are associated with the different stages of the IS diffusion process. For example, Abubakre et al., (2015) found that the application of formal rules and procedures instead of informal norm-emphasizing mechanisms at the different stages of the IS diffusion process was more appropriate for the success of IS diffusion as the employees feared sanctions. In contrast, Ahmed et al., (2022) who focused on understanding the impact of certain stakeholders' orientations on the different IS diffusion stages in a large-scale IS implementation, observed that by strategically controlling stakeholders' engagement at the various stages of the IS diffusion process to obtain their relevant buy-in, the desired IS diffusion outcomes could be achieved.

### 2.4.2 Application of legitimation concept in information system research

Klein & Hirschheim (1989) were the pioneers in explicitly exploring the legitimation concept in IS research and its usefulness in durable support and acceptance of information systems. They found that when information systems development (ISD) methods and tools are incongruent with social changes happening in the external environment, a legitimation gap emerges. This gap can grow leading to ISD failure when

ISD approaches are not legitimated. The authors (ibid) suggested that a specific ISD approach becomes legitimate when stakeholders approve their use in the current social context.

Like Klein and Hirschheim (1989), Banville (1991) highlights the relevance of legitimation in comprehending tasks carried out in an IS project. Banville (1991) considers IS as a social system and claims that social components such as beliefs, values, routines, and myths should be given due attention when managing ICT-induced changes. Banville (1991) suggested that legitimation can be achieved through a social discourse similar to a marketing strategy which aims at developing continuous customer relationships encouraging target customers to purchase a product or service. Additionally, this author recommends that researchers in this domain should conduct interviews with those directly involved in IS projects using a qualitative method and that such interviews should revolve around the legitimation topic, revealing what is acceptable and not acceptable in the project.

Since the call of Klein and Hirschheim (1989) and Banville (1991) to research on the legitimation concept in IS, only a handful of IS researchers have investigated the influence of legitimation on the acceptance and usage, success or failure of IS projects (Brown, 1995; Brown, 1998; Keable et al., 1998; Kohli & Kettinger, 2004; Flynn & Hussain, 2004; Flynn & Du, 2012; Flynn & Puarungroj, 2006; Meissonier, 2015; Tossy & Brown, 2017).

In a study implementation of a Hospital Information Support System, legitimation was achieved through a micro-political process whereby IS sponsors and supporters of a large IT system implementation applied 'niche-marketing' techniques to gain stakeholders' legitimacy thereby dissipating stakeholders' resistance and ensuring information system acceptance (Brown, 1995). Furthermore, Brown (1998) found that stakeholders' perceptions about IS are often exposed through narratives related to information systems and in so doing, legitimation gaps can be understood and appropriately addressed. Kohli and Kettinger (2004) applied agency theory and legitimation theory to study the implementation of a Hospital Information System (HIS) in which legitimation concept plays an important role in achieving IS implementation success. The hospital management team, which did not possess enough legitimacy to encourage the acceptance of the information system by the physicians, used a clan of physicians which successfully changed the norms and values of the other sceptical physicians leading to acceptance and usage of the HIS. Thus, actions which were initially perceived as illegitimate became legitimized. Extending the work of Klein and Hirschheim (1989) regarding "legitimation gap", Keable et al., (1998) examined how end-users perceive the actions of IS developers and whether they consider these actions as legitimate or not. Their results reveal discrepancies between the views of IS developers and the end-users regarding the human and social side of information systems. This was identified as the main reason for the legitimation gap. Tossy and Brown (2017) investigated how e-learning projects can be legitimized through a collaborative

partnership strategy. The authors (ibid) found that this strategy was effective to promote legitimization of e-learning as it contributed to building trust which is a necessary pre-condition for legitimization.

The studies mentioned above make a significant contribution to IS research by highlighting the importance of legitimization in analyzing organizational and social issues in information systems development and implementation. This emphasizes the value of the legitimization perspective in IS research. Based on a review of past literature, it is noted that some researchers have investigated legitimization in IS using conceptual frameworks built on the elements of institutional theory, the Suchman (1995) typology of legitimacy and the baseline theory of Giddens' Structuration theory (1986) as explained in the following section.

#### 2.4.3 IS research applying institutional theory, typology of legitimacy theory and structuration theory

Institutional theory emphasizes how external institutional forces impact organizations such as internationally recognized professional standards, competitors' positions, and pressure, and how organizations respond to these forces and gain acceptance from the society (eg. DiMaggio & Powell, 1983). Several researchers have applied this theoretical lens to various IS research studies (Bhatt, 2013; Kohansal & Haki, 2021; Theiss et al., 2013; Berente et al., 2022). For example, in studying legitimization of a national identity e-government project, Bhatt (2013) found that the project sponsors conformed to existing norms and standards of the IT industry and formed partnerships with key players of the IT industry to gain legitimacy for the e-government project. Furthermore, Berente et al., (2022) explained how internal members of an organization legitimized an IT project, endorsing continued support despite that the project was failing to achieve its expected objectives. The authors (ibid) pointed out that external factors from outside of the organization such as the media and other external stakeholders brought the issue into limelight and compelled the organization to terminate the project.

Researchers who studied legitimacy using institutional theory (DiMaggio & Powell 1983, Zucker, 1987) thus perceived legitimacy as a set of constitutive beliefs that are gained by considering the impact of external forces and their penetration inside an organization. This stream of studies tends to focus on the broad, external perspective of legitimization and thus does not pay much attention to the internal dynamics within an organization. This external focus may also ignore the internal human interaction such as the manager-stakeholder conflict that can exacerbate the external pressures exerted on the organization (Suchman, 1995).

A few researchers in the IS domain used Suchman (1995) typology of legitimacy to understand the various legitimization strategies employed by organizations to achieve legitimization of IS projects (Kaganer, Pawlowski & Wiley-Patton, 2010; Ramotar & Baptista, 2013; Meissonier et al., 2015). Suchman (1995)

outlines three categories of legitimacy, namely moral legitimacy, cognitive legitimacy, and pragmatic legitimacy. Based on the theoretical concepts of Suchman (1995) typology of legitimacy, Meissonier et al., (2015) studied how two universities operating in different socio-cultural context legitimize the implementation of Enterprise Resource Planning (ERP). This study differentiates between gaining legitimation at the organizational and at the individual level. Meissonier et al., (2015) argue that it is important to legitimize ERP at the organizational level as the software suffers from a reputation problem due to high rate of failures. In the study of Meissonier et al., (2015), the project sponsors used legitimating tactics at the organizational level, such as demonstrating the benefits of ERP in harmonizing all business processes and, showing how ERP could be beneficial in aligning with partner organizations to achieve competitive advantage. At the individual level, Meissonier et al., (2015) emphasize the importance of legitimation in achieving user acceptance which is coherent with the research of Flynn & Du (2012) and Flynn & Hussain (2004). While greater emphasis is placed on the nature of legitimation strategies to close legitimation gap, this line of research makes a significant contribution in legitimation research in IS projects.

Structuration Theory (Giddens, 1984) is a powerful theory to understand the production and re-production of social structures. Three inter-linked structures are described within the Structuration Theory namely: structure of signification, structure of domination and the structure of legitimation. Structuration theory has been applied in IS research to understand the interplay between the social structures and human interactions (DeSanctis and Poole 1994; Orlikowski 1992; Jones and Karsten 2008; Orlikowski 2000; Kabanda and Brown 2017; Bernardi 2017). These studies explain the emergence of legitimation structures as the outcome of the shaping of human actions and behaviours from the interplay between human interactions and formal or informal rules in their context. Although this shaping principle emphasizes the outcome of the legitimation-seeking process that has taken place between the actors, the Structuration Theory and its concepts (eg. Orlikowski 2000) does not explain the dynamics of the legitimation-seeking process in detail. Legitimation theory indeed complements this limitation of structuration theory by suggesting principles for legitimation seeking such as conforming to existing norms or manipulating the norms of the legitimation providers and how legitimation structures are constructed by human actions (Flynn and Hussain, 2004).

On the importance of developing and introducing IS that is likely to be accepted by stakeholders, a stream of IS research has focused on the legitimation-seeking process because legitimation takes a holistic approach to stakeholders' acceptance. Flynn and Hussain (2004), Flynn and Puarangroj (2006) and Flynn and Du (2012) have studied the legitimation seeking process using the Legitimation Activity Model (LAM) based on elements of legitimation of the Giddens' Structuration Theory. Flynn and Hussain (2004) investigated the implementation of an intranet system and showed how an IT manager, despite having the

authority and support from top management, had to legitimate his actions before taking decisions that would affect workers at the lower level of the hierarchy. Flynn and Hussain (2004) found that legitimation-seeking led to stakeholders' acceptance of the intranet system. Flynn and Puarungroj (2006) and Flynn and Du (2012) extended the study of Flynn and Hussain (2004) under theoretical underpinning of Suchman's (1995) typology of legitimacy to understand legitimation maintenance and repair.

Flynn and Puarungroj (2006) demonstrated how legitimation is managed throughout a project lifecycle by the project team and users. They provided insights into the impacts of the legitimation strategies on the success and failure of projects under study. One case study considered legitimation aspects throughout the implementation process and ultimately achieved success. However, in the other case, legitimation was not taken seriously at the beginning of the project and this attitude only changed when the implementors faced a failure related to the choice of a software. The failure event highlighted a need for legitimation and the project ultimately succeeded. The analysis suggested that the similarities and differences between legitimation strategies do not reliably predict the success or failure of the legitimation process because success or failure is also dependent on the appropriateness of applying each strategy (Flynn & Puarungroj, 2006).

Flynn and Du (2012) studied two different case studies and demonstrated how legitimation was gained through a series of legitimation activities undertaken by the legitimation seekers, leading to success of IS implementation. They also found that legitimation can 'wither' if not monitored. Flynn and Du (2012) demonstrated how legitimation-maintaining activities in the form preventive actions were carried out by the legitimation seekers when they detected events that could have damaged initial system acceptance. Legitimation repairs were reactive actions that were used to restore previously existing support from legitimation providers which had subsequently disappeared. (Flynn & Du, 2012).

This study adopts the stance of Flynn and Hussain (2004) on the legitimation-seeking process in information system projects as it meets the research requirements by providing insight into the norms of the stakeholders and how leaders legitimize themselves before seeking legitimation from the stakeholders. The framework and its merits will be discussed in more detail in chapter 3.

#### 2.4.4 Review of Legitimation strategies

As discussed in the previous sections, researchers which have focused on legitimation in IS research have provided evidence that legitimation has a large influence on the acceptance and success of IS projects. Their findings pertaining to the legitimation strategies employed in a bid to achieve legitimation are particularly relevant to the aim of the research study. They can serve as a benchmark for comparison with the findings

of this study regarding the set of legitimation strategies that are used by the project team to obtain legitimation from the target end-users.

The table 2.1 below summarizes the legitimation strategies from the review of literature:

*Table 2.1: Legitimation Strategies*

<b>Authors</b>	<b>Legitimation strategies employed</b>
Flynn & Hussain (2004); Banville (1991); Kohli & Kettinger (2004); Brown (1998); Meissonier et al., (2015)	<ul style="list-style-type: none"> <li>• Explain benefits of IS system backed by similar concrete examples.</li> <li>• Advertise product by means of software demonstration and showcasing.</li> <li>• Marketing the benefits of IS</li> </ul>
Flynn & Hussain (2004); Flynn and Puarungroj (2006)	Respond to needs by undertaking a requirement survey prior to initiating an IS project
Flynn & Puarungroj (2006);	<ul style="list-style-type: none"> <li>• Espousing socially acceptable goals of the need to revamp or change existing system.</li> <li>• Co-opting committees for software acquisition</li> <li>• Standardize new models through rigorous training programs,</li> <li>• Proselytize – employ individual talks to address resistance to change.</li> </ul>
Kohli & Kettinger (2004); Klein & Hirschheim (1989); Meissonier et al., (2015); Flynn & Du (2012)	Stakeholder involvement and engagement, facilitate discussion through regular meetings and negotiate with stakeholders to achieve mutually shared goals
Banville (1991); Brown (1998); Kohli & Kettinger (2004); Flynn & Du (2012)	Plan for efficient discourse to encourage participation of end-users ensuring their productive collaboration, triggering positive perception towards IS project & resulting changes
Brown (1995); Flynn & Puarungroj (2006); Flynn & Hussain (2004)	Offer symbolic displays such as the use symbolic management and IT campaigners, a symbolic enactment of top management to encourage user acceptance of the new IS.
Klein & Hirschheim (1989)	Use of both financial and non-financial rewards to motivate end-users.

Authors	Legitimation strategies employed
	Stimulate user support and contribution
Kohli & Kettinger (2004); Flynn & Puarungroj (2006)	Employ group norms for example: apply peer pressure to endorse innovation.
Keable et al., (1998)	<ul style="list-style-type: none"> <li>• Abide to guidance issued by professional associations and their recommendations.</li> <li>• Use human-centric Information Systems Development (ISD) methodologies.</li> </ul>
Kohli & Kettinger (2004); Ngwenyama & Nielsen (2014); Richet, Ngwenyama & Rowe (2016)	<ul style="list-style-type: none"> <li>• Employ influential people to convey IS messages to pessimistic stakeholders; influence and engage other stakeholders in developing a shared understanding.</li> <li>• Reframe the strategic intent which is beneficial to the organization.</li> </ul>
Flynn & Hussain (2004); Flynn & Puarungroj (2006)	Recruit friendly co-optees such as departmental representatives to participate in the customization of the new software solution
Pawlowski, Kaganer and Wiley-Patton (2006); Meissonier et al., (2015)	<ul style="list-style-type: none"> <li>• Praise the reputation of software vendors; hold talks on their competitive edge in the market and sell the advantages of the proposed technological solution.</li> <li>• Highlight the best practices inscribed in the new technological solution.</li> <li>• Explain implementation strategies and success stories</li> </ul>
Flynn & Du (2012); Flynn & Puarungroj (2006)	Decouple software technical problems from the troubled software project
Flynn & Du (2012)	<ul style="list-style-type: none"> <li>• Give more time to end-users for reaping the benefits of the new IS.</li> </ul>

Authors	Legitimation strategies employed
	<ul style="list-style-type: none"> <li>• Formalization of relevant procedures to encourage uptake of the system and institutionalize its use.</li> <li>• Use of personal contacts to secure support of stakeholders.</li> </ul>

2.4.5 Contextual consideration for legitimation-seeking process

Legitimation-seeking may be contingent to the country’s context of research and can be influenced by the national culture and beliefs of the citizens. Meissonier et al., (2015) found that the national culture of a country may influence the legitimation process of ERP in business organizations. For example, in Thailand, employees of business organizations felt a moral obligation to obey to their superiors and thus a legitimation-seeking process might not be necessary (Meissonier et al., 2015).

A legitimation-seeking process can also be contingent upon the legitimacy of the style of management and leadership in the organizational context. Is legitimation-seeking at all relevant in the public sector context which is traditionally characterized by a rigid bureaucratic model and strict command-and-control management, and which is legitimized by its constituents? Bureaucracy is defined as a high degree of formalization (Mintzberg 1979) in terms of tasks governed by written documents, procedures, regulations, and policy manuals. Governments in developing countries tend to have a high-power distant culture. There is a tendency to adhere to a traditional bureaucratic paradigm underpinned by functional rationality, departmentalization, hierarchical control, and rule-based management at all levels of the hierarchy (Ndou 2004).

In legitimation-seeking and at its core, the legitimation seekers that is members of a project team or any influential organizational member need to secure the support of relevant stakeholders to achieve IS project implementation success (Flynn and Hussain, 2004). They should undertake a process to learn the norms of stakeholders to convince them to support information system projects. If the latter feel that it is proper and acceptable to them, they will endorse the project accordingly (Flynn and Hussain, 2004; Flynn and Du, 2012). The legitimation seeking process therefore may require a more flexible participative and collaborative style of management and less authoritarian style of leadership that relies on a “carrots and sticks” approach. Legitimation seekers can be found at any level of the hierarchy in an organization.

Indeed, in the past twenty years, public sector organizations worldwide have been undergoing public management reforms guided by the principles of the new public management (NPM) (Lapiente et al., 2020). The NPM school of thought has broadly influenced public management reform and introduced new

managerial practices to transform the bureaucratic structures of public sector organizations in both developed and developing countries (Mc Laughlin et al., 2002).

One of the key pillars of NPM is the participative style of management. Kim (2002) found evidence of the use of participative style of management in government agencies and demonstrated that this positively affected job satisfaction of employees. In the assessment of leadership style in different municipalities for public sector innovation, Ricard et al., (2017) found evidence of collaborative and interpersonal leadership style underpinned by collaborative work with subordinates including participation in decision-making in one of the cases studied.

Van der Voet, Kuipers & Groeneveld (2015) found evidence of transformational leadership in a public sector organization. Van der Voet, Kuipers & Groeneveld (2015) have also found that there was a positive association between the new leadership behaviour and the occurrence of planned and emergent processes of change and, in turn, such organizational change processes positively impacted affective commitment to change by disseminating information about the organizational change and encouraging employee participation. The authors (ibid) argue that environmental complexity led to a shift in leadership behaviour from a traditional authoritarian style that dominated the public sector for decades, to a more transformational style to meet the challenge of contextual complexities.

Evidence of participative style of management, collaboration and transformational leadership style may indicate a shift from the rigid structure towards a more flexible environment. This leads us to believe the relevance legitimization-seeking process to the public sector context. Fernandez & Rainey (2006) suggest that public sector leaders need to be aware that an organizational change involves a political process of developing and nurturing support from organizational members and other relevant stakeholders. Zhang & Bartol (2010) highlight the importance of empowering leadership in the success of managing IT projects in the public sector as empowering leadership creates a conducive environment for participative decision making and collaboration with stakeholders.

## 2.5 Public e-procurement system

Having explained the importance of achieving legitimization in IS projects, this section now presents a comprehensive review on public e-procurement information system that prepares the ground for the account of the legitimization-seeking research.

### 2.5.1 Overview and purpose

Public e-procurement can be defined from different perspectives, e-commerce, supply chain, IOIS, e-government and part of the reform of public procurement (Vaidya & Campbell, 2016), but each of these

perspectives focuses on a specific aspect of e-procurement. Vaidya & Campbell (2016) then proposed a more holistic definition of public e-procurement as “the use of the internet-based Inter-organizational Information System, which automates and integrates any part of the procurement process in order to improve the efficiency and quality in public procurement, and to promote transparency and accountability in the wider public sector”. The World Bank defines e-GP<sup>6</sup> as “the use of a transactional information system by government institutions and other public sector organizations in conducting and managing their procurement activities and relationships with suppliers for the procurement of works, goods and services required by the public sector” (Chebili et al., 2021:20). These definitions coherently identify the context in which e-procurement is being implemented and the stakeholders of public e-procurement. Literatures identify the stakeholders of public e-procurement as internal stakeholders and G2B (Reddick, 2004; Panayiotou & Stavrou, 2021).

E-procurement originated from the private sector. It was initially based on Electronic Data Interchange (EDI) technology in the 1980s and subsequently integrated in the supply chain of ERP software which was mostly utilized in the manufacturing industry (Panda & Sahu, 2012). The public sector worldwide started to adopt e-procurement in the late 1990s (Panda & Sahu, 2012). Over the years, public e-procurement has evolved from being informative in the form of static websites to a fully interactive and integrated portal where transactions submitted via the portal are integrated with back-end systems of budget execution and other financial systems (Concha et al., 2012). Recently, it has been recommended that emerging technologies such as block chain and digital ledger technology (DLT) be integrated with public e-procurement (Prins, Van Belle and Turpin, 2022).

One of the main motivations for implementing e-procurement in the public sector lies in its perceived potential to enforce good governance principles underlying the procurement process and contribute to clamp down on corruption (Neupane, Soar and Vaidya, 2012; Siriluck, 2012; Faridian, 2016; Siriluck, 2010; Chen et al., 2021; World Bank 2022; Moe et al., 2014; Ilhan and Rahim, 2013; Agbeko, Effah and Boateng, 2021; Azmi and Rahman, 2015; Afolabi et al., 2022; Ahmad, Aljafari and Venkatesh, 2019). Public procurement is frequently subjected to criticism because it is plagued with corruption that undermines the expected cost-saving (Neupane, Soar and Vaidya, 2014; Rakhel and Putera, 2021). In many countries, this has created mistrust among citizens who perceive lack of integrity, transparency, and accountability in the procurement process (Inuwa and Ononiwu, 2020). Corruption takes various forms such as bribery, embezzlement, and collusion among suppliers (Addo, 2019; Afolabi et al., 2022). It can happen at all stages of the procurement process starting from planning, preparation of goods specifications, bid evaluation,

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<sup>6</sup> also referred to as Government e-procurement

award, and project implementation and contract monitoring (Williams-Elegbe, 2018). The direct effects of corruption include loss of public funds and lower quality of goods, services and works (OECD, 2015). Furthermore, bid-rigging and cartelism which are practised by some unscrupulous private suppliers may have disastrous impacts on the public procurement process (OECD, 2016; Williams-Elegbe, 2018).

The motivation to implement e-procurement is even greater in African countries because of rampant procurement-related corruption across the continent. Sub-Saharan African countries fall in the category of lowest performers with Corruption Perceptions Index (CPI) of 33 (Transparency International, 2022). Corruption which was rampant in Africa before the onset of the COVID-19 pandemic became an additional burden for the continent's health systems (Williams-Elegbe, 2018; Addo, 2019). Corruption Watch (2020) drew attention to the potential vulnerabilities in the emergency procurement measures that could be readily exploited during the COVID-19 pandemic (Corruption Watch, 2020). Corrupted public officers seized the opportunity of COVID-19 lockdown periods to massively exploit emergency procurement of medical goods and equipment and loot public funds (Mathiba, 2020). This exploitation of emergency procurements also prevailed in Zimbabwe (Dzinamarira et al., 2021). In South Africa, an audit of COVID-19 related expenditures exposed substantial overpricing, fraud, and corruption. (Transparency International, 2022). African countries such as Rwanda, Ghana, Botswana, Ivory Coast, Uganda, South Africa, Nigeria, and Mauritius have shown enthusiasm and commitment to adopt and implement e-procurement system to help to curb corruption and achieve significant economic impacts (Neupane, Soar and Vaidya, 2012; Agbeko, Effah and Boateng, 2021; Tutu et al., 2019, World Bank, 2023). Rwanda for example has partnered with South Korea to deploy a customized version of the KONEPS e-procurement system (Chebili et al., 2021).

#### 2.5.2 The benefits of e-procurement

There are only a handful of empirical studies reporting the actual realization of benefits of public e-procurement. Other studies highlight only the potential benefits that can be attained by e-procurement implementation in the public sector, but these studies have nevertheless made a useful contribution as they serve as a 'marketing device' in the communication process with relevant stakeholders whose approval and support are required to achieve success in an e-procurement project. For example, Afolabi et al., (2020) identified grey areas in public procurement such as fraudulent tendencies that could be exacerbated by reduced competition among bidders, high human interactions, and high load of paperwork. These authors (ibid) believe that e-procurement can address these grey areas and mitigate corruption due to the high level of transparency that can be achieved with e-procurement. The perceived benefits of e-procurement are shown in table 2.2. Relatively few studies examined the real impact of e-procurement on corruption.

Table 2.2: Benefits of e-procurement

<b>Authors</b>	<b>Benefits of e-procurement</b>
Concha et al., (2012), Engstrom, 2009, Lim, Kim and Lee, (2008), Concha & Anrique, (2010); Ahmad, Aljafari & Venkatesh, 2019	Time and cost savings
Engstrom, (2009), Ilham and Rahim (2013), Leipold et al., (2004)	Increased compliance with supplier contracts
Concha et al., (2012); Engstrom (2009); Seo et al, (2012); Baek (2015), Azmi and Rahman (2015), Leipold et al., (2004)	Increased efficiency in the procurement process
Albano & Dae (2010), Concha & Anrique (2010), Azmi & Rahman (2015); Leipold et al., (2004)	Increased transparency of the procurement process
Albano & Dae (2010), Mahmood (2013), Azmi & Rahman (2015)	Best value for money because of a more competitive environment that has an impact in reducing bidding prices
Depo (2021); Campbel (2017); Ahmad, Aljafari and Venkatesh (2019)	Positive impact on reducing corruption
Azmi and Rahman (2015); Ferreira et al (2014)	Potential of minimizing risk of public procurement fraud
Ilham and Rahim (2013)	Reduction of maverick buying

### 2.5.3 Features of e-procurement and deployment in African countries

An e-procurement system encompasses at least one or a combination of different technologies of e-tendering, e-catalogue management system, electronic marketplace, and reverse auction (Vaidya and Campbell 2016). E-procurement caters for three main functional areas, the pre-awarding phase, the post-awarding phase and supporting features. The pre-awarding phase includes modules such as e-procurement planning, e-publication, e-tendering, e-reverse auction, e-evaluation and e-awarding (Croom and Brandon-Jones 2007; Emery, Melon and Spruk 2021; Concha et al., 2012). The post-awarding phase typically covers contract management, e-catalogue, catalogue management and e-purchasing. The support features cater for e-registration, supplier management, e-complaints, e-signature and monitoring and reporting (Chebili et al., 2021).

Public sector institutions worldwide can choose between three common implementation types of e-procurement, the custom tailor-made system, the COTS<sup>7</sup> and the SAAS<sup>8</sup> technology models. A custom tailor-made e-procurement solution is developed according to the needs of a specific organization. The COTS and custom models have been popular across African countries that have embarked on the e-procurement journey as shown in the table below 2.3 (Chebili et al., 2021). Interestingly it is observed that a country does not need to implement all modules in an e-procurement system. This also facilitates a phase-wise approach to e-procurement implementation.

*Table 2.3 e-Procurement System by Country (Chebili et al., 2021)*

Country	E-GP	Type of software	Functional coverage		
			Pre-awarding phase	Post-awarding phase	Supporting features
Rwanda	UMUCYO	COTS	e-procurement planning, e-publication/notification, e-tendering, e-evaluation/awarding	e-catalogues, catalogue management	e-registration, supplier management, e-signature
Tunisia	TUNEPS	COTS	e-procurement planning, e-publication/notification, e-tendering, e-evaluation/awarding, e-reverse auctions	e-catalogues, catalogue management, e-purchasing	e-registration, supplier management, e-signature, monitoring and reporting
Mauritius	E-procurement	COTS	e-procurement planning, e-publication/notification, e-tendering, e-evaluation/awarding, e-reverse auctions	Contract management	e-registration, e-signature,
Ivory Coast	SIGOMAP	Custom	e-procurement planning, e-publication/notification		

#### 2.5.4 E-procurement system implementation process

In past IS studies, the implementation process of an information system has been broken down into different implementation stages such as IS adaptation related to pre-implementation stage, IS use associated with the

<sup>7</sup> “A software acquired from a software developer or open source that is used as-is or with configuration, or that can be tailored with a layer of specific code layered on top of it” (Chebili et al., 2021).

<sup>8</sup> “A software that is provided as a shared service made available over the web and that can be used as-is or with the addition of configuration without any specific coding” (Chebili et al., 2021).

implementation phase and continued use, and routinization related to post-implementation stage (Sun, 2012; Cooper and Zmud, 1990). This stage model has been useful to identify challenges faced by organizations in the attempt to achieve a successful outcome of implementation of an information system. E-procurement is a generic system for all governmental departments and suppliers' community, and it involves two distinct groups of stakeholders attached to different contexts (Agbeko, Effah & Boateng, 2021). Unlike typical public sector information systems, e-procurement has been viewed as a disruptive innovation (Barahona and Elizondo, 2012; 2014) bringing transformational change. Silva and Hirscheim (2007) argue that an information system which brings transformational change often entails radical change in service that in turn impacts on deep structures encompassing core beliefs and values, distribution of power and organizational arrangements. Therefore, the right implementation approach and a change management strategy are important to accommodate disruptive changes. A 'big bang' implementation approach can simultaneously provoke a cultural shock in the public sector and to the community of suppliers because while the former is traditionally slow-to-change, the latter may not be ready for adoption of such a technology. Given the magnitude of the change and the dire need for a successful implementation to achieve expected outcomes, many countries have followed the recommendations of international organizations (ADB 2013) for earmarking a dedicated organization with the necessary leadership, responsibility, and authority to fully implement and manage changes and support e-GP operations (Al-Moalla and Li 2010; Fernandez and Rainey 2006). Ahmad, Aljafari and Venkatesh (2019) found that implementation of e-procurement in Jamaica was gradual, and a comprehensive readiness assessment and training at each phase of the project contributed to an overall positive sentiment about the initiative.

Measurable maturity levels for e-procurement have been defined in terms of the extent of implementation of its core functions (Concha et al., 2012). To this end, many international organizations following up on e-procurement implementation in governments have recommended a careful phased approach to e-procurement and a modular roll-out of the core functions (Chebili et al., 2021). It has been, however, noted that e-procurement implementation can take several years, and the complete end-to-end system may even require a decade to implement (Concha and Anrique, 2012).

#### 2.5.5 E-procurement implementation outcome worldwide

IS literature has witnessed much debate on the interpretation of success or failure of IS implementation because these connotations are pre-conceived and can have different meanings for different stakeholders (Thomas & Fernandez, 2008). Heeks (2002) suggested that the outcome of IS implementation can be classified into total failure, partial failure and success. The author (ibid) claims that a total failure of IS implementation can arise when either the chosen technological solution is not implemented, or when the implemented system is promptly abandoned during or after the implementation process. A partial failure

may result from a mismatch between the initial expectations from the IS projects and the actual project outcomes. Heeks (2002) further pointed out that an IS project is marked as successful when the stakeholders realize that significant project outcomes have been met and they feel satisfied with the information system. Along the same line, Myers (1994) suggested that successful implementation of IS can be gauged from stakeholders' perceptions. Indeed, stakeholders can express their beliefs on the legitimacy of an IS project through their perceptions and attitudes. A few authors have understood IS implementation success as the achievements of expected benefits (Delone and McLean 2003; Nelson 2005).

Similarly, e-procurement implementation outcomes range from successful to mitigated outcomes in terms of usage level and expected benefits achieved. Some countries including Korea, Chile and Georgia amongst others have claimed success of e-procurement with most of the expected benefits achieved (Lim, Kim and Lee (2008); Seo et al, 2012; Baek, 2015; Concha and Anrique, 2010; Depo, 2021). For example, Lim, Kim and Lee (2008) found that significant cost-saving was attained with the implementation of KONEPS in Korea, underpinned by the successful operationalization of e-bidding and e-payment modules. Furthermore, the suppliers' stakeholder groups were satisfied with the reliability and efficiency of KONEPS and with the increase in productivity in the process (Seo et al., 2012; Baek, 2015). Progress of implementation of e-procurement around the world is continuously assessed by the World Bank using the public procurement global database (World Bank, 2021). It provides a general indication that a significant number of countries across the world have embarked on e-procurement implementation and reportedly, e-procurement has also been perceived as successful in Bangladesh, Ukraine, and Moldova (World Bank, 2021).

Overall, the outcome of e-procurement implementation is disappointing (Croom and Brandon-Jones 2007; Krogstie 2008; Wirtz et al., 2010; Elbanna 2010; Al-Moalla and Li 2010; Bromberg and Manoharan 2015; Ortuzar (2017); Emery, Melon and Spruk 2021; Agbeko, Effah and Boateng 2021 Aman and Kasimin (2011); Vaidya et et al., (2016); Gurakar and Tas(2016); Alomar and De Visscher (2017); Brandon-Jones and Kauppi (2018); OECD 2019; World Bank 2020; Tutu et al., (2019)). E-procurement is plagued by implementation challenges causing considerable delays. Implementation of e-procurement has been found to take more than five years in most cases, absorbing substantial amount of money and man-power resource in the process (Concha & Anrique, 2010). In the context of Mauritius, there is scarce research that report on the implementation of e-procurement and related credible published papers could hardly be obtained.

#### 2.5.6 Challenges of e-procurement implementation

Table 2.4 shows the various e-procurement implementation challenges that are commonly encountered and are categorized using a Technological, Organizational and Environmental (TOE) framework (Tornatzky et al., 1990). A systematic approach based on Okoli (2015) and Gunther et al., (2017) is described in [Appendix](#)

H.1 and was followed to produce a comprehensive review of e-procurement implementation challenges based mostly on the IS discipline.

Table 2.4: Implementation Challenges of e-Procurement

	<b>Implementation challenges</b>	<b>Authors</b>
Technological	Acceptance and usage issues	McCue, C., Roman (2012); Engstrom et al., (2009); Gasco and Nasi (2018);Croom and Brandon-Jones (2007);Kalliannan et al., (2009); Williams and Hardy (2005);Alomar and Visscher 2017; Barahona and Elizondo (2015);Brandon-Jones and Kauppi (2018); Agbeko, Effah and Boateng (2021); Bromberg and Manoharan (2015); Sanchez-Rodriguez, Martinez-Lorente and Hemsworth (2019)
	Disruptive nature of e-procurement	Barahona and Elizondo (2012); Lyytinen and Rose (2003)
	Digital/Electronic signature	Costa, Arantes and Tavaréz (2018); Ojha and Pandey (2014)
	IT security issues	Fedorowicz et al (2004); Mc Cue Roman (2012); Somasundaram (2008); Vaidya, Sajeew and Callender (2006); Agbeko, Effah and Boateng(2021)
	Complicated system	Krogstie (2008)
	Multi-platform	Barahona and Elizondo (2015); Croom and Brandon-Jones (2007)
	Lack of system integration	MacManus (2003);Krogstie (2008);Fedorowicz et al., (2004); Croom and Brandon-Jones (2007); Costa, Arantes and TAVarez (2018); Adebayo and Evans (2015); Agbeko, Effah and Boateng(2021); Afolabi et et al., 2020; Sánchez-Rodríguez, Martínez-Lorente & Hemsworth, 2019
	Shortcomings in online product catalogue	Croom and Brandon-Jones (2007); Krogstie (2008)
	Challenges for software specifications	Somasundaram (2008)
	Inadequate IT &networking infrastructure	Somasundaram (2008); Adebayo and Evans (2015); Agbeko, Effah and Boateng (2021)
Organizational	Stakeholders' issues	Chomchaiya and Esichaikul (2016);Kaliannan et al (2009); Mac Manus (2003)
	Leaders' behavior	Williams-Elegbe (2014)
	Shortcomings in leadership	Gasco et al (2018); Krogstie (2008); MacManus (2003)
	Change management problems	Al-Moalla and Li (2010); Gasco et al., (2018)
	Lack of a project champion	Williams-Elegbe (2014)
	Lack of training and skilled personnel	Costa, Arantes and Tavaréz (2018); Gasco et al (2018);Krogstie(2008); Somasundaram (2008); Vaidya, Sajeew and Callender(2006);Hashim and Mazuki (2013)
	Resistance to change	Adebayo and Evans (2015); Barahona and Elizondo (2015);Heeks(2002);Vaidya and Campbell (2016); Williams-Elegbe (2014);Croom and Brandon-Jones (2007); Henriksen and Mahnke (2005); Ahmad, Aljafari and Venkatesh (2019)

	<b>Implementation challenges</b>	<b>Authors</b>
	Slow-to-change culture	Barca and Cordella (2004); MacManus (2003)
	Departmentalism	Barca and Cordella (2004)
	Major reforms through ICT	MacManus (2003); Somasundaram (2004)
	Value-driven outcome	Barca and Cordella (2004); Mc Cue Roman (2012); Vaidya and Campbell (2016); Ferreira and Amaral (2016)
Environmental	Regulatory frameworks	Henriksen and Mahnke (2005);Faridian (2015);Wirtz et al (2009)
	SME issues	Alomar and Visscher (2017); Costa, Arantes and TAvarez(2018);Gasco et al., (2018);Mac Manus (2003);Ortuzar et al., (2017);Walker and Bramer (2012); Williams and Hardy (2005); Sanchez-Rodriguez, Martinez-Lorente and Hemsworth (2019)
	Country context	Somasundaram (2008);Williams-Elegbe (2014);Walker and Brammer (2012); Agbeko, Effah and Boateng (2021)

### 2.5.6.1 Technological challenges

Referring to table 2.4, the technological challenges that were most frequently identified in literature are acceptance and usage and IT security issues.

#### **User acceptance and usage**

Acceptance and usage are important challenges for public e-procurement. The reasons identified in literature were vast, ranging from techno-centric issues to broader dimensions, including dissatisfaction with e-procurement systems that do not meet the needs of end-users resulting into creation of multiple work-arounds (Mc Cue Roman 2012); lack of user-friendliness of IS (Krogstie 2008); low uptake despite regulations being in force; excessively complicated systems (Engstrom et al 2009, Barahona 2015); and inability to enlist sufficient suppliers in a timely manner to encourage IS use (Vaidya and Campbell 2016).

#### **IT security challenges**

Mc cue Roman (2012) found that IT security was a key challenge in e-procurement as stakeholders were seeking for more reassurance regarding the robustness of the security aspects of the e-commerce platform. Fedorowicz et al. (2004) found that bidders' agencies were concerned about whether the hosting company had implemented security measures in terms of access control, backup, and recovery of data. It is imperative to address IT security concerns to gain the trust of stakeholders to motivate them to use e-procurement (Ahmad, Aljafari and Venkatesh 2019).

### 2.5.6.2 Organizational challenges

Like a typical e-government system, e-procurement implementation faces several organizational issues because of ICT-induced changes. These organizational issues are often intertwined with each other. Resistance to change and the lack of training and skilled personnel were most frequently reported issues

associated with public e-procurement implementation. But the value-driven outcome of public e-procurement also deserves much attention given that e-procurement is a good governance driven system that should reflect public value.

### **Resistance to change**

Resistance to change was found to be a key organizational challenge in e-procurement with multiple underlying reasons. User acceptance and resistance to change in IS do not necessarily imply diametrically opposite behaviours and non-acceptance and resistance are conceptually non-equivalent (Van Offenbeek, Boonstra and Seo 2017). Williams and Hardy (2005) found that small and medium-sized enterprises (SMEs) demonstrate strong resistance to public e-procurement as there was strong pressure from supplier associations representing (SMEs) for equitable access to Government business (Williams and Hardy 2005). Resistance to change to public e-procurement was underpinned by deeper problems that deserve greater attention. Public e-procurement or any e-government initiative carries major public sector reforms which may conflict with prescriptions of reforms of the New Public Management (NPM). For example, Somasundaram (2004) found that centralization ideas underlying e-procurement conflicts with the decentralization ideology of local Danish authorities (Somasundaram 2004). In the Danish context, controls were increasingly decentralized. Proposing a centralized IT infrastructure became incompatible with the norms of the local authorities which aimed to be as autonomous as possible (Somasundaram 2004). Henriksen and Mahnke (2005) noted that despite purchase managers agreed with the potential benefits of e-procurement such as cost-savings, improved delivery, and reduction of direct procurement costs, they were unwilling to use e-procurement because they fear the loss in power that is associated with the centralization ideology of the new public e-procurement platform.

### **Lack of training and skilled personnel**

Inadequate training to use e-procurement and skilled personnel for operating e-procurement may undermine the initiative and obfuscate its benefits. Costa, Arantes and Tavares (2013), Gasco et al., (2018) and Krogstie (2008) found that e-procurement users did not receive adequate training to use e-procurement platform, leading to low usage. Furthermore, some studies have found that a lack of skilled personnel to understand e-procurement technical issues, to manage service-level agreements and facilitate the operationalization of private-public partnership model of e-procurement may impede the smooth implementation of e-procurement (Somasundaram 2008; Hashim and Mazuki 2013). E-procurement development and implementation tend to unfold over a long period of time especially in the context of developing countries (Furuholt and Orvik 2006). Consequently, the project may require skilled ICT personnel to be on the job for a considerable period to manage and monitor the implementation effort.

## **Value-driven outcome**

E-procurement is a good governance driven system which is underpinned by norms such as anti-corruption capabilities (Neupane, Soar and Vaidya 2012; Siriluck 2012). E-procurement is expected to create public values including transparency, accountability, and integrity (Barca and Cordella 2004; Mc Cue Roman 2012; Vaidya and Campbell 2016) and success of e-procurement implementation will be achieved when the stakeholders make sense of these public values. However, a failure to perceive public value by the stakeholders and the wider society may raise legitimacy questions on e-procurement.

### *2.5.6.3 Environmental challenges*

Implementation of e-procurement initiatives across different countries may yield different outcomes, although unlike other e-government projects, a typical public e-procurement system consists at the minimum, of standard modules. While in Mexico, expected benefits have been reported as achieved from e-procurement implementation (OECD 2017b), Turkey's public e-procurement implementation led to contradictory outcomes and did not deliver expected results of increased competition and lower procurement prices (Gurakar and Tas 2016). Williams and Hardy (2005) found that implementation of e-procurement in Italy, Australia and Scotland had varying degrees of success, leading to the understanding of importance of the context in the adoption of a technological solution which should ultimately be adapted to the context in use (Kabanda and Brown 2015). Regulatory frameworks, SME issues, and the country context are the key contextual challenges for public e-procurement.

## **Regulatory framework**

Choi et al (2016) found that strong regulations are imperative for the success of implementation of public e-procurement. However, certain aspects of public procurement regulatory framework particularly the mandated use of e-procurement and the use of digital signature certificate may impact the participation of small and medium enterprises (SMEs) in e-procurement (Wirtz et al., 2010; Henriksen and Mahnke 2005; Haim Faridian 2015).

## **SME issues**

Several research studies reported negative impacts of public e-procurement on SMEs especially in countries where SMEs contribute substantially to GDP such as in Turkey (Gurakar and Tas, 2016). The difficulties that SMEs face with respect to e-procurement are amongst others: the exclusion of SMEs (Costa, Arantes and Tavares, 2018); inadequate funds to invest in ICT infrastructure (Alomar and De Visscher, 2017; Gurakar and Tas, 2016), lack of financial capabilities and contract guarantees as needed by government

procurement; insufficient competence in terms of standards and technical qualifications set by the market (Ortuzar et al., 2017), as cited in Mohungoo, Brown and Kabanda (2020). The success of e-procurement is contingent to the business context of a country particularly if its economy relies largely on SMEs. In Turkey for example, the exclusion of SMEs in public procurement proceedings negatively influenced competition in the market leading to a hike in goods prices that ran diametrically to the expectations of lowering prices from public e-procurement (Gurakar and Tas, 2016).

### **Country context**

In big countries such as India and USA, the federal-state dynamic may represent a key challenge for e-procurement implementation (Somasundaram 2008): In India, the best practices underlying success of e-procurement in the Andhra Pradesh region were not replicated to other states because recommendations advanced by the federal government were not accepted by other states given that they compromised their degree of autonomy. Such country-related challenges of implementation have also been highlighted in e-government research (Avgerou 2001). Considering the influence of national culture of a country, Williams-Elegbe (2014) claims that corruption is rampant in some African countries because corruption has become entrenched in their culture. Overt and covert corruption has become a norm in many such countries where citizens also engage in corruption with impunity (Williams-Elegbe, 2014). It can thus be challenging to achieve the expected objectives of e-procurement, i.e., transparency, accountability, and curbing corruption.

#### 2.5.7 Potential legitimization issues in e-procurement implementation challenges

As clarified by the review of literature on e-procurement implementation challenges provided in section 2.5.6., stakeholders' acceptance and usage remain an important concern in e-procurement implementation. It may be directly linked with potential legitimization problems. The literature review (section 2.5.6.2) reveals two important phenomena associated with e-procurement, namely the reforms driven behind the initiative and the expected public values that should reflect in its outcome.

Public officers may not fear technology per se given that public sector digitalization is already a norm with the rising number of e-government initiatives worldwide (Ahmad, Aljafari and Venkatesh, 2019). In the context of implementation of e-procurement, relevant stakeholders may express disagreement with the degree of emphasis of e-procurement on centralization and devolution of the procurement process which can influence the efficiency, the design and use of the e-procurement system (Coutlehard and Castleman 2001). This indeed influences their power position in the procurement chain. This could be a crucial turning point in the e-procurement project whereby the project team and users could become in conflicting situations and a number of possible outcomes can occur (Banville, 1991). When stakeholders feel that certain elements of public procurement reforms driven by e-procurement are not appropriate and desirable within a system of socially constructed beliefs, norms, and values, they are unlikely to grant their support

and acceptance to it (Suchman, 1995). Peterson (1998) recommends that the only way to get their buy-in is to persuade them of the importance and inevitability of the reform and their self-interest in supporting it.

Furthermore, unethical public officers may demonstrate resistance to digital innovation if they perceive that it is likely to inhibit rent seeking behaviours (Aladwani 2016). Williams-Elegbe (2014) argues that where reform contains an anti-corruption element, stakeholders such as some public sector employees and even bidders may not necessarily support the reform program and may seek to undermine reforms through various means, overtly or covertly. If they are tech-literate, they may endorse the technological solution and then use their expertise to continue with corruptive practices via IS misuse (Inuwa and Ononiwu 2020; Addo 2019).

Regarding public values, if stakeholders fail to perceive the creation of public value from the implemented technological solution, legitimacy problems will crop up. For example, the lack of attention to the readiness of SMEs for e-procurement will cause their exclusion, thereby compromising the notion of fairness to SMEs, Martinez-Lorente and Hemsworth (2019). Suppliers realize value in terms of fair participation and that has implications for developing and sustaining trust in government institutions (Ahmad, Aljafari & Venkatesh, 2019).

A proper legitimation-seeking process in the implementation of e-procurement can be a powerful tool in addressing several contextually situated implementation challenges because through the dynamics of a legitimation-seeking process, norms of the concerned stakeholders are identified and understood, and can also be favourably changed (Flynn and Hussain, 2004). As such the project team and enthusiastic stakeholders may achieve mutually shared objectives, supporting each other to develop a synergy to address all e-procurement challenges effectively through coping mechanisms and ensure sustainable uptake of the technological solution. At the same time, the project team may also develop better understanding on the behaviour and the underlying real intentions of unethical stakeholders in their attempt to innovate their means to circumvent all controls that have been implemented to curb corruptive practices.

## 2.6 Conclusion

The concept of legitimation which originates from the management discipline can be effectively applied to IS project implementation to get insight into how stakeholders support and approve the activities of a project team towards achieving the goals of the IS project. The literature review has shown that there is scarce research focusing on the legitimation process in the information system domain and a very limited number of research papers published on such an important phenomenon since Klein and Hirschheim (1989) introduced legitimation theory to IS research in 1989. The last research publication on legitimation in IS project dated back to 2012.

Past IS legitimation research lacked a proper analytical framework for study the legitimation-seeking process until Flynn and Hussain (2004) developed a useful framework that systematically facilitates an in-depth understanding and interpretation of legitimation activities carried out in IS projects. End-users grant legitimation for a new information system according to their judgements towards their requirements and expectations (Keable et al., 1998). However, this does not imply that an IS project team must offer an information system which totally conforms to end-users' expectations and requirements in order to obtain their legitimation. This would be very unrealistic in the specific case of a large information system with multiple stakeholders having multiple expectations and requirements. Instead, through a legitimation-seeking process, an IS project team can find different alternative means to satisfy the end-users.

Public e-procurement implementation in Mauritius has presented an interesting opportunity for this research. This literature review has exposed the importance of e-procurement initiative, its various benefits but several disappointing results due to major inter-linked challenges of its implementation. Discussion on the e-procurement implementation challenges reveals legitimation problems that may be directly related to acceptance and usage of e-procurement. As it stands, public sector reform driven by e-procurement, the reputation of public sector leaders, the notion of public value and ICT-induced changes are among the key elements that can be associated with legitimacy problems. The spectrum of the problem might be broader, and it is unknown yet about what are the legitimation issues that are hampering the success of e-procurement implementation and how e-procurement project teams are addressing legitimation issues. Furthermore, the literature review has also informed about the good-governance aspects of public e-procurement. Another opportunity that emerges here is an insight into the legitimation-seeking process which will unravel how stakeholders are making sense of the norms underlying the good governance principles underlying e-procurement.

## Chapter 3 Theoretical Framework

### 3.1 Introduction

Walsham (2006) suggests that theory is chosen by virtue of its relevance to the research topic and on the basis of the researchers' subjective view of the insightfulness of a theory. Walsham (2006) advised that theory can be chosen at different stages of the research process, particularly (1) to guide the data collection process (2) to be employed in data analysis and forming the 'data-theory' link, and (3) to be used as the final product of the research. This study uses the Legitimation Activity Model (LAM) developed by Flynn and Hussain (2004)<sup>9</sup> to guide the data collection and data analysis. After data analysis of the legitimation-seeking process, the researcher was confronted with surprising facts or qualitative anomalies that could not be explained by the initial guiding framework. Thus, the need for a second theory arose that could explain the emerging phenomena. Surprising facts were discovered in the data analysis relating to legitimation failure and part-failure of the same e-procurement system deployed in different public organizations and associated with the multiple outcomes of e-procurement characterized by part-usage and fallback. It became crucial to provide an end-point explanation of the emerging legitimation structures that were evident in the different implementation outcomes of e-procurement in order to contribute to practice and for future research extension.

This research opted for the technologies-in-practice theory of Orlikowski (2000) which is positioned as suitably relevant to give insightful or the "best" explanation to the emerging legitimation structures. The justification of use of the theory and integration of theories in a single framework is explained at a later stage in this chapter. The theories are not just juxtaposed to offer different perspectives of the phenomenon but are situatedly integrated to produce an integrated conceptual framework (Inuwa and Ononiwu, 2018)

Given that the core concepts of both the LAM framework (Flynn and Hussain 2004) and Orlikowski's (2000) technologies-in-practice are derived from Giddens' (1984) Structuration Theory, this chapter opens with a brief description of the theory with respect to the structures of domination, legitimation, and signification. Built upon the concept of legitimation, the LAM framework is described. The chapter continues with the justification for using Orlikowski's (2000) technologies-in-practice as the relevant theory for use in the last stage of the data analysis, after the legitimation-seeking process has been analyzed. Finally, the emergent integrated framework adapted to the e-procurement phenomenon is discussed.

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<sup>9</sup> See also Hussain et al., (2004)

### 3.2 Structuration theory

Structuration is defined as "The structuring of social relations across time and space, in virtue of the duality of structure" Giddens (1986:376). It provides an understanding of how social practices are produced and reproduced over time through human interactions. Structure and agency are the two concepts at the heart of structuration theory: Giddens (1984) defines agency as a knowledgeable human agent who draws from resources at his disposal to re-affirm or change structures through his actions. Structures are defined as 'the rules and resources that are recursively implicated' in reproducing social systems. The main point of interest is the duality of structure which expresses the notion that structure shapes and is shaped by human interactions. Giddens (1984) explained that structures do not exist physically but are instantiated in action. Giddens (1984) identified three inter-linked dimensions of social structure, namely signification, domination, and legitimation, which are respectively linked to dimensions of interaction (these are communication, power, and sanctions). Giddens (1984) specifies three modalities, interpretive schemes, resources, and norms that link the realm of action with the respective social structures of signification, power and legitimation leading to the process of structuration (Orlikowski and Robey 1991). The dimensions of signification, domination and legitimation and the related modalities and communications are represented analytically in structuration theory but in real life, they cannot be separated.

#### 3.2.1 Structure of signification

The structure of signification is related to meanings and principles of discourse (communication) and produced and reproduced when human agents draw upon their interpretive schemes to make sense of their own and others' actions (Giddens, 1984). These meanings provide "regulative and interpretative rules constituted in social conduct and resources of authority, which can enable and constrain communication" (Hardcastle et al., 2005:229).

#### 3.2.2 Structure of domination

Human agents produce and reproduce the structure of domination when they exercise power by drawing from allocated resources such as land, technology, budget, and equipment as well as authoritative resources such as hierarchical position in an organization to direct people's actions and achieve the desired outcome (Giddens 1984). Domination is also achieved by those possessing a higher level of expertise and skills in an organization, but organizational politics and interpersonal relationships can have a significant impact on the structure of domination. (Hussain and Cornelius 2009). When human agents mobilize resources to exercise power and achieve domination, they are more likely to get support and resources from other stakeholders (Hussain and Cornelius 2009) and legitimate their actions. It is not only the human agents at the top of the hierarchy who possess power and can control resources but dominant stakeholders or alliance of dominant stakeholders at the lower level of the hierarchy may also possess power to decide on the fate of an IOIS project, influencing its legitimacy (Hussain and Cornelius 2009). In this way, domination is

relevant to research on IS legitimation. Introna (1997) found that when a project team became overshadowed by other stakeholders, the latter exerted more power on the project and could negotiate efficiently with the project team.

### 3.2.3 Structure of legitimation

Structures of legitimation emerge as accepted social conduct, which are interpreted and verbalized by knowledgeable agents, whether right or wrong are accompanied by sanctions and rewards (Hardcastle et al., 2005). This happens when those agents use norms in a specific context which guide how agents should use of rules and resources. Norms are the building blocks in the production and reproduction of social structures (Jones and Karsten 2008); they are not static but can be changed or reinforced depending on the ongoing human social interaction and environmental forces that favour or change these norms (Orlikowski 1992). Norms define which rules have moral underpinnings and define the social conduct of people and what are acceptable practices (Giddens 1984). In this spirit, according to Hussain et al., (2004), a legitimation structure is composed of five key elements, namely an object or target (such as e-procurement), the human agents who may grant or refuse legitimation, the justification of their actions, the values or beliefs underpinning their decisions, and whether legitimation has been granted or not for this object.

### 3.3 Legitimation Activity Model

The Legitimation Activity model (LAM) created by Flynn and Hussain (2004) has been used as the initial guiding, theoretical model allowing the researcher to understand the process of seeking legitimation in e-procurement and to guide the data collection and data analysis. Structuration Theory as a whole or its specific structuration concepts have been applied in IS research (Walsham and Han 1990; Bernardi 2017; Orlikowski 1992; Barley 1986; Brooks 1997; Hussain and Cornelius 2009, and in IOIS setting, (Rodon et al., 2011). Such studies emphasize more on the ‘consumption’ of the legitimation structure rather than ‘capturing’ the details of the process by which human agents produce and reproduce these structures (Du 2009). The latter focus is, however, addressed by the LAM model that examines the micro-political process by which the legitimation structure is produced and (or) reproduced. It provides a convenient way to conceptualize e-procurement artifact in its actual context and it facilitates the understanding of how the desired legitimation structure will emerge as the legitimation-seeking process progresses.

In LAM (see figure 3.1), there is an interplay between two groups of actors, the legitimation seekers and the legitimation providers. Members of a project team or any supporters of the proposed information system to be implemented and who are planning to seek legitimation for the project are the legitimation seekers of the IS project. On the other hand, legitimation providers are the individuals whose legitimation is necessary for the success of the IS project. End-users and even top management representatives who should grant

their legitimation are the legitimation providers. Both legitimation seekers and legitimation providers can be individuals, a group of social actors or business units or an organization (Flynn and Du 2012).

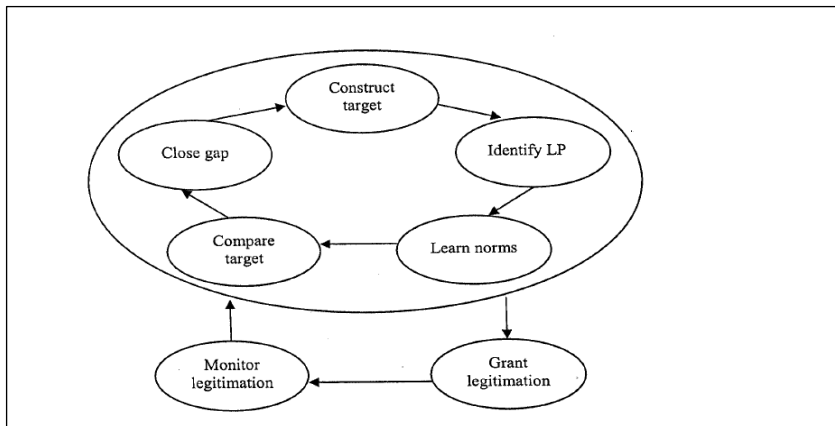


Figure 3.1: Legitimation Activity Model (Flynn & Hussain, 2004)

Flynn and Hussain (2004) describe the legitimation target as “a narrative description of the information system and its predicted organizational effects”. The authors (ibid) conceptualized the legitimation target as constituting of several key elements including the description of the information system project, a belief that the IS project benefits the users, the organization and its operating context, and the identity of the different stakeholders who are expected to grant their approval and acceptance towards the information system project.

Referring to the LAM in figure 3.1, the legitimation-seeking process in the implementation of e-procurement is triggered when the legitimation seeker (LS) constructs the desired legitimation target. The LS then proceeds to identify potential legitimation providers (LPs). The selection of LPs can be based on firstly, individuals or groups of social actors who are more sceptical or doubtful about the rationale and benefits of the IS project (Flynn and Du, 2012) and, secondly, on social actors who can exert influence over individuals whose legitimation are crucial for the success of the implementation project (Kohli and Kettinger, 2004). After identifying the potential LPs, the legitimation seekers learn the norms embedded in their beliefs, culture, and work practices. Their norms are then compared with the legitimation target that was constructed at the initial stage of the project. Depending on the perceived gap, the LS initiates a number of appropriate legitimation activities such as meeting the needs of the LP, conforming to their norms, symbolic display and marketing techniques) to either change the norms of the recipient’s LPs or conform to their norms. This phase resembles a plan-do-check-act (PDCA) cycle whereby the LS will monitor the impact of legitimation strategies, re-evaluate the gap and repeat the LAM cycle again if a legitimation failure is detected. A legitimation success is marked by closure of the legitimation gap (Flynn and Hussain 2004). In this research, the routinization

and institutionalization of e-procurement as considered by the demand-side stakeholders is the desired legitimation structure that is expected to emerge. At this point, the legitimation gap will be considered as closed.

The key concepts of LAM are shown in Table 3.1.

*Table 3.1: Steps in the Legitimation Activity Model (Flynn & Hussain, 2004)*

<b>Steps in the Legitimation Activity Model (LAM)</b>	<b>Description of the steps</b>
1. Construct target	The legitimation seeker (LS) constructs a legitimation target comprising of a descriptive account of the IS project, its potential benefits and the resulting changes in routines and work practices.
2. Identify LP	The LS identifies the LPs which may include individuals or group of individuals or stakeholders such as end-users and business units whose legitimation is required. LPs can be also individuals or group of individuals who have doubts about the project or may exert significant influence on peers whose legitimation is required for the project success.
3. Learn norms	LS attempts to gain an understanding of the LPs characteristics, attitudes, and behaviours by learning their norms through their beliefs, assumptions, cultures, daily work practices and their perspectives about technology.
4. Compare target	The LS assesses the gap between the norms of the LPs and the legitimation target.
5. Close gap	The LS sets out the list of legitimation activities/strategies based on their judgement as to what is most appropriate to close the gap
6. Grant legitimation	The LS evaluates the impacts of their legitimation strategies and assess whether legitimation has been granted
7. Monitor legitimation	The LS continues to monitor the status of legitimation

### 3.4 Use of Technology-in-practice structural model

This research applies abductive reasoning which provides an opportunity for scientists to understand ‘surprising facts’ that are good starting points for better explanation through suitable and relevant theories that support the ‘best explanations’ to these facts (Patokorpi and Ahvenainen, 2009; Ochara 2013). As cited in Ochara (2013), Danermark (2002) suggested that abductive reasoning allows researchers to explore a phenomenon “*in a new way by observing and interpreting it in a new conceptual framework*”.

Orlikowski's (2000) technologies-in-practice is reliably positioned to explain the "surprising facts" that the researcher confronted with and that cannot be discarded because the "best explanation" to these facts contributed to innovative knowledge and for research extension. The three key reasons for choosing Orlikowski's (2000) technologies-in-practice were (1) the implementation of IOIS such as e-procurement can lead to different outcomes when loosely coupled social groups from different organizations appropriate the technology in diverse ways (Pozzebon 2000; Boonstra and de Vires, 2008). This often leads to intended and unintended consequences. The emerging social structures from each of the possible outcomes of implementation as a consequence of legitimation-seeking success or failure, and other situated social interactions between the actors can be "best explained" by the framework. (2) As legitimation-seeking process improves from failure or part-failure, the social structures will change. This is important for future research extensions for comparison purposes (3) the facility of integrating Orlikowski's (2000) Technologies-in-Practice with the LAM theory of Hussain and Flynn (2004) which explains the legitimation-seeking phenomenon between social actors in the ongoing situated use of technology.

Regarding Orlikowski's 2000 structural concept, in their recurrent use of technology, end-users draw from the material properties of the IS, their skills, power, knowledge, the meanings that they associate with the particular information system, their assumptions, beliefs and expectations about IS, their contextual properties and their participation in social and political communities. As such, the structure of technology use is shaped by these experiences, knowledge, meanings, power and the available technological artifact. The set of specific rules and resources that are instantiated in the use of technology serves to structure future use of technology in its routine use by the end-users. Technology-in-practice is enacted as people constitute and re-constitute the structure of technology use (Orlikowski 2000). Technology-in-practice is not static but can be changed when a different set of rules and resources are instantiated in its use. This happens, for example, when the actors develop greater awareness and knowledge about the information system at hand or become more motivated and gained more power in the ongoing use of technology (Orlikowski 2000). The users can be deliberately influenced by peers or a group of people such as IS project team and top management. These groups might have access to a set of resources and the authority to amend rules in order to engage in a process to improve the users' awareness, knowledge and skills, or motivate them to use technology in a different way or even change their power base (Rodon et al., 2011).

As such, emergent technology-in-practice can be enacted. This is a central argument that makes technology-in-practice relevant to the study. Firstly, it takes into account that in the ongoing situated use of technology, the actors can be deliberately influenced by a legitimation-seeking process triggered by another group of actors. As cited in Bernardi (2017), social actors do not only reflexively monitor their actions but also monitor the actions of others (Giddens, 1984) and Bernardi (2017) also found that the interest of different

groups of social actors must be aligned to mediate the enactment of the desired legitimation structure. Secondly, it gives a complete picture of the emergent technology-in-practice (re)constituted from the “consequence of the legitimation-seeking process” that takes place during the ongoing situated use of e-procurement. This provides a more convenient way to understand the outcome of implementation of e-procurement in practice.

It is important to avoid implying a direct ‘cause and effect relationship’ because a legitimation-seeking process, though it significantly contributes to the emergence of the desired legitimation structure (Hussain et al, 20094; Puarungroj 2006; Flynn and Du 2009) and thus the desired technology-in-practice structure, is one phenomena among several rich social interactions between the actors in the specific context that impacts or are impacted by the use of the technology.

### 3.5 Emergent theoretical Framework

The emergent integrated theoretical framework is based on (1) the Legitimation Activity Model of Flynn and Hussain (2004) (as explained in figure 3.1) that is used as an initial sensitizing guide to understand the process of legitimation-seeking between the human agents or actors whereby a group of human agents deliberately influence two groups of end-users to achieve the desired legitimation structure; and (2) at the final stage of the data analysis process, the Orlikowski’s (2000) technology-in-practice structuration concept is then particularized to understand the different technology-in-practice structures and related social structures that are enacted as specific point of time, emerging as a consequence of the legitimation-seeking process between social actors, and other contextually situated ongoing interactions between the actors and e-procurement. The integrated framework depicted in figure 3.2 refers to the ongoing situated technology-use by actors in a public-private sector context. The different public sector organizations share common institutional characteristics and common formalized norms of the public sector. However, informal ways of working, work practices, skills and experience and the informal culture may differ from one public sector organization to another (Rodon et al., 2011).

In the production and reproduction of the legitimation structures, an understanding of the mutual shaping of the material features of e-procurement and the social domain comprising of power, norms and meaning systems of the social context is necessary (Bernardi 2017). While actors reflexively monitor their own actions and influence the actions of others, the interpretive flexibility of the e-procurement sets the boundaries where the material features of the technology and the social domain mutually interact and shape the users’ interpretation about e-procurement. The resulting users’ interpretation will influence the way in which e-procurement is implicated in the reproduction of the structures of domination, legitimation and signification (Bernardi 2017).

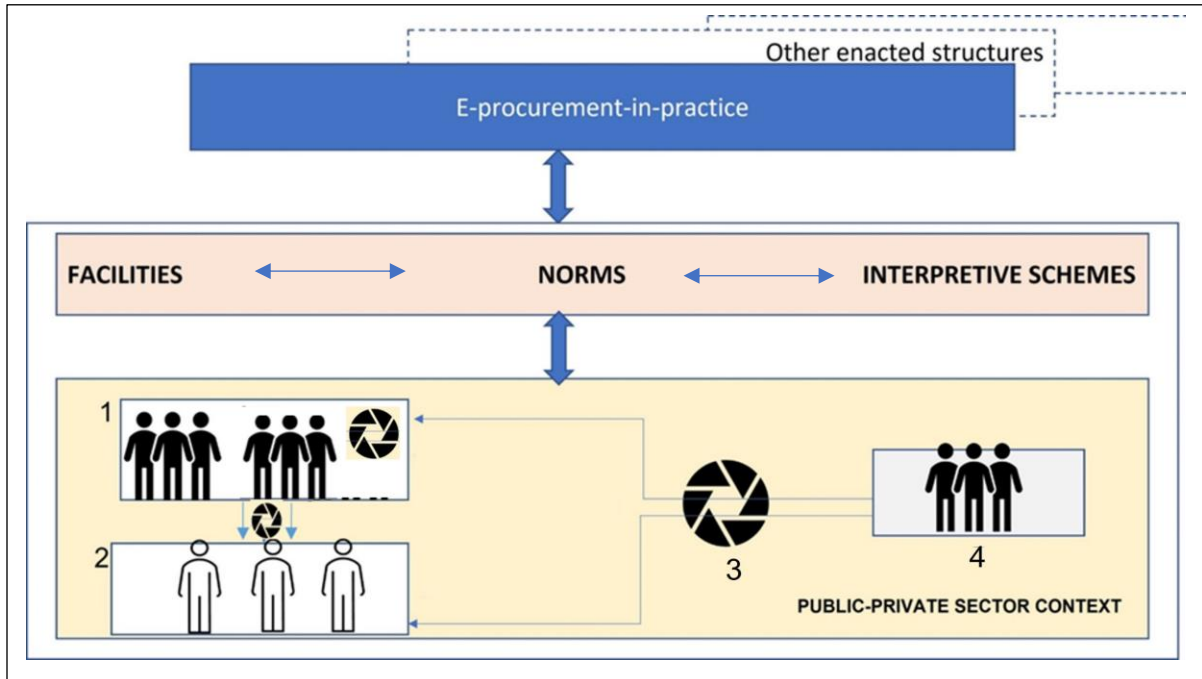


Figure 3.2: Emergent Integrated Theoretical Framework (adapted from LAM theory of Flynn and Hussain (2004) and Technologies-in-practice of Orlikowski (2000))

1 – The group of social actors of different public sector organizations who are the legitimization providers.

2- The actors of the private sector supplying goods and services to the public sector who are also the legitimization providers

3- The legitimization-seeking process based on the LAM (Flynn and Hussain 2004) is employed at the initial guiding framework, as shown in figure 3.1. The process takes place between the project team and the demand-side stakeholders denoted by 1 & 2. The process also happens:

- among the group of social actors in public sector organizations denoted by (1). Influential agents which are enthusiastic about e-procurement and may exert a positive influence on other social actors whose legitimization is required may be present and thus the legitimization-seeking process may also take place there.
- Between the group of social actors and their stakeholders denoted by (2) and as indicated by the arrow.

4- The implementers/project team i.e., the primary legitimization seekers who seek legitimization from both groups of stakeholders as indicated by the direction of arrows.

5. After analyzing the legitimation-seeking process that happens as part of an ongoing situated use of e-procurement, technologies-in-practice and other enacted structures emerging from the success and failure of the legitimation-seeking are explained using the structurational concept of Orlikowski (2000).

Overall, this chapter has explained the theoretical foundation of the research, elaborating on the emergent theoretical framework that integrates the LAM (Flynn and Hussain, 2004) and the Orlikowski's (2000) Technology-In-Practice theories to investigate the legitimation-seeking phenomenon in the e-procurement implementation in its current context of study.

## Chapter 4 Methodology

### 4.1 Introduction

To address the research question, ‘*How does the project team of the implementing agency seek legitimation from the demand-side stakeholders in the implementation of public e-procurement in the Government of Mauritius?*’, an in-depth qualitative case study approach was undertaken to study the legitimation-seeking process in e-procurement implementation, and it was partly retrospective. Using qualitative methods, the research generated a rich description of the context surrounding e-procurement implementation, reconstructing the historical events of the information system development (ISD) and the implementation phase. The inclusion of the ISD stage provided valuable insights on the antecedents of the legitimation-seeking process which is relevant to gain understanding of the construction of the initial legitimation target and the planning of the legitimation activities. A single in-depth case study was undertaken in the Government of Mauritius to study legitimation-seeking for the inter-organizational e-procurement system. The case study entailed an abductive approach to data collection and data analysis (Blaikie 2009). The development of the methodology chapter follows the principles of research onion (Saunders et al., 2008). Section 4.2 gives an overview of the main epistemological foundations of research in social science and justifies the choice of interpretivism paradigm for this research. Section 4.3 describes the research approach followed by the research strategy in section 4.4. Description about the research data, research time dimension and data collection methods are also provided in this chapter. A full description of the dataset is given. The researcher emphasizes the COVID-19 challenges to the data collection process. The data analysis process is explained whereby thematic analysis was adopted and NVIVO was used for coding the qualitative data. Ethical considerations in the research are then outlined. The chapter closes a brief overview of how the privacy and security of data has been ensured and the technique that is employed to ensure research rigour.

### 4.2 Epistemological foundation

An epistemological issue is one that addresses the question of what is or should be considered as accepted knowledge, and positivism and interpretivism are the two main epistemological foundations of social research (Bryman & Bell, 2015: pp26). Qualitative research in information systems can also adopt a paradigm of pragmatism. This paradigm is associated with action, intervention and constructive knowledge. Pragmatism is concerned with action and change and the interplay between knowledge and action (Goldkuhl, 2012). This renders it appropriate as a basis for research approaches intervening into the world and not merely observing the world and thus would be more suitable in action research or design research (Goldkuhl, 2012).

#### 4.2.1 Positivism

The ontological assumption under this paradigm is that social reality is objective and external to the researcher (Blaikie, 2009). Positivists assume that the social and physical reality in an organization exists independently of the interactions of its members (Orlikowski and Baroudi, 1991). Regarding epistemological assumption, only phenomena that can be observed and measured are considered as valid knowledge (Blaikie 2009). Orlikowski and Baroudi (1991) found that IS research under this paradigm often test proposed models by forming testable hypotheses which are accepted or falsified depending on how the data analysis supports or rejects them. Positivists undertake objective assessments and prediction grounded in their research data and their research outcomes cannot be based on subjective opinions or moral judgements.

#### 4.2.2 Interpretivism

The ontological assumption underlying this paradigm is that social reality cannot exist without the interaction of human actors whereby each person has his or her sense of reality, and there are multiple realities (Blaikie, 2009). In other words, reality is ‘socially constructed’ by human actors (Orlikowski and Baroudi, 1991), leading to the understanding that the actions of human actors shape their social context. Interpretive methods of research in IS are “aimed at producing an understanding of the *context* of the information system, and the *process* whereby the information system influences and is influenced by the context” (Walsham 1993, pp. 4-5). Under the interpretivism paradigm, researchers must understand knowledge through experiences of human actors by capturing and interpreting their viewpoints relevant to subject of interest.

#### 4.2.3 Justification for interpretivism

Several IS research have focused on specific aspects of IS projects such as determining the critical success factors for cloud computing (Dembla et al., 2015) and examining the impacts of user involvement in the user requirements determination in the ISD phase (Webb 1997). Other studies have increasingly adopted a broader approach in investigating the evolution of the social process in the technology implementation (Robey and Newman 1996; Kabanda and Brown 2015; Orlikowski and Gash 1994). These studies fundamentally differ not only in their research focus but in their ontological stand.

Basically, this study aims to get insight into the legitimation process in IS implementation of e-procurement. To this end, this research should capture the experience of the users involved in the implementation, capturing their perceptions, expectations, and concerns towards the attempts of the project team for legitimating the IS (Hussain et al., 2004). Hence as an example, it looks at how the project team understands the perceptions of the users and operationalizes legitimation activities along the project timeline; and how the users respond to these legitimation activities, endorsing or rejecting IS. Based on this view of legitimation, the choice of an interpretivism paradigm was more appropriate than positivism. This stand

has also been adopted by the co-workers focusing on legitimation in IS research (Flynn and Du 2012; Flynn and Puarungroj 2006; Flynn and Hussain 2004). In this study, e-procurement system, being an inter-organizational system (Vaidya and Campbell, 2016), cut across both public-public and private-public contexts, whereby the interactions between different group of stakeholders attached to the different context and the influence of social actors over other entities in legitimizing the technology should be understood. The cross-contextual characteristic tied with an IOIS is complex. Reality is socially constructed by the two different group of stakeholders, Government employees and Government-to-business (G2B) working in these contexts.

### 4.3 Research Approach

Research is undertaken to answer research questions posed by theoretical puzzles or new theory can emerge, or existing theory can be revised or extended from collection and analysis of data (Saunders et al., 2008). Inductive, deductive, abductive, and retroductive research approaches are commonly used in theory development (Blaikie, 2009).

#### 4.3.1 Inductive research approach

Inductive research represents a bottom-up approach to theory generation whereby the theory emerges from data analysis (Blaikie 2009). Blaikie (2009) suggests that an inductive approach kicks-off with the collection of data by operationalizing concepts and then identifying patterns in the data. The induction process culminates with the generalization of those patterns and formulation of theoretical propositions thereof (Blaikie, 2009).

#### 4.3.2 Deductive research approach

The main aim of a deductive approach is to examine the relationship between two concepts by proposing a set of hypotheses that are formed based on theory (Blaikie 2009). These hypotheses are confirmed or rejected based on empirical findings, and either existing theory is either accepted or extended. Blaikie (2009) argues further that deductive research produces tentative explanations for the phenomena under test, which are enhanced with future research on the same phenomena.

#### 4.3.3 Abductive research approach

Dobson et al., (2012) argues that besides induction and deduction, Charles Peirce, an American philosopher of the 19<sup>th</sup> century, introduced abduction as a third form of logical inference. As cited in Dobson et al., (2012), Peirce (1903/1997:230) summarizes, “Deduction proves that something must be, but induction shows that something actually is operative and; abduction merely suggests that something may be”.

At a particular stage of a research process, a researcher must explain their observations and confirm or disconfirm the initial theory used throughout the process. Additional literature inferences or insightful

explanations and predictions lying outside the domain of current knowledge may be sought to provide the best explanations (Ochara, 2013). For example, Flynn and Du (2012) used the Suchman (1995) typology of legitimacy which originated from the management discipline to explain the maintenance and repair of legitimation in information systems development phase. This process is referred to as abduction (Ochara, 2013). Minnameier (2004) argued that ‘Inference to the Best Explanation (IBE)’ is fundamentally different from abduction. The author (ibid) specified that abduction is the only type of inference that leads to new knowledge and particularly to possible theoretical explanations of “surprising facts” while IBE concerns “the acceptance or rejection of already established explanatory suggestions”, and more explicitly with evaluation of theory or concepts generated by abduction.

Unlike the induction technique which mainly involves looking at patterns, concepts and theories that emerge from data, on the assumption that data collection can be theory-free, abduction tends to be slightly different from induction whereby researchers examine how data supports existing theories or may call for changes thereof, through an iterative interplay between data collection and analysis (Kennedy and Thornberg, 2018). Abduction is also different from deduction as the researcher strives to be open and sensitive to the data whilst using a theoretical framework as a guide, instead of mechanically deriving hypotheses for testing underlying deductive reasoning (Blaikie, 2009). Like inductive research, development of a theory often becomes the end-product of research work using the abductive approach. A conceptual framework or theory proposition developed at the beginning of the research can be used as “sensitizing theory” to guide the research and produce new insights at the end (Blaikie, 2009).

#### 4.3.4 Retroductive Approach

Through a retroductive approach to theory, a researcher seeks to discover “underlying mechanisms that can explain some observed regularities in a particular context” (Blaikie, 2009:87). The author (ibid) argues further that a researcher is expected to have background knowledge on the observed regularities at the initial phase of the study and thus the retroductive approach can be kick-started with an abductive or inductive strategy whereby the guiding theory or concepts are known beforehand. The uniqueness in this approach is that a researcher can work backward from the data to generate a conceptual framework based on his or her judgements to explain the observed regularities (Blaikie 2009).

#### 4.3.5 Justification for an abductive approach

The research reported on in this thesis employed abductive reasoning to data analysis and used the LAM model created by Flynn and Hussain (2004) as a sensitizing theory to analyse the legitimation activities that occurred in the implementation of e-procurement. The ‘surprising facts’ that emerge out of the analysis process and which cannot be explained by the existing theories may lead to the generation of better explanations and new theories (Ochara, 2013).

#### 4.4 Research Data

The dominant research data in IS research are categorized as either qualitative, quantitative, or mixed (Liu & Myers, 2011). Quantitative data are mainly statistical or numerical data, whereas qualitative data are data in the nominal form such as words and images (Saunders et al., 2008). Quantitative research methods examine the relationship between variables through statistical methods and are typically used for confirmatory studies such as theory testing (Saunders et al., 2008). Qualitative methods in IS research, on the other hand, are used to obtain a deep understanding of the social world and its interaction with information system (Walsham, 2006), by basing on qualitative data such as interviews, documents, participants observation, obtaining information which cannot be explained exclusively through quantitative data. Venkatesh et al., (2013) recommended mixed methods to develop insights in complex organizational and social phenomena in IS research. Mixed methods use both quantitative and qualitative methods, either concurrently or sequentially to examine the phenomenon under research (Venkatesh et al., 2013). However, the appropriateness of such a method depends on the requirements of the research question(s) and the context of the study.

##### 4.4.1 Justification

In the past, research works focusing on acceptance of information system including the e-government stream, adopted primarily the quantitative research approach, such as TAM (Davis, 1989), its descendant, UTAUT (Venkatesh & Davis, 2000) and its subsequent derivatives that have been extensively tested (Benbasat and Barki 2007). This research, which offers an alternative lens to study IS acceptance through legitimation-seeking employed a qualitative research method to examine the phenomenon. Flynn and Du (2012) pointed out that “legitimation is a high-level abstraction of formal or informal support of stakeholders” towards information system projects. If stakeholders are sceptical about the benefits of an IS project, their likely reaction will be to withhold their support (Flynn and Du, 2012). Alternatively, they may unconsciously grant their support to an information system that would be beneficial to them. The researcher was therefore convinced that insight into legitimation activities could only be obtained through the reconstruction of the context in which they occurred.

A snapshot of the context in which the legitimation activities unfolded over a specific period can be reconstructed only with qualitative data which is obtained through qualitative methods such as participants’ interviews, observations data and secondary data. Through different qualitative methods such as stakeholders’ interviews, observation, and documentary analysis, the researcher could unravel what meanings these stakeholders assign to their actions in the project. This is the only way to tell whether legitimation was granted or refused. A researcher should pay attention that research participants tend to “post-rationalize” their actions in historical events. While the researcher grasped the norms and beliefs of the participants in such “post-rationalization”, the researcher also recognized that these views may have

been biased and misleading about what really happened in those historical events. Analysis of secondary data such as project documentation, annual reports, circulars, organization's emails and proceeding of stakeholders' meetings complemented the data collection requirements in an effective manner and diminished the risk of a distorted understanding of those events.

## 4.5 Research Strategy

By employing qualitative research strategies, researchers can understand the perspectives of people on a specific phenomenon within their social and cultural context (Myers 1997). Case study, ethnography, action research are the popular qualitative research strategies used in IS research (Myers and Avison 2002).

### 4.5.1 A case study strategy

A single case study research method was used to gain deep insight into the legitimization activities that were undertaken by the project team in the implementation of a national e-procurement system in the Government of Mauritius. The case study focused on the implementing agency, the Procurement Policy Office of this Government which piloted the e-procurement project. Yin (2004) argues that case study is appropriate when the phenomenon needs to be studied across time in its natural setting by using a range of data collection methods to collect information from one or a few entities including people, groups or organizations (Benbasat, Goalstead and Mead, 1987). Thomas and Myers (2015) claim that case study is appropriate when the researcher seeks to address questions of "how and why" things might have happened or why it might be the case. The authors (ibid) further stated that by looking at the subject from many and varied angles, the researcher gets closer to the 'why and how' of the phenomena under study and hence getting close to the 'reality'. Cavaye (1996) pointed out that one of the main strengths of case study research is that it enables the researcher to unravel the 'reality' and detail by studying the phenomenon in the context in which it occurs. Descriptive, explanatory, and exploratory knowledge can be generated by using case study strategy in research (Blaikie 2009).

Given that IS implementation unfolds over time and is researched by a complex process involving multiple actors participating in different events of the process, case study research was well-suited to identify the key actors and events and re-construct the context. Furthermore, multiple data collection methods were utilized in case study research to obtain a 'thick description' of the legitimization activities and to some extent explained the legitimization-seeking process (Flynn & Du, 2012). The case study approach focuses on making sense of a research phenomenon by understanding the shared meaning of organizational actors in their context. Flynn and Du (2012) recommend that the perceptions and behaviours of the organizational actors relevant to legitimization aspects of an information system should be investigated and such approach allow the researcher to construct "thick description" and interpret the case studies. It was not easy to evaluate whether legitimization is acquired or is lost. Through thick descriptions, a researcher not only

understands the immediate behaviours of people but gains an understanding of contextual aspects surrounding those behaviours that render the event or action meaningful (Mills et al., 2010). Rich insights were also gained on potential strategies that could be applied to close legitimation gaps in cases where the project team was struggling.

#### 4.5.2 Generalization

As cited in Walsham (1995), Yin (1989) suggested that a case study is generalizable to theoretical propositions that emerge from the analysis of empirical findings. Walsham (1993) highlighted that the validity of inferences generated in one case study does not depend on the representativeness of the case from a statistical point of view but “on the plausibility and cogency of the logical reasoning used in describing the result from the case and in drawing the conclusions from them”. Walsham (1995) proposed four types of generalization from interpretive case studies namely development of concepts, theory generations, contribution to rich insights and drawing of specific implications, based on past case studies on IS research. Thus, the generalization of findings from an in-depth case study is feasible.

Regarding research quality and generalization aspect of case study research, Thomas and Myers (2015) argue that apologetic comments of authors such as “this is just one case study, and hence the findings cannot be generalized to other settings” became less frequent over the past ten years and authors became less defensive when using the qualitative approach. Thomas and Myers (2015) suggest that researchers should no longer be needed to be apologetic or defensive when using the qualitative methods because qualitative studies were published in top-rated journals and that qualitative studies, under interpretive nature, were among the “best papers”. Nevertheless, rigour should be maintained in any research methodology.

#### 4.5.3 Selecting the case study

Selection of the right case study is an important step in conducting case study research (Eisenhardt, 1989). The researcher made considerable efforts in selecting the right organization and a public information system that would meet the requirements of this study, making substantial contribution to both practice and theory. In the selection process, the researcher ensured that access to the organization was obtained. One major challenge for undertaking case study research in the public sector is that public sector organizations can rarely grant access to researchers whom they don't know or if they would, the process of granting access may be extremely slow given that hierarchical decision making in the public sector (Kaufmann et al., 2019). Furthermore, public officers may be unwilling to dedicate time to academic research activities. Moreover, not many practitioners may appreciate the importance of social and organizational issues in the implementation of e-government because they have often taken a rationalistic and techno-centric approach to e-government implementation (Goldkuhl, 2016). Given that the researcher is a public officer, expression of her interest in conducting research on IS implementation in the Government was received positively

considering its potential contribution to the success of the selected case of IS implementation. The researcher seized the opportunity to orientate her research to e-procurement implementation in the Government of Mauritius which was in progress at the time of selecting the case and was of a national importance. The research, however, focused on a single-case study.

Previous studies on IS legitimation employed the case study method (Flynn and Hussain 2004, Flynn and Du 2012, Flynn and Puarangroj (2006), Meissonier et al., (2015). These researchers undertook cross-case studies and compared cases to validate and strengthen their evidence about the phenomena. In contrast, this research work focused on a single case study. Given that the research involves public institutions, the procedure for seeking permission for ethics clearance and establishing contacts with another Government is lengthy and complicated, thus making it difficult to undertake a multiple case study.

#### 4.6 Gaining site access.

In compliance with the ethical requirements, the researcher met the Director of the Procurement Policy Office to seek site access which was officially granted for undertaking the research. Given that the researcher is a public servant, she is familiar with the public sector and has a wide network of contacts that can facilitate access to stakeholders' department (G2B) which would otherwise be difficult for an "outside" researcher. The researcher who is employed on a substantial capacity in the Government of Mauritius for nearly 25 years, is fully aware of her duties and responsibilities as a Senior Systems Analyst in the Government, as well as an academic researcher. She respected both the ethical requirements of research and workplace ethics.

#### 4.7 Units of analysis

It was challenging to decide about the unit of analysis in this research given that e-procurement is an inter-organizational system (IOS). The big question is "what level of legitimacy should be sought? Should I focus on an organizational level or at an individual end-user' level or at a group of users' level?" Ruef and Scott (1998) suggested that organizational legitimacy can be analyzed at the level of the whole organization, individual organizations or subunits and research aspects of organizations. Meissonier et al., (2015) also distinguished between legitimacy at an organizational level and legitimacy at an individual level and argued that it was important to legitimize ERP at the organizational level as the software had a reputation problem due to its high rate of failures. In the study of Meissonier et al., (2015), the project sponsors used legitimating tactics such as demonstrating the benefits of ERP in harmonizing all business processes and showing how ERP can be beneficial in aligning with partner organizations to achieve competitive advantage. At the individual level, the authors (ibid) emphasized the importance of legitimation in achieving user acceptance which is coherent with (Flynn and Du 2012; Flynn and Hussain 2004).

In this study, the units of analysis include (1) The project team of the PPO which made attempts for legitimation-seeking and (2) Individual users or group of users from individual public bodies and bidding organizations who responded to legitimation-seeking attempts of the project team. E-procurement's smooth operations depend on the mutual use of the system by the government employees denoted as G2G and the bidders' community denoted as G2B. Since the G2B stakeholder group (bidders) did not respond favourably to the invitation of researcher to participate in the study due to the COVID-19 pandemic, the researcher relied solely on the accounts of the users of public bodies to gather relevant information about the perceptions of the suppliers about e-procurement. The lack of participation of G2B stakeholder group represents a limitation to the study.

#### 4.8 Research Time Dimension

Time plays an important role in research design and execution. Research time dimension can be categorized into longitudinal, repeated measures, cross-sectional and multiple snapshots (Chen and Hirschheim, 2004). Ideally, a longitudinal time span which enables a researcher to study a phenomenon over an extended period would have best suited the nature of this research because a legitimation-seeking process that ultimately culminates in the emergence of the legitimation structure in and across the organizations, occurs over a long period of time. However, due to COVID-19 pandemic constraints, this research used a single snapshot cross-sectional time dimension whereby data was collected at a single point of time from November 2019 to September 2022 to give a snapshot of the phenomenon (Liu and Myers, 2011).

#### 4.9 Data collection

Various data collection methods can be used in a case study strategy namely interviews, observation, and secondary data (Kennedy and Thornberg, 2018). The choice of data collection method can also depend on the schedule for the research plan and the requirements of the research question. After securing ethics approval for data collection, a meeting was held with the project team of e-procurement at the Procurement Policy Office. They were enthusiastic about this research and unanimously agreed to facilitate the researcher in enrolling participants in the research. The research fundamentally involved three stakeholder groups: the project team, the users of different public bodies of the Government of Mauritius and the registered suppliers of good and services. The project team facilitated the researchers in establishing contacts with potential participants of the different public bodies of the Government of Mauritius for data collection. The main data collection method was semi-structured interview. The field data collection kicked off in November 2019 with interviews of the project team.

With the continued assistance of the project team to enroll participants from different public bodies of the Government of Mauritius, the field data collection continued with several visits to the different public bodies which were interested in the research. The field data collection process ended in October 2020. The

research was supplemented with substantial and reliable relevant secondary data that provided insight into the evolution of the e-procurement phenomenon from January 2021 to September 2022. Secondary data from publicly available sources were collected from January 2021 to September 2022.

#### 4.9.1 COVID-19 Challenge to the data collection process

The unprecedented Covid-19 pandemic has posed some challenges to the data collection process in terms of accessibility to the participants and uncertainty. The public sector participants were not easily accessible during the lockdown period. The researcher managed to establish contact with a handful of participants but surprisingly they were all unwilling to give online interviews and prefer on-site meetings. Thus, data collection resumed once the lockdown was lifted in May 2020. Furthermore, initially, the researcher planned to interview a sample of the bidders' community. However, most of the potential participants which were contacted, either did not revert to the researcher for appointments or were unwilling to participate in the research. Besides, the researcher also designed an "online questionnaire" which contained all open-ended questions as per the research instrument. The researcher invited a sample of suppliers to fill in the questionnaire, but a very low response rate was obtained, and the data quality was well below expectations. So, the scope of the research was limited to a single stakeholder group, representing the users of public bodies of the Government of Mauritius. Through the interview process, the researcher managed to obtain the views of suppliers via the participants of different public bodies who used to deal with those suppliers.

The primary data collection period was not extended beyond November 2020 because of high uncertainty associated with COVID-19 pandemic in view of the surging number of COVID-19 cases in Mauritius during that period. Hence, people were avoiding physical meetings, and the work-from-home arrangement was re-implemented. In early March 2021, a second lockdown came in force, thus justifying the non-extension of the field data collection period in face of the data collection challenges.

#### 4.9.2 Semi-structured Interviews

The best method to understand how the legitimization activities unfolded was semi-structured interview. The semi-structured interviews were based on the interview guide prepared beforehand ([Appendix C](#)). The interviews broadly attempted to obtain information from (1) the history of the project and its milestones including project activities in the ISD and implementation phases and the organization's resources and facilities allocated to the project (2) a description of the interviewees' involvement and experience in these activities, and their concerns and expectations (3) the interviewees' experience of their engagement with the project team and their perceptions on the project team's implementation efforts (4) the description of e-procurement implementation outcome and the perceptions of the interviewees' on why such outcome unfolds. Although guidelines were helpful in assisting the researcher in conducting the interviews, the flow of each interview did not strictly follow the guidelines. The researcher allowed the participants to speak

freely and openly, allowing their stories to unfold naturally. The guidelines served to keep conversations on track (Walsham, 1995).

Semi-structured one-to-one and small group interviews which were conducted in local Creole language, were recorded upon the consent of the participants. Recording was not allowed for the first four interviews, constraining the researcher to take notes. Hand-written notes method necessitated a second meeting with all the four participants to ensure that no key points had been missed. For remaining interviews, recordings were allowed following my plea on the shortcomings of notes-taking whilst reassuring them that interviews would remain highly confidential.

Considering the interview data collection method, Myers and Newman (2007) highlighted its potential pitfalls that include amongst others, the artificiality of interviews, lack of trust in the interviewer, time constraint to conduct interviews and level of entry in the organization. The interview method is not without difficulty, especially when confronted with a sensitive project such as e-procurement. Firstly, regarding G2B, government officials are by nature risk averse. In reluctance to “voice complaints or negative opinions” about e-procurement, they may have “painted a good picture” of the e-procurement system though they may have had some concerns about the system. So, lack of trust is a potential interview issue for this kind of research. The interview, in this case, hinged upon the role of the researcher. Walsham (1995) argues that a researcher can play the role of an outside observer or an involved researcher. As an outside observer, the researcher keeps a distance with the participants, trying to be as objective as possible whereas, with an involved role, the researcher can influence the social context of the participant through action research and become the full collaborators of the participants in studying and transformation the organization (Walsham, 1995). In this study, the researcher successfully established a rapport of trust with the participants.

In the interview process, the researcher should be able to establish trust, reassurance and even likeableness with the participants (Bauman et al., 2011). It entirely depends on the personal skills of the interviewer. Furthermore, the interview methodology begins with the assumption that it is possible to investigate elements of the social by asking people to talk and by gathering or constructing knowledge by listening to and interpreting what they say and to how they say it (Bauman et al., 2011). Getting relevant data and constructing knowledge depends on how the researcher asks questions, what he or she assumed is possible from asking questions and what level of knowledge the researcher considers answers to reflect (Bauman et al., 2011). It boils down to the personal qualities of the researcher and his or her role assumed in conducting the interview.

#### 4.9.3 Documentary Evidence and website contents

Documentary evidence such as project documents, meeting briefs and website contents are examples of secondary data sources. One of the key purposes of secondary source was triangulation of primary data to render the evidence more credible and to identify possible contradictions (Bryman & Bell, 2015). In cases where contradictions are noted, the matter can be scrutinized further for a deeper understanding of the situation.

The researcher used various reliable documents sources that were deemed relevant to the research question. For example, the reliability of the content of the annual reports published by the Procurement Policy Office (PPO) was verified. These documents are normally submitted as part of the legal provision of the Public Procurement Act 2006 and their copies are also submitted to the National Assembly of Mauritius (PPO Annual Report, 2021b). The researcher relied on various sources of publicly accessible documents and website contents including amongst others, annual reports published on the PPO's website, published annual reports of public bodies, circulars, directives, public procurement law and related guidelines published on the PPO's website and on the websites of other Government bodies, published reports of the director's of audit (see [table B.2 in Appendix B](#) for the list of documents retained for document analysis). Through these documents and information, the researcher got an overview of the functioning of PPO and details about the e-procurement project, including the milestones reached in its development and implementation. The documents were studied before embarking on the stakeholders' interviews. Documentary evidence was pivotal to the re-construction of the project events. It was also useful to corroborate the data that is collected through interviews. Furthermore, a historical comparison of documents over different periods of time was useful to reconstruct the sequence of project events since kick-off and revealed insights that were relevant to the research questions of this study. All these documents and relevant information from website contents were saved in a single folder and uploaded in NVIVO software for subsequent coding and analysis.

#### 4.9.4 Observation

Observation as a data collection method is a powerful tool to explore how things are happening and evolving in the context where the research is done: such as monitoring end-users' behaviour over a period (Yin, 2004), exploring the power relations and how certain actions are becoming legitimate and observing rituals, symbols and cultural affinities that can explain legitimacy underlying IS acceptance. By using a participant observation technique, the researcher can take notes about the ongoing activities in the organization and engage in informal discussions with the end-users to understand their perception and perspectives about the information system in the immediate context of use rather than retrospectively (Kaplan and Maxwell 1994). The researcher can make sense, reflect, and interpret observation data based on the field notes taken.

Participant observation though should be conducted in an ethical manner to avoid a perception of privacy intrusion, intimidation, and gossiping.

The researcher obtained permission from the management of the Procurement Policy Office, the research case, to attend training sessions that the department had organized with procurement representatives of stakeholders' organizations which are on the e-procurement implementation roll-out plan. By attending these training sessions, the researcher immersed herself in the social setting to observe and gain an appreciation of stakeholders' interactions and the different reactions of each stakeholder. Observations made a substantial contribution to understanding the legitimation activities undertaken by the legitimation seekers and the reactions of the legitimation providers. It served to confirm or disconfirm information conveyed through interviews with participants. Training recordings were done with the permission of the trainer and consent of the trainees.

Direct observation of the end-users' changing work practices resulting from the use of e-procurement was very important because it would provide insights into the emerging legitimation structures. Given that all interviews were carried out at their workplace, the researcher at the same time took notes of the observable material facts that she felt were relevant and systematically named and uploaded them in NVIVO for subsequent coding. For example, as a new work practice emerging from the use of e-procurement, the users were writing the closing and opening dates of bids that were launched online on a whiteboard, in order not to miss those dates. This observation was coded in the category "emerging new work practice". The researcher ensured that end-users did not feel intimidated by her presence and achieved this by presenting a friendly stance to the staff.

#### 4.10 The Data Set

The dataset consisted of one-one interviews, small group interviews, secondary data (documentary evidence and website contents), observation data and training sessions that the researcher attended.

##### 4.10.1 Breakdown of interviews

In this study, the IT project manager and team of the Procurement Policy Office (PPO), officers of the procurement cadre and other staff that use e-procurement in the procurement process chain from public bodies which on-boarded e-procurement at the different phases from 2015 to 2019 were among the interview participants. Given the professional profile of the researcher, she easily established contacts with those departments in a timely manner to identify eligible participants for the study. The list of procurement cadre staff posted in different public bodies was obtained from the website of the respective public bodies and were contacted by phone to fix interviews. Table 4.1 gives a breakdown of the interviews.

Table 4.1: Breakdown of Interviews

<b>Organization</b>	<b>No. of interviews</b>	<b>Interview type</b>	<b>Participants' profile</b>
Procurement Policy Office	5	One-one	Project team, IT manager and procurement officers
Public bodies (Ministries, Departments and local authorities)	26	One-one	Procurement cadres and technicians involved in procurement, management
One Public body (One Ministry)	3	2 groups of 3 and 1 group of 4 participants	Procurement cadre and management
<b>Total</b>	<b>34</b>		

#### 4.10.2 Secondary data

Examples of secondary data sources used in this research include:

- Documents from the research participants - user manual for public bodies
- Publicly available documents downloaded from PPO websites such as user manual for suppliers, the procedure for suppliers' registration, guideline for Digital Signature Certificate requirements for suppliers and public bodies, annual reports; and other relevant publicly accessible documents from various online sources.
- Relevant information from websites contents including amongst others: e-procurement portal of the Government of Mauritius, the old public procurement portal of the Government of Mauritius, National Audit Office, Procurement Policy Office, website of Ministry of Public Service and Administration, websites of public bodies.

#### 4.10.3 Observation Data

The key observation data include:

- Participation of the researcher in training on online bidding for:
  1. Public bodies – 8 participants
  2. Suppliers – 9 participants
- Participation of the researcher in training on online evaluation module (25 participants)

## 4.11 Data Analysis

This section presents the data analysis techniques applied to the qualitative data to (1) gain insight into the legitimation-seeking process in e-procurement implementation, (2) unravel the rationale behind such activities over the implementation timeline (3) establish an understanding of the outcome of legitimation activities.

### 4.11.1 Thematic Analysis

Thematic analysis underpins the qualitative data analysis in this research. Thematic analysis remains the most suitable approach to address qualitative analysis as it efficiently reports people's experience, perspectives, beliefs, expectations, and meanings during a given time frame (Braun and Clarke 2006). Braun and Clarke (2019) drew scholars' attention that the thematic analysis approach proposed in their earlier paper in 2006 should not be taken as a standard procedure that is applied to different qualitative research. Braun and Clarke (2019) instead advised that thematic analysis must show a degree of critical reflexivity in the method. The authors suggested to adopt reflexive thematic analysis approach that reflects creativity, reflexivity, and subjectivity, contributing to knowledge production. Codes represent the "researcher's interpretations of patterns of meaning across the dataset" (Byrne, 2022). A researcher effectively applies reflexive thematic analysis when conducting interpretive data analysis at the intersection of: (1) the dataset; (2) the theoretical assumptions of the analysis, and (3) the analytical skills/resources of the researcher (Byrne 2022).

After acquiring a general understanding of the scope and the context of the data through repeated reading of the interview transcripts and scrutinizing the secondary sources, the research used thematic analysis (Braun and Clarke 2006) to analyze and to systematically organize the data, identifying and documenting associations within and between concepts and themes from the raw data. At each stage of the implementation phase, the legitimation seekers' accounts were triangulated with those of the legitimation providers, relevant secondary sources and observations (see table 5.5 in section 4.11.5). This demonstrates "the researcher's reflective and thoughtful engagement with their data and their reflexive and thoughtful engagement with the analytic process" (Braun and Clarke 2019, p. 594).

In essence, an iterative coding process underpins thematic analysis until a saturation point is reached for each theme (Braun and Clarke 2019). In this research, the thematic analysis process broadly involved the following steps:

1. Before data thematic analysis started,
  - All interview and training recordings were carefully listened to two or three times. In some cases, the recordings had to be repeatedly listened to because there were different relevant accounts from different users who were talking at the same time rendering the transcription challenging.
  - Each interview was then translated from local Creole to English language and transcribed using Microsoft Word. As qualitative research focuses on representing the participants' voices, correct techniques and accurate translations are vital to ensure a valid representation of participants' meaning and trustworthy knowledge production (Yunus et al., 2022). Furthermore, the re-checking process is crucial to ensure the correct assignment of meaning from the original material into the target language. As the researcher is bilingual with strong commands of the target language, re-checking and cross-verification was successfully ensured by the researcher to ensure minimum meaning loss.
  - Each interview document was systematically named, and the questions were highlighted in different colours to demarcate the questions from answers.
  - All the interview excerpts were then uploaded in NVIVO software.
  - The interview transcripts were read several times to get familiarized with and immersed in the data and to identify initial themes developed from the research question.
2. Each line in each paragraph of each interview transcript was read carefully to understand the attributed meaning of the text. As the reading progressed, coding of relevant features of the interview excerpts were done, collating data relevant to each code. This was an iterative process until a saturation point was reached.
3. The codes were then compared, grouped, and collated to sub-themes.
4. The sub-themes were collated with the main theme defined from the research questions. Additional main themes emerged from the analysis.
5. Other key elements of the dataset included secondary data in the form of documents, photos, and videos. All these secondary sources were also uploaded for coding. Each document was systematically named before coding. For example, the annual report of the Procurement Policy Office published in 2013 is named "PPO Annual Report 2013\_PPO30". The same coding process (steps 2 to 4 above) was followed. All documents which were retained for document analysis, their NVIVO coding statistics and their corresponding sources are found in table B.2 in Appendix B. Document analysis implies searching for meaning, requiring the researcher to go through the text searching for phrases and sentences that can unlock meaning which is not explicitly cited in the text (Olsen, 2014). Examples of the coded extracts from documentary sources are given in table 4.2. The coded extracts, comprising of

relevant phrases, paragraphs or sentences from the document contain part of the unique name which is assigned to the document and a serial number. For example, PPO30-02 was a coded extract from the document “PPO Annual Report 2013\_PPO30”.

Table 4.2: Document Analysis Coding Examples

Document name	Coded extract number	Coded extracts
PPO Annual Report 2013_PPO30	PPO30-01	<i>“In the context of e-government initiative, the Ministry of Finance and Economic Development signed a supply contract in December 2013 with Nextenders (India) Pvt. Ltd in consortium with Sify Technologies Ltd of India for the supply, installation, testing and commissioning of an e-procurement application.” “In line with Government’s plan towards a fully-fledged digital society requiring increased use of ICT in public administration, the PPO introduced the e-Procurement” (PPO Annual report, 2013)</i>
	PPO30-02	<i>“The road is generally not easy as it requires commitment to break many established orthodoxies for the technology. Requiring public bodies to embrace e-Procurement has been an unprecedented challenge to break administrative inertia”.</i>

#### 4.11.2 The nodes tree and description

After the coding process was completed using NVIVO software, a project map was generated showing the nodes falling at least in the first level of the tree hierarchy. The full coding results and the description of all the nodes including the nodes tree are found in [Appendix D](#).

#### 4.11.3 Abductive approach to data analysis

This research adopted an abductive approach to the dataset and was facilitated by the integrated theoretical framework of the LAM (Flynn and Hussain 2004) and Orlikowski’s Technology-in-Practice (2000). The initial data coding relied on the LAM framework (Flynn and Hussain, 2004) that served as the guiding sensitizing theory and provided an initial set of broad themes for analyzing legitimation activities and their outcomes. A detailed example of the coding process using the LAM framework is shown in section 4.11.4. The key themes were drawn from the stages of the LAM framework (Flynn and Hussain 2004). The process of data analysis started with the lowest level of coding. Text fragments from the interview transcripts were coded into third level codes. The third level codes were then reviewed and merged into second level codes. In this process of reviewing and merging codes, the codes were constantly cross-checked against documents

and web-site contents sources. The validated second-level codes were then grouped into sub-themes which were ultimately reviewed and grouped into constructs for the main themes as the first-level codes. In this part of the research, the norms inscribed into e-procurement software were also studied and coded as it made key contributions in understanding the reactions of the stakeholders to the e-procurement initiative. As the data analysis using the LAM framework (Flynn and Hussain 2004) was progressing, emerging themes were analyzed and in case they were related to legitimation concepts that could not be explained by the initial guiding framework, these concepts were further examined within the actual context that they were emerging using Orlikowski's (2000) technologies-in-practice. This necessitated the initiation of an open coding process of the dataset to capture the relevant features of e-procurement implementation. A detailed example of this open data coding process underpinned by the thematic analysis technique is shown in section 4.11.5.

#### 4.11.4 Example of coding process using the LAM

“**Construct legitimation target**” is one of the main themes derived from the LAM framework (Flynn and Hussain, 2004). “e-procurement as the new norm for better accountability and transparency in procurement” is a sub-theme. Referring to table 4.3, the aims of e-procurement and its expected benefits are the 3<sup>rd</sup> level codes that are grouped into the sub-theme of ‘e-procurement as the new norm for better accountability and transparency in procurement’. Project phases and events, e-procurement as the new norm and sub-targets are the sub-themes that all together constitute the main theme “construct legitimation target”.

*Table 4.3: Codes of the Construct Legitimation Target Main Theme*

Codes into sub-themes	Files	reference
e-procurement as the new norm for better accountability and transparency in procurement	13	48
aims of e-procurement	11	16
Change culture	6	10
Change in work practice and standardization of process	2	2
e-procurement expected benefits	8	17
the underlying procurement process compliant with PPA	2	3
project phases and events	8	19
general announcement and ISD stage	3	3
implementation phase 1 onboarding any public body	1	1
implementation phase 2 high value public body	4	7
official launching of e-procurement	3	3
pilot phase of implementation	3	7

sub-targets	5	8
accompany users in the learning process	1	1
address users' concerns and needs	4	4
attempt to operationalize evaluation module	1	1
create a reputation for e-procurement and procurement process	4	5
improve international score in ease of doing business with e-proc	1	1
progress self-tracking	1	1
routinise e-procurement to reach autonomy in operations	4	4
secure support of only high procurement value--volume public bodies	2	2
secure support of suppliers	1	1
secure top management support of public bodies to own change and generate a change mindset	6	7
timely implementation	1	1
top management commitment and ownership	3	4

### Emerging themes

As part of the legitimation strategies, instead of conforming to the norms of stakeholders or dismantling their norms as being the only two possibilities in the legitimation-seeking process, the legitimation-seekers eliminated uninterested stakeholders which were found to negatively impact on the success of the project, through “*selective prioritization and exclusion procedure*”. “Raising reputation of the e-procurement software” was also an emergent theme in the legitimation-seeking process.

Other emerging themes were linked to legitimation status when the researcher found that legitimation status was not dichotomous (granted or not granted) but also included ‘partly granted’. These legitimation statuses are associated with e-procurement implementation and the researcher delved deeper on how the stakeholders describe this experience and how they give meanings to the outcome of e-procurement implementation that underpinned multiple legitimation structures.

#### 4.11.5 A detailed example of the thematic analysis process

This section outlines a detailed example of the application of the thematic analysis process. After repeatedly listening to the voice recordings and reading the interview transcripts, the researcher noted some key patterns in the data: for example, comparing users’ interviews, most users spoke about the “implementation result” in a quite similar way and these extracts generally include key components that implies “economic outcome” and “complaints”. “Each category is a grouping of loosely cohesive codes pertaining to one phenomenon” (Hugues & Jones 2003). The comparison and integration of the categories were then done,

and more abstract categories were formed leading to an emergence of a hierarchy of categories (as recommended by Hugues & Jones (2003)). The process alternated between the data and categories, eventually grouping categories into high-level themes. Being a highly iterative process, the data analysis took a long time, requiring moving back and forth between the data and the preliminary results (Elsbach & Sutton, 1992). The interviews done at the outset gave a broad indication on the types of outcomes that is fallback, part-usage and success. In a similar way, legitimization seekers, their strategies, the stakeholders, e-procurement software, and outcome of implementation became the basic first-level components of e-procurement implementation that were identified from the dataset using basic reasoning. The process started with the third-level coding that required the direct coding of text fragments from the plain transcript. This coding level resulted in the generation of a high number of codes which meant that re-organization of codes was necessary. Following this review and merging of codes where feasible and without distorting the meaning, the number of codes was reduced. Resultant codes were then grouped into sub-themes. At the 2nd level, the sub-themes were once again reviewed and merged. Finally, the sub-themes were grouped into main themes that were derived from the common meaning of the sub-themes. An example of the coding process is provided in table 4.4 and 4.5. In some circumstances, the codes were cross-checked against secondary data for validation purposes. For example, if a public body claimed that it is using e-procurement, its Invitation for Bids (IFB) statistics was immediately verified on the e-procurement portal of the Government of Mauritius. Furthermore, in one case, the user interviewed in October 2020 claimed that e-procurement has recently been implemented and was operational while this was not the case when cross-checked against secondary data.

### Lowest level coding

Table 4.4: Lowest Level Coding

Lowest level codes	Text fragments	Interview Transcripts
Negative economic outcome	<i>The number of bids received is lower than paper-based. Got only 1 bid for the first one launched on e-proc and it was not responsive. So, I was already discouraged to continue with the system.</i>	EPROC23
e-procurement process related difficulties	<i>E-procurement is more time consuming than paper bids. bid opening is more complicated than existing paper method</i>  <i>Problem with e-procurement software is with the decryption and re-encryption at the supplier side. It take 2 days. On some occasions we found that the supplier forgets to do this, the bid is considered as no-bid submitted</i>	EPROC14

Data format limitation	<i>Now bill of quantity is 30-40 pages. (He showed sample document of a bill of quantity). We will need to input items, sub-items and description. It's there that the contractor will put the price. The system accepts only one format and in Excel only</i>	EPROC23
Inadequate validation and system rigidity	<i>The system highlights that it was saved successfully.. only that supplier drew attention that it was wrongly filled..in fact the system should have indicated that some fields were empty</i>  <i>This quotation had to be cancelled..price schedule..we should scroll down ..1,2,3 we tick but did not scroll down to get other items. When we clicked on OK, the system accepted it and did not prompt of errors,...inadequate validation..the suppliers could not put their amount..when we've asked PPO if it can be corrected..they said it cannot be and we had to re-launch.</i>	EPROC11
lack of user-friendliness	<i>Qualifications of contractor- system is not simple as google form or drop box. It is complicated.</i>  <i>Now for inputting materials details on system (even for small items), details have to be loaded in excel and merged. Suppliers are often confused. Prices exclude vat. They confused on these things. System is 50 % user-friendly not 100%.</i>	EPROC26

### Grouping lower-level code into sub-themes and the main theme.

Table 4.5: Grouping Lower-Level Code

1 <sup>st</sup> level	2 <sup>nd</sup> level	3 <sup>rd</sup> level	Lowest level codes
Implementation assessment	Complaints  Complaints	Complicated system  Unmet user requirements	<ul style="list-style-type: none"> <li>• e-procurement process related difficulties (15-41)</li> <li>• e-procurement document template issues (7-19)</li> <li>• Data format limitation (2-2)</li> <li>• inadequate validation and system rigidity (3-4)</li> <li>• lack of user-friendliness (6-7)</li> </ul>

#### 4.11.6 Triangulation of data sources

Table 4.6 shows triangulation of the accounts of legitimation seekers with legitimation providers and secondary sources at each stage of the e-procurement implementation data analysis to ensure high quality of the research results.

Table 4.6: Triangulation of data sources

Stage of implementation	Legitimation seekers' interviews	Legitimation providers' interviews	Secondary sources ( <a href="#">Appendix B</a> ) & observations
ISD stage	EPROC01, EPROC04, EPROC03,	EPROC22, EPROC25, EPROC05,	PPO30-01, PPO29-01, PPO47, PPO38, PPO14, PPO31, PPO21,

Stage of implementation	Legitimation seekers' interviews	Legitimation providers' interviews	Secondary sources ( <a href="#">Appendix B</a> ) & observations
	EPROC29,EPROC02, EPROC29C	OBS_TRAIN02, EPROC10, EPROC28, EPROC20_GROUP_4_AM PSO_ACCT, EPROC11,EPROC_GROUP_3_MPSO_ACCOUNT,EPROC23,EPROC25, OBS_TRAIN04_EVAL,EPROC12	PPO19, PPO16, NAO04, NAO01, NAO02, NAO03, PPO30-01, PPO51, PPO12, PPO28, PPO28-02, PPO38, PPO28-03, PPO52, PPO53
Official launching and the pilot phase	EPROC04, EPROC29, EPROC01, EPROC29C, EPROC03, EPROC04	EPROC12, EPROC28, EPROC07 EPROC_GROUP_3_MPSO_ACCOUNT, EPROC26	PPO28-03, PPO52, PPO53, PPO33, PPO30, PPO28-03, EPROC08_PPO_SPOC, PPO47, PPO48, PPO31, OBS_TRAIN_03, PPO28_04, PPO33-02, PPO61, CWA02,OBS_TRAIN02
First phase	EPROC29, EPROC04, EPROC01	EPROC26, EPROC25 EPROC13, EPROC14, EPROC28, EPROC16,EPROC05,EPROC23, EPROC06,EPROC10, EPROC24,EPROC26,EPROC27, EPROC11	PPO38, OBS_TRAIN02,OBS_TRAIN03
Second phase	EPROC01, EPROC04, EPROC01, EPROC03, EPROC29	EPROC_GROUP_3_MPSO_ACCOUNT, EPROC_GROUP3_PSO_ACCOUNT, EPROC06, EPROC05, EPROC11, EPROC21, EPROC22, EPROC27, EPROC25, EPROC_PSO_FDL, EPROC29A, EPROC24, EPROC20_GROUP_4_AM PSO_ACCTOBS_TRAIN02, EPROC17	PPO32, PPO33, PPO28, PPO53, OBS_TRAIN02, PPO12, PPO14, OBS_TRAIN04,

#### 4.12 Qualitative Comparative Analysis

Qualitative Comparative Analysis (QCA) is a popular method used to explore the relationships between multiple conditions or configuration and an outcome by drawing from set-theory and Boolean algebra (Mattke et al., 2021). QCA is useful in identifying whether a set of conditions are sufficient to determine an outcome or whether a set of conditions are necessary for an outcome to happen. Overall, QCA is a

convenient technique that reduces the complexity associated with the interplay of several conditions that impact an outcome (Mattke et al., 2021). The comparison of the three different e-procurement implementation outcomes with respect to the different configuration of the key-driving and contextual factors became challenging. This led to the use of a systematic approach of QCA which recommends the construction of a truth table for analysis. The truth table facilitated the identification of conditions or configuration of conditions which might have contributed to each e-procurement implementation outcome and whether the absence of these conditions might have led to other outcomes.

#### 4.13 Ethical Considerations

The researcher has followed the procedure to submit Ethics application for this research. When the approval was obtained from the Ethics Committee of the University of Cape Town (UCT) (See Ethics Approval Letter in Appendix I section I.1), the researcher met the PPO Director to convey the ethics approval for data collection and submitted a research execution plan and the official Approval of Ethics to the Director of PPO to comply with their administration needs for conducting the research. The official letter of approval from the research organization is found in Appendix I Section I.2. For each interview, the participant was briefed about the aims of the research and was requested to sign an informed consent form before the interview started. The participants were also informed about their rights to withdraw from the interview at any time and to choose not to answer any particular questions. Each participant was reassured that the data would be kept confidential and that no individual or Ministry or Department details would be published in this thesis or journals. Furthermore, the interviewee was informed that he or she could request a draft copy of the research results and analysis.

#### 4.14 Security and privacy of data

Ensuring data security and privacy is essential in social science research involving human subjects. This research adhered to several best practices of data security and privacy. Collected data was stored in a secure manner to prevent accidental exposure, loss, or intrusion. Recorded interviews and transcriptions soft-copies were saved on external hard disk which was password-protected using a strong password. All research documents and media containing raw data were safely stored under lock and key. Upon completion of the thesis, all voice recordings files were deleted.

#### 4.15 Research rigour

It is necessary to ensure that rigour is maintained throughout the research work and ensure research quality. The seven principles suggested by Klein and Myers (1999) are valuable and frequently used by researchers doing interpretivist-based studies to critically reflect and defend the quality of their methodological approach (Walsham, 2006). In chapter 7, these seven principles are applied for evaluating this research considering the contextual nature of e-procurement.

## Chapter 5: The case study and the findings

### 5.1 Introduction

This chapter presents the case study used in this thesis. The case study concerned the legitimization process in a public e-procurement project of the Government of Mauritius. To achieve continued demand-side stakeholders' input and to get their support and acceptance for the project, the Government of Mauritius entrusted the Procurement Policy Office (PPO) the responsibility to drive and implement the e-procurement project across all the affected public organizations. The designated project team of the PPO carried out a series of legitimization activities as part of their implementation efforts to seek legitimization of the concerned stakeholders. This case study seeks to gain insight into how legitimization of IS was gained or failed and to understand the rationale behind the legitimization activities applied in the project for the period November 2019 to August 2022. Firstly, the legitimization-seeking process is understood from the viewpoints of the e-procurement project team who became the legitimization seekers and gave descriptive accounts about their experience of the implementation process and their perceptions about the outcome of e-procurement implementation. Legitimation activities are implicit and are derived from the descriptive accounts obtained. Secondly, the end-users who were identified as the legitimization providers described their experience about the implementation of e-procurement, how it unfolded in the respective public body, what meanings they assigned to IS and what their expectations and concerns were with the new system. Their viewpoints served to validate the accounts of the legitimization seekers to the extent possible, concluding whether legitimization has been really granted or not and to spot possible contradictions or falsehood. Both perspectives were merged to obtain insights regarding the legitimization-seeking process and to identify the legitimization structures that emerge as a result of the legitimization-seeking process in the context of use during a given period.

This chapter starts with an overview of the organizational background of the PPO followed by a brief description of the e-procurement project initiation. The stakeholders of e-procurement, the procurement workflow and the key milestones of the e-procurement project are provided in subsequent sections 5.3.1., 5.3.2 and 5.3.3 respectively. The findings of the research are then presented in section 5.4 whereby a road map is provided for better clarity on the presentation of the findings. The legitimization-seeking cycles for the milestones or phases of the e-procurement project are fully explained in this section.

### 5.2 Organizational background

The Procurement Policy Office (PPO) functions under the aegis of the Ministry of Finance, Economic planning, and Development of the Government of Mauritius (Procurement Policy Office, 2022). Its mission is to foster a modern and efficient public procurement system. As part of its functions, it formulates procurement policies including directives, procedures, instructions, and the technical notes for best

procurement practices for public bodies of the Government of Mauritius. Public bodies<sup>10</sup> are Ministries, departments, and other organizations of the Government of Mauritius such as the Ministry of Youth Empowerment and Sports and Recreation, the Mauritius Digital Promotion Agency, and the Central Water Authority (Government of Mauritius Portal, 2020). The PPO aims at assisting these public bodies to set-up and maintain a procurement structure that embeds good governance principles, promote good procurement practices that will contribute to achieve efficiency and effectiveness in the procurement process (PPO Functions of Policy Office, 2020). Among its other functions, the Procurement Policy Office issues standard forms of contracts, bidding documents, pre-qualification documents, requests for proposals and other similar documents for mandatory use by all public bodies (PPO Functions of Policy Office, 2020). The PPO also gathers information from different public bodies on procurement activities and ensures that these public bodies are complying with the Public Procurement Act (PPO Functions of Policy Office, 2020). The PPO periodically prepares and conducts training sessions for public officials, contractors and suppliers concerning procurement (PPO Functions of Policy Office, 2020).

Table 5.1 provides a summary of the units of the PPO. The project team was constituted from the personnel of the different units (PPO Procurement Policy Office Functional Structure, n.d.).

*Table 5.1: Summary of the Units of the PPO*

<b>Units of the organization</b>	<b>Organization key roles and responsibilities</b>
Legal matters and compliance	“Draft regulations, directives, circulars, guidelines, and amendments to Public Procurement Act, investigate complaints from Public Bodies and suppliers, execute debarment and disqualification of defaulting suppliers and conduct performance and compliance evaluation in public bodies” (PPO Procurement Policy Office Functional Structure, n.d.)
Capacity building and advisory	“Perform training needs analysis and designing relevant courses, train the trainers, conduct and oversee training programme in-house or in collaboration with other institutions, conduct procurement R & D, compile advices and guidance issued and follow-up on outcomes, update FAQ system for consultation by public bodies” (PPO Procurement Policy Office Functional Structure, n.d.)

<sup>10</sup> As per the Public Procurement Act 2006 of Mauritius, a public body is a Ministry or Government department, a local authority, a parastatal body, or any such other bodies as specified in the First Schedule of the Act.

Procurement templates and innovative practices	“Develop and test bidding and contract models to be used in public sector, facilitate and coordinate use of framework agreements, customize digitalized standard bidding documents/templates for the e-procurement system, development of procurement techniques such as performance based technical specification and promote sustainable public procurement” (PPO Procurement Policy Office Functional Structure, n.d.)
Information Technology	“Implement the e-procurement system, manage helpdesk, general IT support, management of the centralized registration process, e-procurement support service provider's contract management, management of Public Procurement Portal and management of PPO website” (PPO Procurement Policy Office Functional Structure, n.d.)

5.3 Initiation of e-procurement project

The Procurement Policy Office (PPO) was mandated by the Government of Mauritius to drive and implement the public e-procurement system (e-PS) in 204 public bodies. The PPO owns and manages the e-procurement system. As shown in figure 5.1, the e-PS, a web-based application, which is hosted at the Government Online Centre (GOC) of Mauritius, connects both the users of public bodies and registered suppliers of goods and services, works and consultancy including SMEs on a single platform to electronically conduct public procurement proceedings. It is mandatory for the suppliers, local or international, to register on the e-procurement portal and purchase a digital signature certificate (DSC) prior to submit bids electronically. The PPO created a team to implement the e-procurement project (e-procurement system of Government of Mauritius, 2015c).

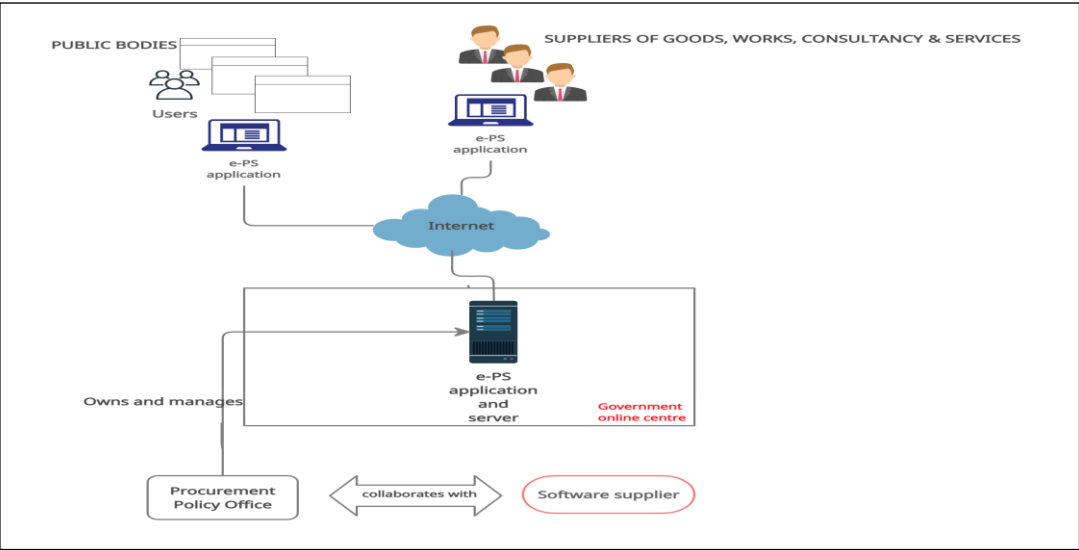


Figure 5.1: The e-PS Infrastructure Diagram

### 5.3.1 The stakeholders of e-procurement

In this research, the stakeholders of e-procurement system are classified as demand-side and supply-side (De' 2005). As shown in diagram 5.2, the supply side refers to the e-procurement project team of the PPO, who are the drivers and hence the supporters of the project whereas the demand-side stakeholders which use the e-procurement system are the end-users of public bodies and registered suppliers of goods and services, works and consultancy.

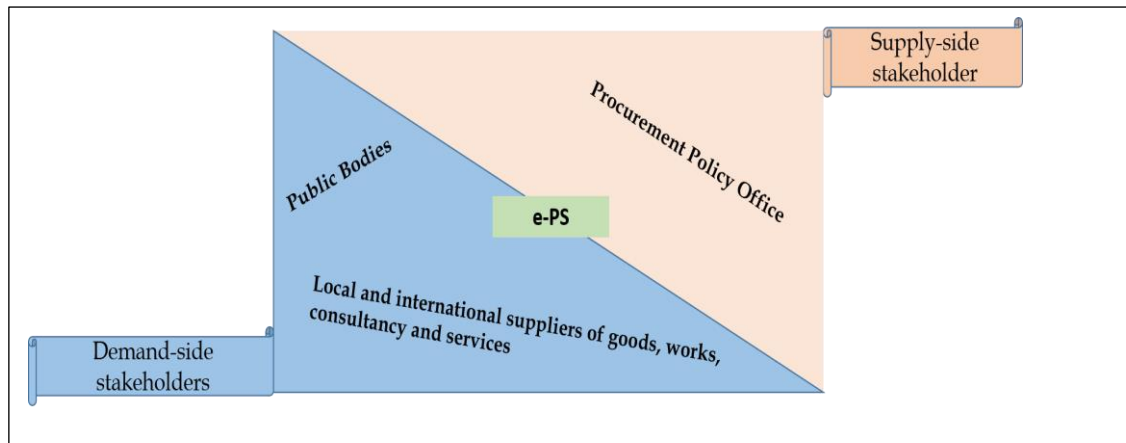


Figure 5.2: Stakeholders of e-PS

The demand-side stakeholders are:

- Procurement and supply cadre of public bodies:  
The procurement and supply staff are responsible to prepare, review, publish and award bids. There are around 400 officers in this category. They are posted to 33 Ministries and departments, and they are the end-users of public e-procurement. The procurement and supply category of officers include different grades including Manager Procurement and Supply, Assistant Managers Procurement and Supply, Principal Procurement and Supply Officers, Procurement and Supply/ Senior Procurement and Supply Officers, and Assistant Procurement and Supply Officers (Pay Research Bureau, 2021). These officers are recruited by the Ministry of Finance and Economic Development (Pay Research Bureau, 2021).
- Management/administrative and technical cadres of public bodies are involved in the procurement chain (PPO Annual Report, 2013).
- The bidders' community – The list of registered suppliers (national and international) of goods, services, works and consultancy services on e-procurement system. As of 2018, a total of 836

suppliers were registered on e-procurement but in 2022 the figure has raised to 5,232 (PPO Annual Report, 2018; e-procurement system of Government of Mauritius- Portal Statistics, 2022)

### 5.3.2 E-procurement workflow

The workflow underpinning the e-procurement system functions as a single chain requiring input from both public bodies and bidders. Figure 5.3 shows the distribution of the responsibilities of the stakeholders in e-procurement. However, the normal appeal process following an award is outside the scope of e-procurement system. Under the Public Procurement Regulations 2008 (PPO Regulations, 2022), an unfortunate bidder has the right to make an appeal if it feels prejudiced by the award. The Independent Review Panel is an independent institution that will investigate the appeal.

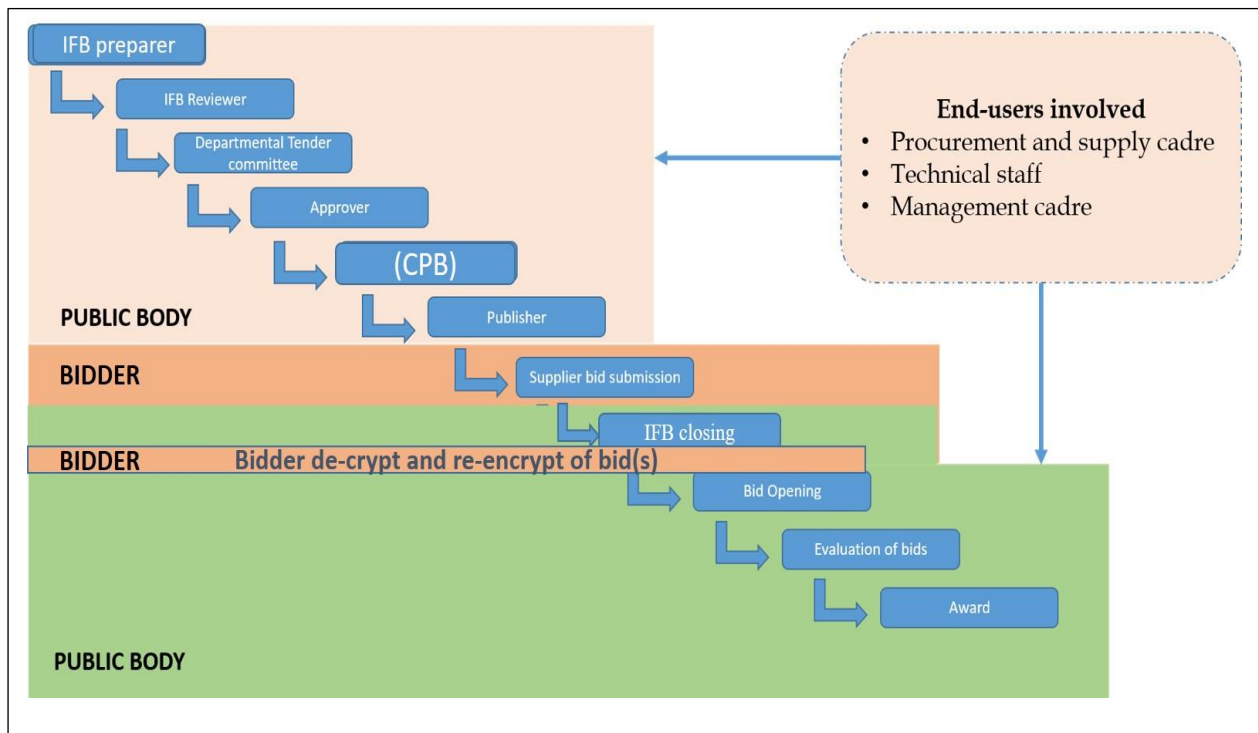


Figure 5.3: Process Flow and Responsibilities of Stakeholders in e-PS (source: e-PS presentation, 2020)

### 5.3.3 Key milestones of e-procurement project

The different project milestones and phases of e-procurement project with the corresponding sequence of events are mentioned in different annual reports published by the PPO (Procurement Policy Office annual report, 2020; 2019; 2018; 2017; 2016; 2015; 2014). After synthesizing all relevant information from these latter secondary sources, Figure 5.4 is produced to summarize the project phases and milestones of the e-procurement project, highlighting the key events that took place in each phase of the project. After the sign-off of the project in 2013, the Information Systems Development (ISD) stage kicked off immediately and

ended in August 2015. From September 2015 to June 2016, the pilot stage of e-procurement implementation was ongoing with the enrollment of 7 public bodies. During phase one, from July 2016 to June 2017, nine additional public bodies were registered on e-procurement followed by 40 additional institutions in phase 2. After July 2020, the Government decided to render e-procurement mandatory for all public bodies compelling all prospective bidders to register on e-procurement. This measure was officially enforced in January 2021.

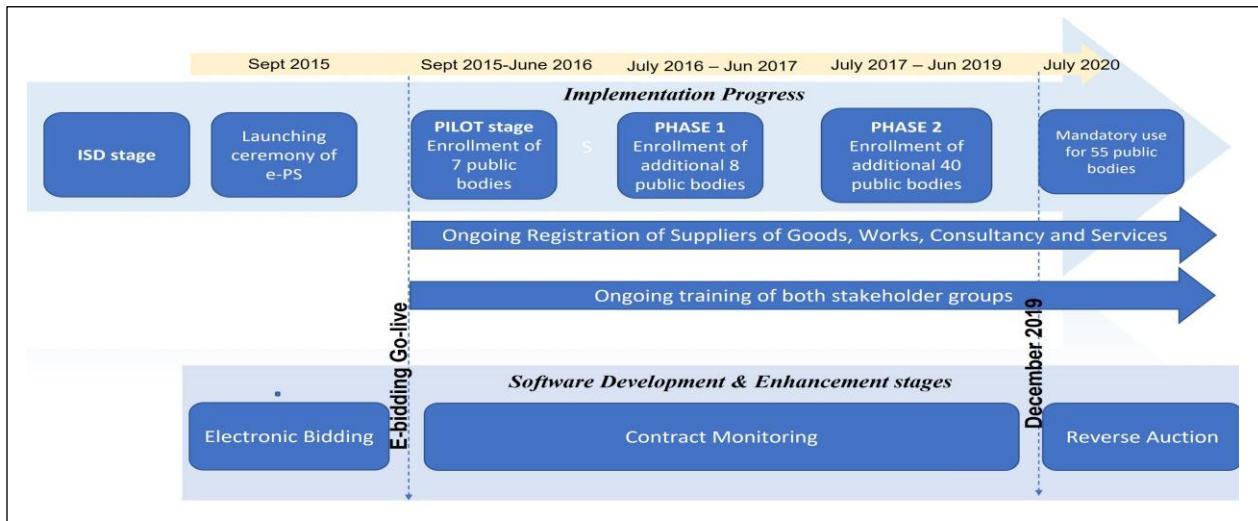


Figure 5.4: e-PS Project Milestones and Phases

## 5.4 The Findings - The legitimation-seeking process

This section explains the legitimation-seeking process that was carried out along the timeline of the e-procurement project implementation and in each of the project phases as shown in figure 5.4. For a better understanding of the dynamics of the process, a roadmap of the findings is shown in figure 5.5.

### 5.4.1 The findings roadmap

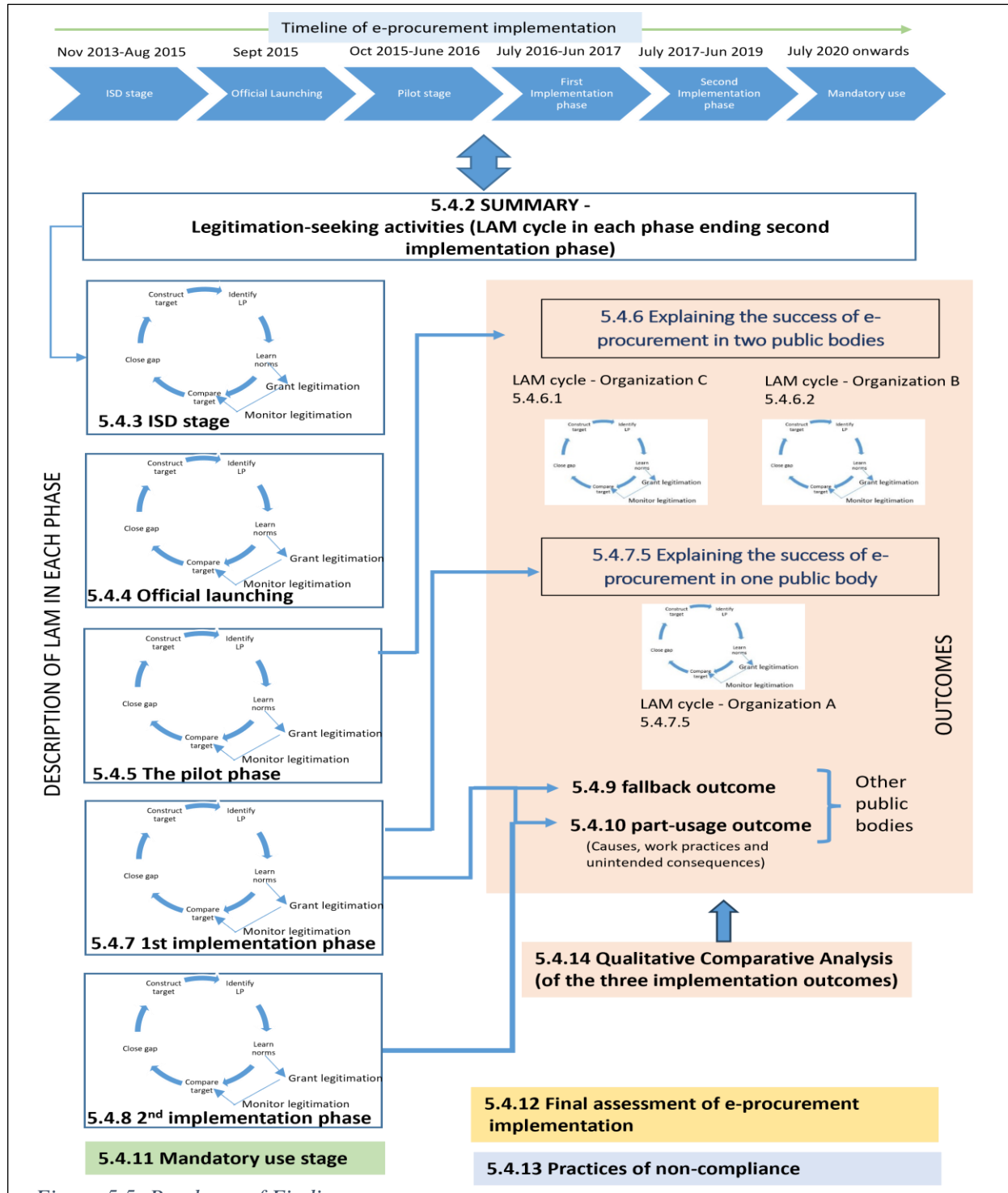


Figure 5.5: Roadmap of Findings

## 5.4.2 Summary of the Legitimation-seeking activities

Table H.2 in [Appendix H.2](#) summarizes the legitimation activities executed by the project team in each step of the LAM cycle namely: construct legitimation, learn the norms and spot gaps, apply legitimation strategies, impacts of legitimation strategies applied and status of legitimation and in each phase of the e-procurement project. It is indeed a comprehensive, concise, and insightful summary of the findings explained all along the rest of this chapter.

### 5.4.3 ISD stage (2014-2015)

The ISD stage kick-started in year 2014 and was completed by September 2015. During this phase, the software supplier customized the commercial off-the-shelf system (COTS) before deployment started in September 2015. (see coded extract **PPO10** in [Table B.3](#)). An understanding of the information systems development (ISD) stage, which preceded the implementation stage, provided key background information about:

1. The profile of the legitimation seekers and how they understand the norms of public servants.
2. The initial legitimation targets.
3. How the general aims behind the initial legitimation target such as “*lowering potential for fraud and corruption*” are translated into e-procurement software.
4. How the norms underlying the existing public procurement process, for example accountability and transparency are inscribed into e-procurement.
5. The historical deviations from these norms by public officers

#### 5.4.3.1 The legitimation seekers

To drive the e-procurement project, the Procurement Policy Office set-up three teams: an e-PS project team, a steering committee, and a capacity and change management team ((see *extract PPO29-01* in [Table B3 Appendix B](#)). The e-PS project team was constituted by the Procurement Policy as shown in figure 5.6. It was led by an IT manager recruited on contract basis to deploy and implement e-procurement across all public bodies, as commented by the IT manager:

*I joined the PPO in 2014 on a contract-basis as a project manager and I was involved in the e-procurement project for 1 year. (Observation: the label affixed on the door of his office is “G. J. IT manager”). I have 5 years of previous project management experience. My team is responsible for the implementation of e-procurement under the supervision of the director of the PPO. (EPROC01)*

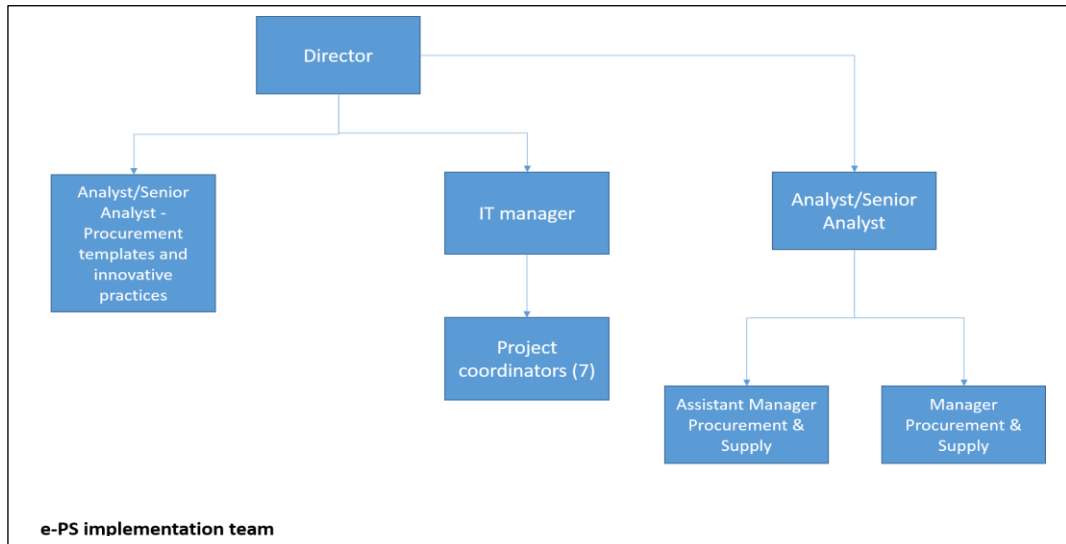


Figure 5.6: e-PS Project Team (Source, PPO Procurement Policy Office Functional Structure, n.d. see ( [B.4 -1 PPO55](#) in [Appendix B](#) )

The steering committee is another team which is comprised of top management representatives of key stakeholder Ministries of the Government of Mauritius and is led by the top executives of the Procurement Policy Office. They were meeting periodically for progress monitoring and decision-making at a higher level to encourage the uptake of e-procurement. The capacity and change management team functioned alongside the steering committee to manage the change. These project drivers and the e-PS project team (Fig. 5.6) became the initial legitimization seekers for the e-procurement project.

The IT manager leading the e-PS project team, has an information and communication technology (ICT) academic background and several years in ICT project management. as he affirmed:

*I completed my B.eng Electrical Engineering at the University of Mauritius, and I am studying for a master's degree in information systems and technology. I have just completed my MBA at Dulcere. I have 5 years of previous experience in managing software projects. (EPROC01)*

As part of the e-procurement implementation plan, a method of Single Point-Of-Contact (SPOC) was devised by the PPO to assist public bodies such that each resource person in the implementation team was assigned to one or more public bodies at which he or she must assist with for all issues of e-procurement (see extract **PPO60-01** in [Table B.3](#)). SPOCs are divided into ICT and procurement background. The IT manager supervises 7 project coordinators who acted as SPOC providing e-procurement technical support services, as explained by the IT manager:

*I am supervising 7 project coordinators. They are the SPOCs who provide all technical and application support to public bodies which onboard e-PS. They do follow-up with the public bodies. (EPROC01).*

The assistant managers of Procurement and Supply, who also formed part of the e-PS project team, had procurement competence enabling them to provide timely assistance to the procurement functional aspects of e-procurement, as asserted by one assistant manager of Procurement and Supply:

*I am an MPSO having more than 20 years of experience in procurement. I hold a degree in procurement and supply management.... We look only at the process of procurement inside e-procurement. For example, if an addendum has to be generated when an error happens in the opening of bids. (EPROC04)*

Thus, with the set-up of the different teams, the director of the PPO was demonstrating its serious intentions and commitment to drive e-procurement implementation.

The analyst officers in the e-PS project implementation team who work in the unit “Procurement templates and innovative practices” were however not interviewed, making this a limitation to the research.

#### *5.4.3.2 Constructing the legitimation target.*

The legitimation seekers constructed a legitimation target “e-procurement is the new norm for better transparency and accountability” as evidenced by the fact that the director of the PPO endorsed the idea that digitalization is required to improve the public procurement system (see coded extract **PPO11** in [Table B.3](#)). The legitimation seekers identified several benefits of e-procurement for public servants in their duties to handle the procurement of goods and services in the public sector. These benefits include amongst others: “to deepen use of ICT in work environment, bridge the G2B digital gap with the private sector and catalyse reform of public sector in modernizing the way public bodies will carry out procurement tasks; to toto er potential for fraud and corruption and to promote government sectoral policy for increased access and share of SMEs in public procurement.” (E-procurement system of Government of Mauritius, 2015c; see other benefits in [Appendix F2](#)).

The e-procurement project aimed at transforming the way in which public bodies conduct procurement activities along with facilitating local and international suppliers for doing business with the Government, by bringing both stakeholder groups on a single electronic platform to effect procurement transactions (see coded extract **PPO47-01** in [Table B3](#) in Appendix B). In so doing, the Government aims at improving productivity and efficiency in the public procurement process. The director of the PPO recognized that e-procurement as a new norm required a change of culture, changing work practices and standardization of procurement process (see coded extract **PPO30-01** in [Table B.3](#)).

#### 5.4.3.3 Learning of norms and spot gaps

##### 1. Existing norms inscribed in public procurement process

Given that the PPO issued the procurement guidelines that embed good governance principles (PPO Procurement Guidelines, 2017), some legitimation seekers of the project team who were Procurement and Supply Officers, were conversant with existing good governance practices and norms in terms of accountability, transparency, ethical practices and timeliness that are inscribed into the public procurement process of the Government of Mauritius, as stated by one participant:

*We give advice to public bodies on several procurement matters such as marging of preference for SMEs, bidding committees' composition etc. Our procurement guideline is the standard in the government. (EPROC02)*

All public bodies were following the same procurement process executed in the paper-based method and they also used an old public procurement portal in parallel to upload Invitation for Bids (IFB) and publish award notices (see coded extracts of examples of standard procurement procedures used by all public bodies: **PPO12**, **PPO16**, **PPO19** and **NAO03-02** in [Table B.3 in Appendix B](#); see the old public procurement portal in [B.4-6](#)) The legitimation seekers acknowledged that “not all public officers are bad” that is not all public officers are necessarily unethical in public procurement and they were convinced that several ones are diligently following the procedures, as explained by a respondent:

*“Not all public officers are bad. 80% are good officers but just because a handful of defaulters, the reputation of procurement is tarnished” (EPROC01)*

Based on the procurement guidelines issued by the PPO regarding procurement structure for public bodies (PPO procurement guidelines 2017; see an example of coded extracts of the content of the procurement guideline in [Appendix F3](#)), the researcher identified and coded the following existing good governance norms in the procurement process. The researcher then verified whether they were inscribed in e-procurement (see section 5.4.3.4.1).

- a) Ethical practices
  2. Equality of opportunity to all suppliers including SMEs
  3. Fairness to suppliers
  4. Declaration of conflict of interest of members who participate in bid evaluation and award
  5. Secured reception of bids by public officers and maintain bid confidentiality

6. Public officers should abstain from human touch or direct personal dealing with potential bidders
  7. Dissent in evaluation – any member participating in bid evaluation committee and who has a different opinion of the bid committee in respect to the way the evaluation is conducted, and the award is being made can call for a dissent.
- b) Transparency aspects
- Maintain proper records and communications throughout the process
  - clearly defined procurement process chain
  - Timeliness in procurement process
  - Competitiveness and responsiveness of bids – this aspect is not exclusively mentioned in the procurement guideline but several participants from different public bodies talked about it as key to achieve procurement objectives.
- c) Accountability aspects
- Clearly defined roles & associated responsibilities
  - Set-up of procurement committees (departmental tender committee, bid evaluation committee, independent review panel)
  - Sanction structure
  - Independent evaluation process
  - Acceptable languages

## **2. Historical bad governance records**

The legitimation seekers were also aware of historical deviations from the good governance norms as evidenced by the historical bad governance records of public bodies. Historical bad governance practices are reported in detail every year by the Director of audits of the National Audit Office (NAO) of Mauritius (National Audit Office, 2022). These include lack of accountability and transparency, excessive delays compromising timeliness rules in procurement, lack of ethics, and non-compliance to rules leading to heavy money losses, inappropriate method of procurement and professional shortcomings of procurement officers. These bad governance practices cost the government billions of Mauritian rupees every year. An example of extracts coded from NAO annual audit reports into the relevant items below are found in Appendix B, [Table B.3](#).

- Lack of transparency and accountability (NAO04-01)
- Excessive delays compromising timeliness in procurement (NAO02-01)
- Exploitation of emergency procurement method (NAO04-02)
- Inappropriate procurement method chosen (NAO03-01, NAO01-01)
- Lack of ethics (NAO04-03, NAO03-02, NAO01-02)
- Non-compliance to rules and heavy losses (NAO04-04, NAO02-02)
- Professional shortcomings in procurement exercise (NAO04-05, NAO03-03)

### **3. Slow-to-change culture**

The legitimization seekers, being public servants, were also very familiar with the public service culture as they identified the public service as a slow-to-change and claimed that strong commitment was required by the PPO to eliminate the institutionalized orthodoxies in the procurement process, (see coded extract **PPO 30-02** in [Table B.3](#) in Appendix B). To bridge the gap between their target and this norm, they aimed to break the administrative inertia and embarked on a change culture with the same resource base, (see coded extract (**PPO47-03** in [Table B.3](#) Appendix B). They believed that ICT would act as a driver of performance culture in the work environment (see coded extract PPO38-01 in [Table B.3](#) in Appendix B)

### **4. One procurement law but nuances in practices in procurement process**

The legitimization seekers also learnt that though a single procurement law guides the procurement process in the Government of Mauritius, the work practices guiding the procurement process differ from one public body to another, and the procurement structure for each public body can be adapted depending on nature of procurement, as they explained:

*We did not have any choice. We had to do the reform. When we speak about paper-based procurement, we have procurement law which is basically used by all Ministries and departments but each one doing procurement in their own respective ways, but it does not define how internal process of doing procurement should be. They use laws but do it in their own ways especially in terms of internal process: for example: who approves, who prepare the IFB in details. (EPROC29)*

*5 procurement sections are available in the procurement unit of <anonymized department>. Sections are categorized by type of medical products procured: staff of pharmacy and laboratory medical supplies. (EPROC05)*

The tie-up of the nature of procurement with the context of public bodies was raised by many legitimization providers through their explanations:

*The nature of procurement is different here. This is the <anonymized department> and often procurement of medical items has to be done fast. Each medical item has its own specification. We have high value of procurement, and we work with overseas suppliers. (EPROC05)*

*Nature of tendering is mostly restricted bidding at the Ministry. (EPROC10)*

## **5. ICT norm**

Furthermore, since the legitimation seekers were familiar with the norms of the public sector, they were aware that ICT norm had paved the way in the government as some e-government projects had already been institutionalized, though not all public bodies might have been digitalized by now, (E-Government Development Index, 2020; see code extract **PPO30-01** in [Table B.3](#) in Appendix B) The widespread use of ICT in public bodies were also advocated by the legitimation providers.

The end-users who were the legitimation providers had ICT skills as they used ICT in their day-to-day duties including the use of Microsoft office, cloud services, email, online survey, and Oracle based system as evidenced by their explanations below:

*We have all ICT infrastructure. We do not have desktop..all senior officers, account officers..have laptops. There is a cloud system, wifi. We have an IT dedicated infrastructure. (EPROC28)*

*We are computerising other systems at this Ministry. Along with e-procurement, there will also be an e-ims (e-Inventory Management System). EPROC20\_GROUP\_4\_AMPSO\_ACCT*

*Yes, I do, especially Excel and Word. I also have government email for my account and for the section. (EPROC05)*

*Of course, I use mostly excel and word and government email and we have to use internet to search for items catalogues and specifications. (EPROC10)*

*Before e-procurement was introduced, I used email for bid submission in my previous workplace because fax was not efficient given loads of documents that were often required from suppliers. (EPROC\_GROUP\_3\_MPSO\_ACCOUNT).*

*For example: let say we are using google form or survey monkey there are some online instant helps option, and when we position the mouse, instructions are displayed. In the e-proc system we do not have such help. (EPROC23)*

*I use ICT systems at work. I am using Oracle at Municipality, and I am comfortable with it. (He login into the system to demonstrate.) PPO's show case is <anonymized organization C>. But in many places e-procurement has not worked. When I have OAB I use the old public procurement portal. (EPROC25).*

The meaning they assigned to ‘e’ is also evidence of the ICT norm in the Government, as one legitimation provider stated:

*Yes it is necessary as the advantage is ‘e’ like HRMIS, all ‘e’ system.. we need to accept change and innovate..like email..we have accepted the change. (EPROC11)*

Thus, the legitimation seekers did not expect the implementation of e-procurement to be too “technically difficult” given that the users have ICT norms.

## **6. Rotation of staff**

The legitimation seekers were also aware of the long-standing public policy of staff rotation in the public service which aims at enhancing employees’ work experience in the different functional areas of the public sector. End-users along the e-procurement chain may be subjected to staff rotation. This policy may thus likely influence the e-procurement implementation process as different public officers would have different perceptions and strategic approach to digital innovation (see [B.4 – 2 PPO51- Staff Rotation in Public Sector](#)).

## **7. Equality of opportunity to SMEs**

Focusing on the suppliers’ stakeholder group, the legitimation seekers were aware that in the supplier’s community, there is a significant proportion of SMEs. On the basis of equality of opportunity ethical practice, SMEs inclusion in public procurement proceedings is supported by margins of preference in securing public contracts (see [B.4 – 3. PPO 16 Directive 5](#)). The e-PS system catered for SMEs at time of registration that ensure that the SMEs receive the margin of preference at time of award of bids (see [B.4 – 13. SMEs registration in Appendix B](#)). The legitimation seekers did however flag that special attention must be given to SMEs with the upcoming e-procurement project and that ICT readiness of SMEs was important. However, no ICT readiness assessment on the suppliers’ side was undertaken as explained by one legitimation seeker:

*We expect that at the very basic all suppliers, even the small ones, must have at least one laptop or PC and Internet to do business, right! Small businesses have their pages on Facebook. free Wifi spots at all Post Office are available..Look..if they want to have business with the government, they should be able to demonstrate that they have at least these basic things...otherwise their credibility becomes doubtful (laugh)..(EPROC02).*

## 8. Bid security and confidentiality.

Focusing on supplier stakeholder group, the legitimation seekers were already aware about the ethics of maintaining bid security when bids are received by public bodies. In the former method of public procurement, this was ensured through the reception of bids in a securely bid box under lock and key (see photo of bid box formerly used: [see extract of the Public Procurement Regulation about bid box in F.1](#)) and public bodies were required to ensure the physical security of the bids by not allowing bids to be opened by accident or viewed (see coded extract **PPO12** in [Table B.3](#) Appendix B).

### 5.4.3.4 Applying legitimation strategies

#### 5.4.3.4.1 Inscribing good governance principles in e-procurement (e-PS)

Key good-governance practices that formed part of the existing procurement process in respect of norms and ethics were inscribed in e-procurement. New norms were also inscribed to meet the aims of e-procurement underlying the legitimation target, especially that of clamping down on fraudulent and corruptive practices.

Figure 5.7 below shows all good-governance norms that were inscribed in e-PS and all these verified by own researcher's action when she followed training on e-procurement as a public officer.

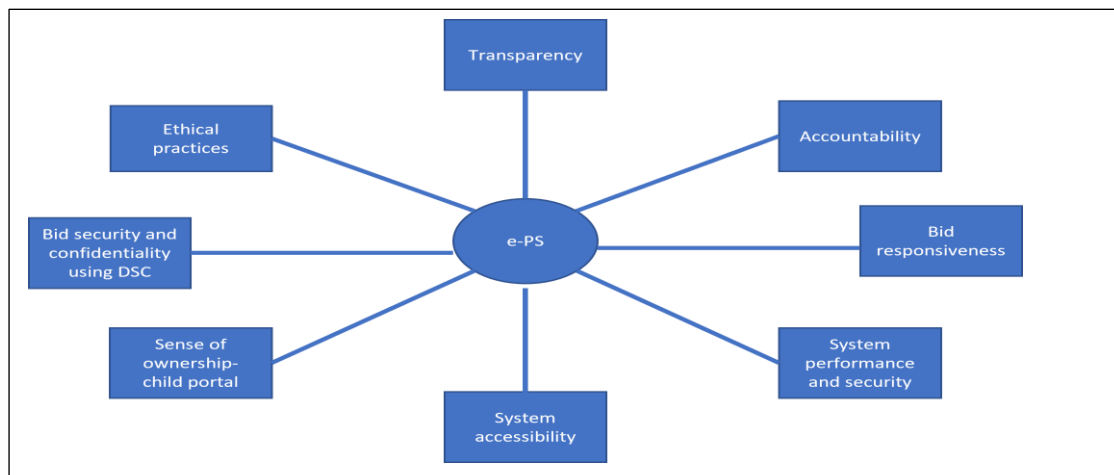


Figure 5.7: Norms Inscribed in e-PS and Other Relevant Positive Features

- **Accountability feature inscribed in system.**

The project team brought changes to the existing level of controls with different system roles assigned to different users or groups of users to inscribe the principle of accountability in the software (see figure 5.5).

One legitimation seeker explained the principle of accountability in e-PS:

*In the system, we have roles such as preparer, reviewer, publisher, approver and closer and opener of bids. So, if somebody prepares the document, the system forces the user to pass through a reviewer then it will go to a committee which will scrutinize and then will go to approver.. (EPROC29)*

Furthermore, given that the e-procurement software caters for the creation of different bid committees such as the Departmental Bid Committee (DBC) and Bid Evaluation Committee (BEC), also reflected the aspect of accountability.

- **Use of digital signature certificate (DSC) for bid security and confidentiality**

The legitimation seekers catered for use of Digital Signature Certificate (DSC) in e-procurement to encrypt bid data and ensure authentication of the submission. The aim is to address the need for maintaining confidentiality and security of bids submitted on the electronic platform. This was inscribed into the software at the outset, (see extract **PPO28-02** in [Table B.3](#) in Appendix B)

- **Reducing human touch by online bid opening facility**

Bid opening no longer requires bidders to physically attend the bid opening process in office but they can follow it online, as demonstrated by a narrative of a legitimation seeker regarding the bid opening during a flash flood event:

*When all radio has announced that all public bodies will closed at 11:00, the public body should have done an addendum, send emails or fax to the concerned suppliers...about the news and postpone it. They have unfortunately stuck to their old working procedures and did not pay due attention that with a new system which is online at a national level, the bidders need not be physically present at their office to follow bid-opening. This can be done on their laptops at their home. (OBS\_TRAIN04\_EVAL)*

- **inscribing the norm of reaching consensus in evaluation alongside e-procurement**

If a dissenting<sup>11</sup> situation arises, a dissenting process should follow as per the procurement guideline (PPO Procurement Guideline, 2017). However, this norm was not inscribed into e-procurement but alongside the software whereby the PPO confirmed that dissenting is not desirable, and the office can provide guidance to reach a consensus to avoid a dissenting situation. This is affirmed by one legitimation seeker:

*The chairperson can then create a new BEC. Desenting report will be uploaded on the system? It's only the chairman who has access to evaluation data. He has to upload the desenting report. The evaluator will not sign the main report but will sign a desenting report but this is not catered. Normally, we do not expect this to happen in the sense that we expect the members to voice out then come to a concensus having one*

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<sup>11</sup> Dissenting of a member participating in the bid evaluation committee means that the member disagrees with the chairman and other committee members, and henceforth decides to step down (PPO procurement guidelines, 2017)

*report. But we can have a situation. Normally members can seek guidance from PPO to reach a consensus. (OBS\_TRAIN04\_EVAL).*

The above claim was made in the presence of the researcher and no other trainees refuted this claim.

- **Prevention of fraud inscribed by the implementation of validation in e-procurement.**

Several validations were added in e-PS to prevent occurrences of fraud. For example, with the reduction of human touch through the online bidding system, public bodies cannot pick and choose bidders to participate in open advertised bidding (OAB) because once a bidder is registered, the bidder will automatically receive notifications in the form of alerts or emails from e-procurement for all new Open Advertised Bids (OAB)

*There are many good things.. for example: human touch.. we cannot deny ..the human touch ...any attempt to interfere with the procurement process like picking and choosing of bidders is not possible (EPROC 29A).*

Furthermore, bidders cannot tamper with the standards of bidding document nor change the Bill of Quantity (BOQ) values, as affirmed by one legitimation seeker:

*Bid letter was changed in a case..bidder change the wording “we agree we may not be disqualified”..this is a legal document...the bidder did a fraud but it was a legal document..the bid letter reads as “we agree that we may be disqualified....”. completeness of bid, we have a circular for completeness of bid submission form whereby it should be completed on itself by the bidder and uploaded on the system. (manual) BOQ is not normally given as soft-copy to supplier to avoid risk of tampering..it so happened in the past. BOQ cannot be changed however on ‘e’. (OBS\_TRAIN04\_EVAL)*

- **Audit trail implementation**

Audit trail has been implemented in the e-procurement system for transparency purposes. One legitimation seeker gave an example of audit trail in the evaluation process of a bid, highlighting the recording of all changes that are done in the evaluation process:

*The bidder response will be acting as the main component. You can qualify or disqualify them by clicking on the icon next to the criteria. System will ask you if you are sure to overwrite the result. Then you can click on ‘yes’ if you wish to overwrite it. There will be a note like an audit trail of who overwrote the result. (OBS\_TRAIN04\_EVAL)*

- **system-controlled daytime factor in closing and opening of tenders**

The daytime factor of the closing and opening of bids is now controlled by the system as explained by a legitimation seeker:

*Clock in the system is very important. Closing and opening of the tender..everything is done as per the clock..if you missed their deadline for publishing their tender, an addendum has to be produced ..if supplier missed the deadline...they will not be able to get access for submitting their bids.(OBS\_TRAIN04\_EVAL)*

- **Transparency norm inscribed in the system.**

Whilst recognizing that the former paper-based method was not sufficiently transparent for both bidders and the public sector, the e-procurement catered for a variety of Management Information System (MIS) reports and audit trail features that reinforce the transparency aspect of public procurement (see a coded extract, **PPO28-01** in [Table B.3](#) in Appendix B; PPO Annual Report, 2017). One of the key transparency features of the e-procurement system comes in the form of a comparative statement that is accessible to all bidders who can view their competitors' offerings once the bid is closed, as was affirmed by one legitimation provider.

*We have two types of comparative statements, one for the supplier and one for the public body (OBS\_TRAIN04\_EVAL) - Transparency as compared with old system is much better ..accounting officers are always scared of procurement but now they are happier with this system and feel more confident to give their approval. (EPROC 29A)*

#### 5.4.3.4.2 Stakeholder communication

The Procurement Policy Office (PPO) made a government-wide stakeholder communication by issuing a correspondence to all public bodies informing them of the amendment in Procurement regulation to cater for electronic bidding (see [B.4 – 4. PPO6 circular 6](#)). The office was thus also aware about bureaucratic administrative procedure in the public service whereby the public body should give its approval for starting implementation of e-procurement in its respective organization.

To bridge the gap between their target and the norms of the public servants, the legitimation seekers recognized that the implementation process was challenging, and they would need a whole change plan, (see **PPO30-03** in [Table B.3](#) in Appendix B) whilst adopting a phased approach to the implementation.

*Implementation in phases will facilitate the two main stakeholders, that is, the public bodies and suppliers to shift to complete electronic procurement transactions. (PPO29-01)*

Legitimation seekers also understood that resistance to change is normal at the initial stage of an IS project. One legitimation seeker expressed his viewpoints on the likelihood of resistance to change with the introduction of e-procurement:

*See, in any innovation, there is resistance to change at the start and I have put lot of emphasis on this blocking factor right at the start of the project. Down in the corridor, resistance to change is affixed on the conference room. (EPROC 29C)*

#### 5.4.3.4.3 Readiness assessment

The legitimation seekers undertook an assessment of the stakeholders' readiness for e-procurement focusing on public bodies only. They carried out several visits for the public bodies earmarked for e-

procurement roll-out. During these visits, the legitimation seekers assessed their readiness in terms of human resources and ICT infrastructure requirements.

*“In that programme, the Public Body is assigned a staff as a Single Point of Contact (SPOC) at PPO, the e-Readiness of the public body is assessed, and PPO officers”* (see PPO30-01 in [Table B.3 Appendix B](#); PPO Annual Report, 2013).

A user’s statement of one public body confirmed the readiness assessment for e-procurement at the ISD stage:

*“Initially, the PPO office made a site-visit at the tender unit of the <anonymized department> to evaluate whether the site meets all requirements in terms of connectivity, ICT infrastructure and staffing to implement e-procurement....*

*... We had all the basic elements to start the implementation of e-procurement. We were already using word and excel in our procurement work to launch quotation.”* (EPROC12)

Readiness assessment was not completed during the ISD stage but continued in other stages of the e-procurement project because there are 204 public bodies in the government which were not all ‘on-boarded’ altogether at the same time but were progressively enrolled on e-procurement. One legitimation provider of a public body which adopted e-procurement at a later stage of the IS implementation explained about the lack of human resources and obsolete ICT equipment which needed replacement during a readiness assessment meeting with the legitimation seeker:

*A SPOC from PPO met us here before we started using e-procurement, we were very clear that our computers need replacement and we are short of staff..see only one MPSO and one APSO. They took note of our grievances and spoke with the DPS.* (EPROC 27)

#### 5.4.3.4.4 Loose software coupling

Legitimation seekers opted for modular design of e-procurement with loose coupling. The online bidding and the online evaluation module were loosely coupled with minimum dependency. After completing the online bidding process, a public body had the choice of either proceeding with the evaluation module or doing an offline evaluation using a paper-based method, as explained by one legitimation seeker in a training session:

*“What is the offline evaluation: is simply you will stop here and make paper evaluation...?”* (OBS\_TRAIN04\_EVAL)

The evidence for flexibility for offline evaluation of bids following online bidding was mentioned in the user manual of e-procurement system. A photo of the relevant page of the user manual stating the above fact is shown in figure 5.8.

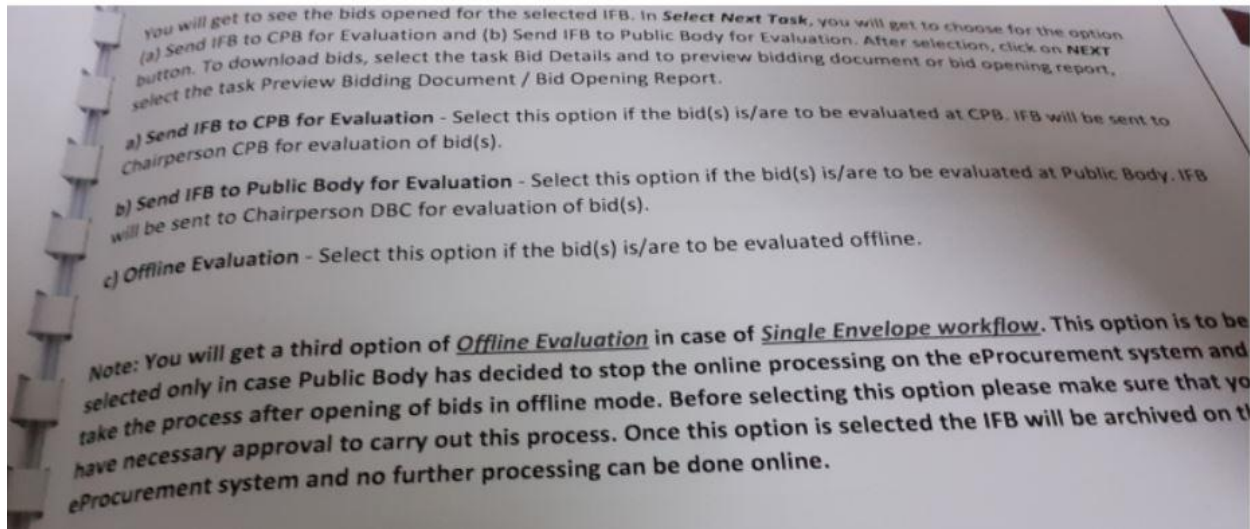


Figure 5.8: Evidence of Offline Evaluation Mode Option (Source: User manual on-site)

The loose coupling strategy in the software development indeed facilitated a phase approach of e-procurement implementation regarding its different functionalities. The PPO advocated that there were three distinct phases in the development and testing of e-procurement software (PPO Annual Report, 2016; PPO Annual Report, 2021). In phase 1, only the online bidding module was developed and then implemented by the end of September 2015. In phase 2, the online evaluation module, Management Information System (MIS) reports and the award processing module were developed and tested. By the end of 2016, these features went ‘live’ (PPO Annual Report, 2016). In phase 3, the software supplier undertook the development and testing of the remaining modules of e-procurement including the online Framework Agreement process, reverse auction, and contract monitoring (PPO Annual Report, 2018). However, it was not confirmed from the legitimization seekers whether there was user acceptance testing (UAT) for these modules by public bodies.

#### 5.4.3.4.5 Standardization of process

After analyzing the existing different ways of doing procurement, the legitimization seekers opted for standardization of process to make e-procurement workable for all public bodies, as asserted by one legitimization seeker:

*So, we were compelled to do standardization of the procurement process. Processes were standardised and streamlined. (EPROC 29)*

The commercial off-the-shelf (COTS) e-procurement software was customized to fit the standardized process, following which several public bodies were invited for the User Acceptance Testing (UAT), as commented by one legitimization seeker:

*The system came from India. It was a ready-made package. We did not adapt to their system, but we did the contrary, we make the technology adapted to our requirements. Our law, standard bidding documents and evaluation guidelines remained the same. The supplier makes the adaptation. (EPROC29)*

#### 5.4.3.4.6 Look and feel of child portal

The project team also improved the look-and-feel of the software to reflect the sense of ownership. This was done through the concept of child portal whereby each public body has its own customized application URL featuring its name. This approach imparted a sense of ownership, giving them the feeling that they own their respective portals for example:

*“<https://cwa.eproc.publicprocurement.govmu.org> is a child portal for the Central Water Authority; <https://ceb.eproc.publicprocurement.govmu.org> is a child portal for the Central Electricity Board.”*

#### 5.4.3.5 The impact of legitimization strategies applied

Stakeholders from two public bodies were particularly enthusiastic about implementing e-procurement when the project was announced. This is discussed in the next section.

#### 5.4.4 Official launching and initiation of the pilot phase (2014-2015)

##### 5.4.4.1 Constructing the legitimization target

While the original broad legitimization target still prevailed in this phase, the project team constructed a sub-target in this phase. They were looking forward to creating a reputation for e-procurement and to sell the product (e-procurement software) to the 204 public bodies. The legitimization seekers knew that a marketing technique was required to ‘sell’ e-procurement among the stakeholders, as evidenced by their claims:

*“How do you think we can improve usage? Through marketing. It is like we have a product and we should do marketing to promote it.”(EPROC 04)*

*“We did meeting with chief executives..we sell the products ..we explained the benefits..we did demonstrations...we did intensive follow-up with the public bodies...”(EPROC29)*

On the other hand, given that suppliers’ uptake was crucial for the success of e-procurement, the project team was working in parallel with them to seek the support of the private sector as implicated in their legitimization strategy in Section 5.4.4.3.1 and 5.4.4.3.3.

##### 5.4.4.2 Learn the norms and spot gaps

After the public-sector wide announcement of e-procurement, the project team learned that two public bodies, A and C, showed enthusiasm in implementing e-procurement. The former positively responded to the call of the project team for participating in the User Acceptance Testing (UAT) of e-procurement and was cooperative, thinking of the benefits of e-procurement. The claims of both the legitimization seeker (EPROC01) and the concerned legitimization provider (EPROC12) confirmed this.

*Yes, and we called upon many departments to make the testing but not all of them turn up. Mr O. was among the most who cooperated to test the bidding module. He launched a bid on the mock platform. He cooperated for the go live. (EPROC01)*

*We think positive and did not take it as a burden because if you gave a deep reflection..e-procurement does bring some positive things.., transparency..more reliable,. (EPROC12)*

*I find that e-procurement can render our life much easier during auditing process by external auditors. (EPROC12)*

*I was personally very willing to implement e-procurement. We had all the basic elements to start the implementation of e-procurement (EPROC12)*

Public body C, on the other hand, expressed interest in implementing e-procurement as the Chief Executive Officer (CEO) had a shared vision for an innovative procurement process. Organization C was a supportive

and enthusiastic stakeholder as explained by a legitimation seeker (EPROC29C) and same fact was confirmed by the concerned legitimation provider (EPROC28).

*We did not target <anonymized organization C> at the start. Initially, when PPO float a correspondence to all public bodies to inform about e-procurement and how it will be implemented, Mrs N. B., procurement head of <anonymized organization C>, contacted the PPO for a meeting. <anonymized organization C> expressed their interest to implement e-proc. Mrs B. wanted to rope in Mr Z.B. in the PPO team in the implementation of e-proc. We accepted her request (EPROC29C)*

*The government came with 24/7 vision of water supply, and we needed fast contract. our manager of supply and proc was in constant contact with PPO before the implementation so that we can try e-proc at <anonymized organization C>. (EPROC28)*

#### 5.4.4.3 Apply Legitimation strategies

##### 5.4.4.3.1 Training and registration of suppliers' stakeholders

In the implementation process, the legitimation seekers focused simultaneously on both stakeholder groups, that is, the public bodies and the private suppliers because e-procurement operations are chain-driven and cannot function without suppliers' input (see diagram 5.2 for mutual dependency of the stakeholder groups in e-procurement). Suppliers' registration and training on e-procurement were two fundamental requirements for using e-procurement (see coded extract **PPO60-04** in [Table B.3](#) in Appendix B; e-procurement system of Government of Mauritius, 2015c). Registration on e-procurement was and will be always progressive. The registration process involved administrative procedures concerning the purchase of a Digital Signature Certificate (DSC), as stated in the coded extract below:

*"To manage the security and integrity of bid data that is processed using the e-Procurement System, it is mandatory for the Suppliers to obtain a digital certificate." (e-Procurement system of Government of Mauritius, 2015a: pp4)*

To this end, they maintained the operation of an old public procurement portal so as not to cause prejudice to suppliers which had not yet registered or were in the middle of the process of registration, as affirmed by one legitimation seeker:

*No..we still publish notices and awards on the old public procurement portal...not all suppliers have registered. EPROC01.*

In so doing, the Procurement Policy Office ensured that the norm of "equality of opportunity" was duly respected and catered for all suppliers whereby registered and unregistered suppliers could consult both portals for bidding opportunities, as evidenced by procurement notices posted on the old public procurement

portal (see Appendix B4 - 6 for the photo & description of the Public Procurement Portal: [B4 – 6: Public procurement portal](#) )

#### 5.4.4.3.2 Seek support from powerful stakeholders from public and private sector

The legitimisation seekers of the Procurement Policy Office (PPO) sought the support of powerful stakeholders in the private sector by developing a partnership with the private sector. They established a joint Public Private Sector Steering Committee comprising, amongst others, the Joint Economic Council (JEC), the Ministry of Technology, Communication and Innovation and the Ministry of Public Service and Administrative Reforms of the Government of Mauritius to accelerate the uptake of e-procurement among private suppliers and to deliver suppliers' training effectively (see **PPO 47-04** in [Table B.3](#) Appendix B)

#### 5.4.4.3.3 Using marketing technique to encourage suppliers

For each tender published by a public body, the PPO was inviting suppliers for a free training program to encourage them to register on e-procurement and an advertisement was published in newspaper so as not to miss any potential supplier (see coded extract **PPO28-03** in [Table B.3](#) in Appendix B).

#### 5.4.4.3.4 Raising national awareness about e-procurement.

Built upon the enthusiasm and co-operation of public body A in the e-procurement project, the project team undertook a ceremonial action endorsed by a Minister of the Government of Mauritius for the launching of e-procurement in a renowned hotel located in Ebene, Mauritius, in October 2015. The event was broadcasted on TV news and published on website to raise national awareness for the software and to trigger a positive opinion about e-procurement among the demand-side stakeholders. In this launching ceremony, public body A launched its first online bid for the purchase of IT equipment (see [PPO52 B.4 – 5 for Official launch](#)).

At this stage, the old public procurement portal was still operational, and some public bodies were launching Invitations for Bids (IFB) using the paper-based method alongside the old public procurement portal. Evidence include press cutting invoking the paper-based bidding submission and the active old public procurement portal showing fresh uploading of IFBs (see the third press cutting relating to the [“procurement of an access control system”](#) in [F.5 – Public notice of bids](#))

#### 5.4.4.4 Impacts of legitimisation strategies applied

The launch ceremony was successful and legitimisation seekers were preparing for the pilot phase. At this stage, suppliers' registration was ongoing. The list of suppliers registered as at December 2019 was obtained from the legitimisation seekers as a Microsoft Excel file.

#### 5.4.5 The pilot phase

The pilot phase started with seven public bodies including the two public bodies which showed enthusiasm in e-procurement, as explained by the legitimation seeker:

*“Our model of implementation is based on pilot strategy. Pilot project started with 4 Ministries and 3 departments” (EPROC29)*

##### 5.4.5.1 Constructing the legitimation target

The purpose of the pilot stage in information system implementation is a crucial stage as it helps to reduce the risk of IS failure (Bansler and Havn 2010; Hertzum et al., 2019). The legitimation seekers felt it was wiser to embark on a pilot stage followed by progressive roll-out instead of a “big-bang” approach that requires the whole public sector to suddenly switch from paper-based procurement to e-procurement, as they asserted:

*You are an experienced IT analyst in the public service, right? and you know it fairly well that nobody takes risk to deploy large-scale systems in government at once.... Needless to say anything else about the nature of public servants... when it comes to introducing changes! (EPROC01)*

*We do not want any clashes with top management of public bodies and trade unions. Any voluntary participation in the initial pilot phase was most welcomed and we have given credit to these public bodies. (EPROC29)*

IS implementation may interrupt current organization’s projects or ways of working. Orlikowski and Gash (1994) suggest that ‘to interact with technology, people have to make sense of it; and in this sense-making process, they develop particular assumptions, expectations, and knowledge of the technology, which then serve to shape subsequent actions toward it’ (Orlikowski and Gash, 1994: 175). This notion supports the idea of a pilot stage in implementation of IS.

Early problems can undermine faith in the software and cause delays in subsequent implementation. A pilot stage can be allocated with sufficient resources and due attention should be given to the end users involved in this stage. The legitimation seekers of the PPO project team requested feedback from the users who were operating in their own real contexts. This was affirmed by the claim of the legitimation seeker:

*Their feedback on launching real bids online was important to us. (EPROC01).*

Bansler and Havn (2010) claimed that through pilot implementation, based on the feedback obtained from end-users, the implementors can then identify desirable changes in the organization’s processes impacted by the system.

#### *5.4.5.2 Learn the norms and spot gaps*

The two public bodies, A and C, which showed interest in e-procurement were the focus of the legitimization seekers as the latter were feeling confident that if these public bodies achieved success in the implementation (implicated by their legitimization strategies described in section 5.4.5.3.7), the reputation of e-procurement will be raised. A good reputation would facilitate the tasks of the legitimization seekers in ‘selling’ the software to other public bodies. The legitimization seekers assessed a little legitimization gap after they found that the public body C was ICT ready and had a well-defined procurement structure (see section 5.4.6). Having met all the requirements in terms of ICT infrastructure, staffing and structured procurement process, public body C only required support in terms of training, handholding and, change requirements to achieve success.

Regarding the remaining five public bodies<sup>12</sup> which participated in the pilot phase, being already aware of the slow-to-change culture of the public servants, the legitimization seekers adopted a soft-transition philosophy to close the legitimization gap (see Section 5.4.5.3.2).

#### *5.4.5.3 Apply Legitimation strategies*

##### *5.4.5.3.1 Improve credibility of team through ISO certification.*

The Procurement Policy Office (PPO) sought ISO accreditation which the director thought would play a key role to improve its credibility, positioning the PPO as a leading organization for implementing e-procurement across the whole Government. The office acquired ISO 9001:2015 from 30 June 2018 (see **PPO33-02** in [Table B.3](#) in Appendix B)

##### *5.4.5.3.2 Adopt a soft transition philosophy*

Built upon the aim for bringing a radical change in the procurement functions, the legitimization seekers advocated that the road was difficult (see coded extract **PPO30-02** in [Table B.3](#) in Appendix B). Based on their actions, it was clear that they opted for a soft-transition philosophy for a smooth transition from a deeply institutionalized paper-based method of procurement to e-procurement. E-procurement is often identified as a disruptive change (Barahona and Elizondo, 2012). The soft-transition strategy was characterized primarily by a phased approach to implementation and sustained ICT support services to the public bodies which were enrolled on a pilot basis. The range of ICT support services provided include amongst others: dedicated officers for handholding (SPOCs), a helpdesk service (e-procurement system of Government of Mauritius helpdesk, 2020), a process-based assistance, user manuals (see [F.2 – extract of](#)

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<sup>12</sup> This study catered for end-users’ interviews from **three public bodies** out of the five, including the two successful ones.

[user manual](#)), free training, mock platforms and six-weeks long on-boarding and follow-ups (see [annex F.6](#) flowchart). The end-users were indeed satisfied with the helpdesk service as affirmed by one legitimation provider:

*We have a dedicated and highly performing helpdesk ...each time suppliers were encountering difficulties in uploading their documents, they phone helpdesk (EPROC29)*

The legitimation seekers felt that handholding would increase the confidence of the public servants to launch bids on their own and gained maturity to achieve independence in carrying out e-procurement operations (see extract **PPO 28-03** in [Table B.3](#) in Appendix B). The handholding was also witnessed by the researcher through observations of a SPOC doing handholding of a public officer to prepare a bid as explained below:

*Observation: Mr R.S., the SPOC prepares the template in excel by matching the item specifications with the template columns. Once template preparation is completed, the MPSO logs in the system and verifies the filled template before it is uploaded by Mr R.S. on the system. The MPSO then waits for Mr R.S. to complete the whole operation. (EPROC08\_OBS)*

A mock<sup>13</sup> platform was also created by the supplier to allow the public bodies to launch real-case bids by mounting and publishing an IFB on a test instance on it prior to executing same on the live system (**PPO 47-02** in [Table B.3](#) in Appendix B). The legitimation seekers raised the confidence of top management of public bodies through the e-procurement mock platform which is a web-based system specially designed and customized for each public body. This mock platform was also used in the training of end-users for hands-on practice in preparing, reviewing, and publishing bids (see coded [extract PPO11 in Table B.3](#) in Appendix B). The mock platform was also utilized for parallel run and generated positive results as advocated by one legitimation provider which was implementing e-procurement in the pilot stage:

*The biggest success factor is the mock e-PS. This was a parallel run.. (EPROC28)*

#### 5.4.5.3.3 Organize and provide training for all.

The PPO was equipped with dedicated training rooms for training end-users of different public bodies and suppliers. The training room is equipped with laptops on desks, a whiteboard and one projector. This claim was verified by the researcher's observation who attended different training sessions to observe the training and on-going discussions and interactions between the trainers and the trainees in a real setting (see photo of training session in [B.4 - 12](#)).

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<sup>13</sup> A mock platform was a similar web-based electronic platform to the 'live' e-procurement with a 'URL' accessible to all public bodies.

The aim of users' training in software was to enhance their knowledge about the software. These users were encouraged to flag any requirements that have not been taken on board by the software developer. The office provided training to 114 public officers of 16 public bodies and 255 suppliers in the financial year 2019/2020 (see coded extract **PPO31-01** in [Table B.3](#) in Appendix B) and as asserted by one legitimization seeker:

*We give training for both public bodies and suppliers. (EPROC01)*

The PPO has also catered for user manuals, self-training through You-tube videos uploaded on the portal for international bidders (e-procurement portal of Government of Mauritius - "How-to", 2020). The PPO's helpdesk also provided assistance to suppliers for e-procurement registration (see coded extracts **PPO28-04** in [Table B.3](#) in Appendix B).

#### 5.4.5.3.4 Personal contacts and relationships

While personal contacts and good working relationships are not explicitly spelled as legitimization strategies, it nevertheless formed the basis of stakeholder support in e-procurement. One legitimization provider claimed that because of his previous working relationships with PPO staff and his good personal contacts, he agreed to cooperate to help them to achieve their aims of implementing e-procurement:

*I always had a very good personal relationship with PPO staff who are my colleagues...(EPROC12)*

*...How this good relationship? We worked together on legal issues regarding procurement in the past and we've developed good relationship. Because of this good relationship, I was ready to cooperate with them to advance the implementation of e-procurement (EPROC12)*

His claim was confirmed by one legitimization seeker:

*We spoke with L.K. He is a nice guy, and we get along with him. He encourages the staff to implement e-procurement here. (EPROC\_GROUP\_3\_MPSO\_ACCOUNT)*

#### 5.4.5.3.5 Stakeholder engagement and communication

The project team undertook comprehensive stakeholder communication and engagement with both stakeholder groups, public bodies, and suppliers, to encourage the testing and uptake of e-procurement. They advised stakeholders through various communication means, phone, email, letters, and meetings and claimed to hold 909 meetings sharing an estimated time of 1652 hours to their service (PPO Annual Report, 2016: pp32). Legitimation providers confirmed that PPO engaged with them for example to assist them to engage with their suppliers, as evidenced by their statements below (and same argument was also advocated by legitimization providers in the next phase):

*We wrote to PPO. The office advised us to fix a meeting with our suppliers and their representatives will attend to explain to suppliers about e-proc and plan training. <anonymized Ministry> is a big Ministry!*

*Observation of the researcher: One whole floor of a building reserved just for processing procurement of this ministry (EPROC07)*

*The Chief Executive raised an issue about the supplier problem when he had a meeting with the PPO at the MInistry. PPO advised to use the list of suppliers registered in the database. (EPROC26)*

Ideally, for each stakeholder organization, a six-week workflow was planned and executed for ensuring smooth on-boarding, as explained by a legitimation seeker. However, in practice there was no pre-defined timeline that was followed. All the legitimation seekers mentioned that a kick-off meeting is indeed done with the public body and subsequent follow-up without committing on the end dates. This was affirmed by one legitimation seeker as follows:

*At each PB level, when we on-board a public body, we hold a first kick-off meeting with management of theat PB to explain the usefulness of e-procurement and the modus operandi for implementation. Then a SPOC will be earmarked for that PB and will follow-up. The SPOC will configure the e-PS at the site. (EPROC03)*

They also met the suppliers and explained the importance of e-procurement, their rights to voicing out if any criteria were causing prejudice to them and how they should use e-procurement to raise their objections. This claim was supported by the researcher who observed the supplier's training.

*PPO also do engage with suppliers. We meet suppliers. (EPROC01)*

*You should read the bidding document well... It gives full information about who can submit and who cannot submit, what are the factors that can bring conflict of interests. As a bidder, you have your rights to voice out if you think any criteria is causing prejudice to you, for example: if you think that a specification is tailor-made from a specific company, you can challenge the bidding process. (OBS\_TRAIN03)*

#### 5.4.5.3.6 Encourage public bodies to engage their suppliers.

Given that suppliers are not their direct stakeholders but the close working partners of public bodies, the PPO encouraged the public bodies to sensitize their suppliers to adopt e-procurement, The PPO issued a directive that demonstrate their soft-transition philosophy instead of a strong coercive approach ([see B.4 - 7 PPO 23 Directive 36](#)). Through this directive, PPO advised the public bodies that “suppliers should get prepared for this change” and instructed them to annex a notice to bidders encouraging them to register on e-procurement whilst providing them information on assistance and manuals for registration.

#### 5.4.5.3.7 Extending additional special support to enthusiastic stakeholders.

In addition to training, ICT support services and encouraging the public bodies to enroll their suppliers, the project team extended additional special support to an enthusiastic public body by giving the project team

the go-ahead to liaise and work directly with the software supplier. One legitimation provider of the enthusiastic public body explained that his team worked with the software supplier directly to discuss their specific users' requirements and customized the system to their needs:

*When <anonymized software supplier> got the contract..we worked along with <anonymized software supplier> to work on the requirements. We need someone who understands procurement well to be able to implement e-procurement. How about G.J.? He is an IT person, not a procurement person (EPROC28)*

*“ICT people were the support people?..*

*..Yes..we didn't need the IT team as such because Next tender had the IT personnel...*

*..<anonymized software supplier> is a very reputable company.. they catered for all of our requirements..the way we asked them to address to our requirements was done to our satisfaction.”(EPROC28)*

#### *5.4.5.4 Impacts of legitimation strategies applied in the pilot phase*

Two public bodies successfully implemented the e-procurement system with consistent launch of Invitation for Bids (IFB) on the e-procurement platform. This is covered in detail in section 5.4.6. In contrast, the other public bodies involved in the pilot stage were unsuccessful and subsequently fell back to the former mode of procurement. Table 5.2 shows the significantly low number of bids launched using e-procurement by two high-volume procurement public bodies from year 2017 to 2020. These two public bodies formed part of the pilot stage and participated in this research study.

*Table 5.2: IFBs launched online by Public Body M and N (source: research participants interviews & e-procurement portal statistics (2020))*

<b>Year</b>	<b>Public body M</b>	<b>Public body N</b>
2017	12	NIL
2018	14	3
2019	7	4
2020	5	2

However, at this stage, the legitimation seekers focused on the success rather than the fallback as they believed that selling the success may neutralize the ‘fallback’ effect later. Explaining the success though gives insight into the internal legitimation process that was driven by the project champions who were once legitimation providers and subsequently became legitimation seekers in their respective organizations as asserted by their claims:

*Well, indeed <anonymized as A> department has launched the highest number of bids as compared to other Ministiries and departments as you will note on the e-procurement portal. Our success is a long story. (EPROC12)*

*I presented the project at CAPAM, Common-wealth association. We got the certificate of distinction with the project. (EPROC28)*

The official launch of the system at the public body C was carried out on the 4 November 2015 by the Chairperson of the organization in the presence of the Director of the Procurement Policy Office and senior management officials.

5.4.6 Explaining the success of e-procurement in two organizations.

#### *5.4.6.1 Explaining success of legitimation in Organization C*

##### *5.4.6.1.1 A summary of the organizational Background*

This sub-section starts with an overview of organization C followed by the description of the internal legitimation cycle that took place inside the organization. Organization C functions under the aegis of a key Ministry of the Government of Mauritius. It undertakes the treatment and distribution of potable water for domestic, commercial, and industrial usage in Mauritius (CWA, 2013). The infrastructure of the organization is made of over 4,000 km pipe network, seven water treatment plants, over 100 boreholes and some 100 services reservoirs with over 1000 employees for operating the plant. The distribution of water is divided into six water supply zones over the island (CWA, 2013)

To sustain the operational aspect with an ever-growing demand for a growing population and industries, the organization should procure different categories namely goods, works and services. Before e-procurement, the organization has been doing paper-based tendering. But it was e-procurement ready in the following aspects.

1. ICT infrastructure
2. Well-defined procurement process
3. Personnel
4. An Established bid room with wireless internet and projection facilities. (Source: *on-site documents- CAPAM Final Presentation slides 15.10.2018\_pdf\_CWA02*)

The main themes associated with context of Organization C are shown in figure 5.9 and form the basis of the legitimation cycle inside organization C.

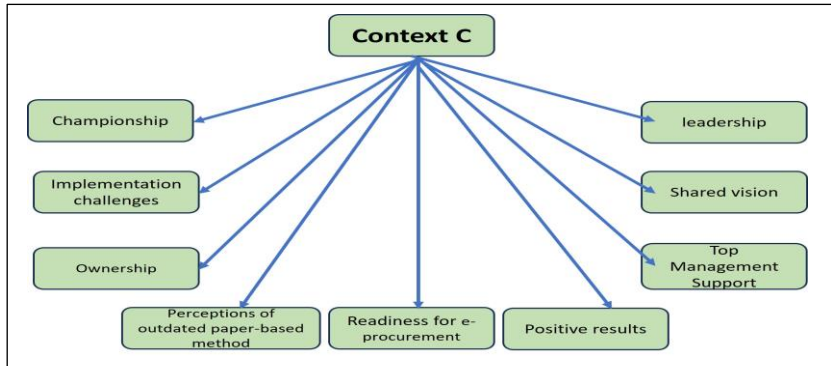


Figure 5.9: Coding Tree Context C

#### 5.4.6.1.2 Profile of the main legitimation seeker

- **Leadership, top management support and shared vision**

The department aimed for an efficient procurement system to meet their needs for high volume of procurement associated with their water-pipe replacement project to align with the 24/7 water supply promise of the new Government that was elected in 2014. As explained by one participant of the organization, the Chief Executive Officer (CEO) demonstrated leadership skills because he took a firm decision to adopt e-procurement to meet the organization’s objectives:

*“Now at the <anonymized organization C>, we had a new CEO and his vision is to digitalize procurement and enough is enough with paper in procurement. Our GM.. norm to respect deadline and meet project objectives. Our GM has a phd in economics...*

*..Our CEO, Y.I., said no way traditional paper method. He wanted to achieve business excellence and so stop the traditional use of minutes and files.. make everything online....*

*...When the e-procurement came at <anonymized organization C>. there was a new management of <anonymized organization C> with the new government with a new vision of 24/7. How to achieve 24/7?? Our former bidding system was traditional paper based. To launch a contract, it looks a minimum 2.5 months to bid and receive contract. We needed to launch contract faster and get faster response to meet our vision “(EPROC28)*

#### 5.4.6.1.3 Construction of the legitimation target

- **Perceptions of outdated paper-based system**

The organization faced multiple problems with the existing paper-based procurement method, triggering the need for an efficient procurement system that would meet the organization’s requirements. The

organization perceived the paper-based method as outdated as it could not satisfy the timeliness factor of the procurement process:

*We identified piping works around 3.5-4 billion of value, and bagatelle as top priority project absorbing significant investment. we had to do it faster..Piping works was the priority because of water loss. Paper-based could not satisfy our timeliness requirement..we had lot water wastage (EPROC28)*

It therefore implies that the organization was ready for de-legitimizing the paper-based method and eliminate ‘muda<sup>14</sup>’ (see [Annex F.7](#) – The ‘Problem Definition’ – CWA02)

- **Readiness for e-procurement**

Before the e-procurement implementation, the organization was ready for e-procurement in terms of ICT infrastructure and a well-defined procurement process, as explained by a legitimization provider:

*We have all ICT infrastructure. We do not have desktop..all senior officers, account officers..have laptops. There is a cloud system, wifi. We have an IT dedicated infrastructure (EPROC28)*

#### 5.4.6.1.4 Learning the norms and spot gaps

- **Learn the norms of an initial legitimization provider and spot gaps**

The CEO identified an engineer who was very enthusiastic about e-procurement and nominated him as the project champion to drive e-procurement implementation in the organization. The researcher in fact interviewed this project champion.

*I was a top competent person in doing evaluation in collaboration with CPB, PS and PAS..I always did all donkey works. <anonymized organization C> was impressed by my evaluations.. My manager proc and supply who did a doctorate in procurement proposed that I take lead to implement e-procurement. (EPROC28)*

One legitimization seekers of the PPO confirmed this claim in his statement stating that the nominated champion was “a real champion” who was very enthusiastic about e-procurement and worked hard to achieve the organization’s objective for implementing e-procurement:

*The second person is Z.A....Not N.B... He was not in procurement..he learn procurement...he was hyper-motivated to adopt e-procurement(EPROC29)*

*<anonymized organization C> took a policy decision to use e-procurement for OAB..he was the field person to work on these documents on e-procurement to achieve their objectives..and make things happen..he was a champion. <anonymized organization C> has worked beyond compliance with our directives issued for e-procurement and achieved success (EPROC29)*

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<sup>14</sup> Muda means wastefulness.

- **Championship**

The nominated project champion asserted that he had the relevant competence to drive the e-procurement implementation. He had good procurement knowledge and had experience in contract management. The jargon used in the interview and the different procurement types quoted in his explanation during the interview were evidence that he had procurement knowledge which was essential for implementing e-procurement successfully.

*“I am an engineer. I joined the <anonymized organization C> in 2014. I was fully involved in driving e-procurement...*

*..In <anonymized organization C>..engineer has to be well-versed wit contract management. An engineer knows everything and customized everything from start to finish of the procurement process...*

*..We master the OAB which is the most difficult. we train the PSOs to make Rfq, rb and oab. We did not master only works, but consultancy and services..one envelope and two-envelopes and all testing were done at the <anonymized organization C>.” (EPROC28)*

The engineer though had to learn e-procurement and get well acquainted with the software, mastering it sharply to assume the role of the project champion. He explained that he engaged with the project team of the Procurement Policy Office (PPO) and got training on e-procurement, as he affirmed:

*We went to eproc training ... I asked as many questions as I could and use their mock platform for practice (EPROC28)*

He further stated that the PPO project team granted him full authorization to work directly with the software supplier to convey IS change requirements and ultimately improve the software to meet their needs.

*Next tender is a very reputable company.. the consultants catered for all of our requirements..the way we asked them to address to our requirements was done to our satisfaction.(EPROC28)*

The nominated project champion also claimed that he shared his knowledge with the software developer to address some shortcomings in the e-procurement software:

*There were indeed some small issues, but they collaborated. Bill of quantity..we cannot change the values.. how will it tackle changes..we gave an idea for blank BOQ..system will make the total and give the output in excel format and eliminate the risk of wrong calculation. It works marvellously.(EPROC28)*

- **Learn the norms of internal users and spot gaps**

The project champion aimed to seek support from the internal users towards e-procurement, thus showing evidence that he converted to a legitimation seeker. As asserted by his claim below, he expected resistance

to change from the end users and had to face sarcastic reactions from them after training session. But he accepted the challenges and pursued his goals.

*Whenever there's innovation, there's resistance it is natural..(EPROC28)*

*I recall when I trained my chief engineer planning ( management wise is no.3 of the <anonymized organization C>)... he said that "look my boy! you are wasting his time" "do not waste my time"..I said ok you have 2 hours to sit..I explain the system and made all boq..One of his engineer was in the training....When the training was over, he said to me good luck with the system in a sarcastic manner. (EPROC28)*

#### 5.4.6.1.5 Legitimation strategies applied

- **Training and mock platform**

After the project champion mastered e-procurement in terms of the different online bidding methods, he organized training for both internal users and suppliers in collaboration with the Procurement Policy Office (PPO) as he explained:

*"I knew the system better than PPO but Mr. G. and me were like consultants...*

*we master the OAB which is the most difficult. We train the PSOs to make Rfq, rb and oab. We did not master only works, but consultancy and services..one envelope and two-envelopes and all testing were done at the <anonymized organization C>." (EPROC28)*

The project champion identified key success factors for the implementation of e-procurement such as training of staff and partners, enhancement of IT infrastructure, mock e-PS exercises and working on requirements with the software suppliers. The project champion advocated that the mock e-PS platform facilitated the launch real bid contributing to success of implementation of e-procurement. The use of the mock platform indeed empowered the users across the procurement chain to familiarize themselves and became conversant with e-procurement.

*The biggest success factor is the mock e-PS. This was a parallel run..We have the e-mock training platform that can be used to get familiar with the system..(EPROC28)*

*The connection risk was also a cause of concern due to its dependence on internet connection and the IT infrastructure issues have been addressed successfully. (EPROC28)*

- **Championship to address implementation challenges**

The project champion showed commitment and perseverance by facing many implementation challenges. He used a mix of conviction and coercion to get user buy-in for e-procurement. The champion spent much time explaining the benefits of e-procurement, doing presentations and handholding them in real work

situations. These were done to raise the confidence of the end-users in using e-procurement. The project champion encouraged the users to work on the mock platform to re-assure them how much easier it was to launch a bid online than using the previous paper mode. He also pin-pointed the short-comings in the paper-based method and demonstrated how these short-comings can be overcome when launching bids online.

*The heads of the divisions were reassured through continuous mock implementation to convince them, and the top management was adamant. All the staff involved in the procurement process have been taken on board and vigorously trained. (EPROC28)*

*I then organized one presentation.. all were greatly impressed, I explained with actions whereby I had to open a bid. I showed how a bid is opened. (EPROC28)*

*Bid opening was previously done manually and was prone to errors. Now the system does everything automatically..system compel the bid to become responsive. Before, we had to do bid opening report..1/5, 2/5 etc but now the system forced the supplier to become responsive by prompting them obliging them to fill all mandatory field.(EPROC28)*

*Facilities in e-evaluation: respond to that ..comply or not?..evaluation is done automatically. Do you know the marking system in evaluation? (EPROC28)*

*Yes.. I gave him an evaluation to do..i gave him a fully worked excel sheet.. he asked how I do it? I said everything was done by the system and this is the facility of e-proc (EPROC28)*

The project champion showed an understanding of users' attitudes and norms. In some cases, he used coercion to increase uptake. He did not have the authority to exert pressure on the staff, but he sought authority from the CEO who was supporting him in this initiative, as he asserted in his claim:

*No I didn't convince them but i use the hardest way.. I won't listen to their **stories** don't make pretext.. I requested management to compel them to use...we mean business here ..we have a strong management commitment(EPROC28)*

The project champion demonstrated all the characteristics that a real IT project champion is expected to have namely: show commitment and perseverance by facing challenges, knowledge sharing, mastering of the IT system and the ability to work independently of the Procurement Policy Office (PPO), organize and deliver training, setting aims, understanding of stakeholders' beliefs and attitudes and seeking stakeholders' support. His success in convincing internal users to support e-procurement and minimize resistance was evidenced by his claim below. The project champion related that an officer higher in the hierarchy who was initially opposing to e-procurement later endorsed the initiative by asserting that e-procurement was a good thing for the organization, and he initially never expected that e-PS would be a success in the organization:

*“When the training was over, he said to me ..good luck with the system in a sarcastic manner..I did lot of training and took everything on my own ...*

*....The same chief engineer when he was retiring.. he said in his speech that he never expected that e-proc was a success..it was a blessing.” (EPROC28)*

Along the same line, the champion further pointed out that a member of the PPO staff who did not trust his capabilities initially, was finally impressed by his efforts. This PPO staff who was a part-time lecturer at the University of Mauritius often referred to the success of public body C in academic lectures related to Procurement and Supply:

*Mr T. did not believe in e-procurement project at the start. He was a member of the PPO but never believed in that project. He gives training in UOM and UTM After seeing my success, he makes reference to <anonymized Organization C> in all his lectures at the UOM. I think you should meet him (EPROC28)*

The champion brought positive results at the end of e-procurement implementation whereby he asserted that the procurement unit of organization C got very competitive bids through e-procurement, and they had higher response than traditional paper-based method:

*We made very competitive bids with e-procurement and we get higher response of bids..why we get more responsive bids because the system did not allow the bidder to go forward unless the bids comply to the criteria specified. System does not allow the system to go forward unless he responds to the criteria requested. (EPROC28)*

#### 5.6.4.1.6 Impact of applied legitimation strategies

The confirmation of the success in organization C was visible in the ownership of the system characterized by independence achieved in routinizing online bidding as claimed by the project champion:

*We did e-proc and the advantage is everything is online and easier..we don't need SPOC anymore. No paper..we launch the document, the following minutes, it is published. If we have an addendum, once I click, the other end will get an email. (EPROC28)*

Success of e-procurement in organization C was mainly attributed to (1) the new CEO's shared vision aligning with the Procurement Policy Office and (2) top management support to e-procurement. This claim was also supported by a member of the project team of the Procurement Policy Office (PPO) as stated below:

*There were many reasons first, commitment of that top management man..Y.I. he was person that he believed in e-procurement..he accepted problems at the start. He makes the difference but he pursued perseverance (EPROC29).*

Furthermore, usage of online bidding module on e-procurement was evident as there was a consistent positive trend in IFB (see table in [F.7 -Statistics on IFBs Organization C](#)) and the number of IFB launched continued to rise. It stood at 1311 as at end of year 2022 (CWA e-procurement portal statistics, 2022). Organization C even won a Commonwealth Association for Public Administration and Management (CAPAM) award for its success in e-procurement implementation. *“The implementation of the e-procurement system at the <anonymized Organization C> has been possible because of the team spirit and enthusiasm which exist and a strong management”* (CWA02). This was acknowledged in the CAPAM 2018 international innovation awards project paper. The photo of the certificate of distinction in “Innovation in Public Service Management” is shown in Appendix B ([see B.4 – 8. CWA03](#)). Same was advocated by the project team of the Procurement Policy Office (PPO) whereby the e-procurement was recognized as one of the 2018 International Innovation award finalists (see [extract PPO33-03 in table B.3](#) in Appendix B). However, though the project champion mentioned that the organization has moved to online evaluation, his claim could not be confirmed through other sources. The benefits which organization C obtained from e-procurement implementation in terms of cost savings was well documented (see [Annex F.7](#) for success results). One professional staff member of organization C even published articles related to the success of e-procurement implementation in the organization (Bhaukaurally et al., 2017, 2017a).

#### 5.4.6.2 Explaining success of legitimation in organization B

##### 5.4.6.2.1 Summary of Organizational Background

This sub-section opens with a brief overview of Organization B followed by a description of the internal legitimation cycle that took place inside this entity. Organization B<sup>15</sup> is a law enforcing agency functioning under the aegis of a key Ministry. The organization has a large number of staff deployed in different units and branches of the organization. All procurement for these local offices and headquarters is done through a central procurement unit at the headquarters.

The main themes associated with the context of Organization B are shown in figure 5.10 and form the basis of the legitimation cycle inside organization B.

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<sup>15</sup> The identity of the organization is preserved to comply with ethics of research.

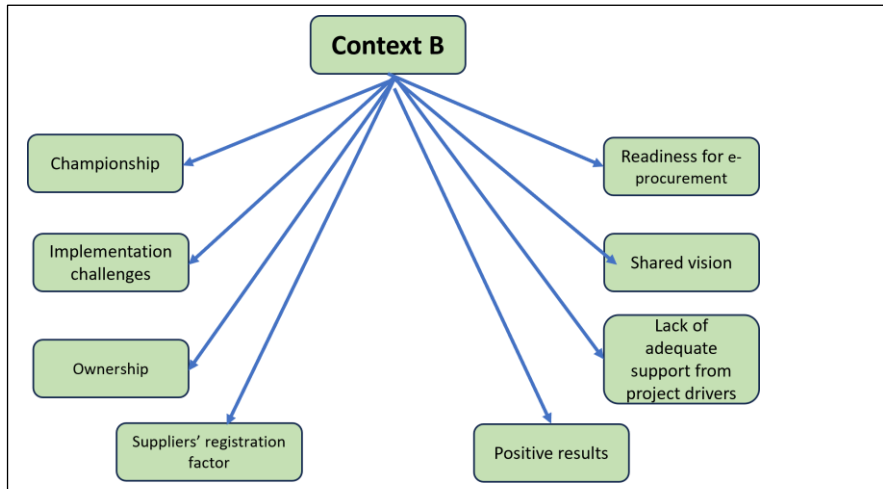


Figure 5.10: Coding Tree Context B

#### 5.4.6.2.2 Profile of the main legitimation seeker

- **Shared vision**

The manager of the procurement and supply of Organization B was the main legitimation seeker. He had competence on procurement in terms of work experience, ICT skills and academic knowledge. He was nearing his retirement but had a shared vision that e-procurement should be the new norm in the public service.

*“I am the Manager of Procurement and Supply at the <anonymized organization B> Procurement Unit. I have more than 35 years of experience in procurement..next year I am proceeding on retirement...*

*...Before e-procurement was introduced in the <anonymized organization B>, I already had knowledge given that I was studying an undergraduate course in Procurement and supply at the UOM...*

*..I already sensed the opportunity before Mauritius embarked on e-procurement. I was already using IT in procurement before the system was implemented. We allowed our suppliers to submit their documents by email. “. (EPROC12)*

#### 5.4.6.2.3 Constructing the legitimation target

The manager of procurement and supply of organization B advocated that he was personally willing to embark on e-procurement.

*I was personally very willing to implement e-procurement. We had all the basic elements to start the implementation of e-procurement (EPROC12)*

After receiving a government-wide communique about the implementation of e-procurement in the Government, the manager of procurement and supply of organization B contacted the Procurement Policy Office (PPO) to express interest in implementing e-procurement in the organization. The manager of procurement and supply claimed to have good interpersonal relationships with the project team given that he worked with them in the past (see section 5.4.5.3.4).

The kick-off meeting was then done with the top management of organization B, whose management team was sceptical at the start. Top management was very pessimist about implementing e-procurement as they thought they were being taken under experimentation:

*But reluctance was felt by the <anonymized organization B> head of department. I was very enthusiastic to go ahead. I got greenlight from management with much and much difficulty to proceed with e-procurement. They were old school. They did not have the will. I kept trying to convince the administration department - they were uncertain and felt that PPO was using them as a “cobyte” (experimental basis). (EPROC12)*

The claim was confirmed by the PPO project team also whereby the IT manager acknowledged that the manager of procurement and supply of organization B tried to convince the pessimistic top management to adopt e-procurement:

*One staff of <anonymized organization B> told us that it’s not a guinea pig and the staff asked why not implement it at <another anonymized department> before asking them to implement e-procurement in their department. Fortunately, that we have a dedicated procurement head in <anonymized organization B>, who did lot of efforts to convince management (EPROC01)*

- **Readiness for e-procurement**

Organization B was ready for e-procurement in terms of adequate human resources in the procurement unit, ICT infrastructure in terms of Government Intranet System, email and internet connectivity. The PPO made a site visit to assess same and they satisfied all the basic requirements for e-procurement.

*“After groundwork, we satisfied all the basic requirement for e-procurement....*

*.....We were already using ICT in our procurement work to launch quotation....*

*He showed to me (the researcher) the chart of the full procurement process which he worked out”. (EPROC12).*

#### 5.4.6.2.4 Learning the norms and spot gaps

The most difficult challenge faced by the legitimation seeker was to obtain the support of the users who hold higher positions in the hierarchy such as the top management and some technical staff of organization.

As mentioned earlier, top management was very sceptical about e-procurement. A failure to convince top management might fail e-procurement implementation in the organization.

#### 5.4.6.2.5 Legitimation strategies applied

- **Training, team engagement and mock platform**

The champion felt that he should master e-procurement well to convince top management about the benefits of using e-procurement over paper-based methods. At this stage, he also required the support of his procurement team. He organized training for himself and all his staff in collaboration with the trainers of the PPO. He was very open with his staff and allowed them to voice their opinions about e-procurement by engaging with them, as he asserted in his claims below. In so doing, he identified those were for or against e-procurement.

*“I approach them like a father, I think good for them ..let's work together and face the challenges..this will benefit their career..Young people should move on 'e' I trusted them and was certain that they were going to cooperate with me for implementing the system....Initially, I had meeting with my staff and I allowed them to express their opinion freely. They were young energetic people. The officers are IT literate and we have computers, internet and network . Many were positive but one staff was not willing and was always complaining. It is difficult to use. PC is slow. The system is slow. She wanted to apply for her transfer. But when we started to work with e-procurement, she finally followed us.” (EPROC12)*

The champion claimed that he had successful teamwork with the procurement staff and together as a team they took a deep reflection on the benefits that e-procurement could bring in terms of more transparency in the process:

*We thought positively and did not take it as a burden because if you gave a deep reflection..e-procurement does bring some positive things.., transparency..more reliable,. All contributed to get on track to embark on e-procurement. (EPROC12)*

The champion also engaged with the project team of the PPO when they encountered technical issues that must be addressed by the software supplier. The champion did follow-up with the project team until all identified enhancements were done.

*We have had problems with the system. I escalated our issues to PPO as they are responsible for liaising with the software supplier. We did not have direct access to the software supplier...G.J. put meeting to discuss all the problems. Some enhancements were made. It appears that the PPO did not test the system with enough cases. We had regular meetings with the PPO until enhancements were done and the tests were conclusive (EPROC12)*

The champion had a learning curve and mastered e-procurement so well that he was keen to share his knowledge with the project team and colleagues.

*I have that dexterity ..knowledge..wanted to share with other public bodies..do you know how many colleagues contact me for feedback and help for using e-procurement?? (EPROC12)*

- **Championship**

The manager of procurement and supply acted as a true IT champion. He was very enthusiastic about e-procurement and demonstrated commitment and perseverance by accepting to face several implementation challenges, but he never gave up. He employed several tactics to convince top management to get their support for e-procurement. He gave a demonstration of e-procurement, highlighting the shortcomings in paper-based methods that could be easily eliminated using e-procurement. He explained to them how good bids can get rejected by paper-based method, but similar errors would not arise with the e-procurement system.

*Now regarding <anonymized organization B> staff who are involved in bid evaluation and departmental committees: at start, I have to show to them the pitfalls in paperwork and explain how such pitfalls can be eliminated if we proceed with electronic bidding. I also demonstrated how very good bids get rejected because of errors in paperwork...I convinced the administration of <anonymized organization B> about the advantages of going paperless, about reliability of process workflow, the potential for reduction of corruption. (EPROC12)*

The manager of procurement and supply often pinpointed shortcomings of the software and proposed software improvement accordingly. In so doing, he indirectly took ownership of the e-procurement system.

*We do have ups and downs on the operation side of e-procurement..we know the advantages and disadvantages...I spoke to the director of PPO- I have loads of suggestions how to improve being given that I have worked with the system for already 4 years ..I wanted to have brain-storming sessions (EPROC12)*

The manager of procurement and supply asserted that he was using the evaluation module on a test basis. However, he highlighted the shortcomings with this module which he then escalated to the project team but did not affirm that his organization was doing online evaluation in the production environment. Thus, there was no evidence that the organization was doing evaluation online.

*For example: we have only the yes and no options in the process for preliminary evaluation on the system. But yes and no are simply not sufficient. Also, the evaluation was time consuming. We have to choose the criteria again. They should have appeared automatically. The system did not automatically select eligible bids at the outset. We report all issues to PPO to address the problem. (EPROC12)*

One important point that the manager of procurement and supply highlighted is that a sense of judgement and procurement knowledge were necessary for executing bid evaluation.

*We had a practical solution. I do professional work. I joted down all the problems..and made a checklist ..of all the problems. Let me tell you that big knowledge of IT is not required to address those problems..it's a question of judgement and procurement knowledge.. (40 points)...20-25 points but nothing have been done...lack of willingness at the PPO to tackle and improve the system. (EPROC12)*

The manager of procurement and supply achieved success as demonstrated by the official launch of e-procurement, and the positive results following the consistent launching bids using e-procurement. Consequently, he became a reference point for others for driving e-procurement implementation.

- **Suppliers' registration success factor**

The manager of procurement and supply, knowing that uptake by their suppliers is a key success factor to e-procurement success, undertook stakeholder engagement and participation. He organized a workshop inviting potential suppliers and motivated them to bid online by explaining the benefits of using e-procurement. He also organized suppliers' training.

*We had to motivate suppliers. We identify potential buyers to register. We enroll them on training course at the PPO. We then invite all bidders of <anonymized organization B> for a half-day session of work on how to bid. 150 bidders came in the event. Bidders were willing to participate and had working sessions with the procurement section. We explain how to go paperless. Many suppliers do not know how to bid. We sometimes have good bids, but document wrongly filled. (EPROC12).*

#### 5.4.6.2.6 Impact of legitimation strategies applied.

The manager of procurement and supply who acted as a true legitimation seeker, succeeded in convincing top management to use e-procurement to effect online bidding. The acceptance of top management for using e-procurement is evidenced by the acceptance of the public body in their participation in the official launch of IFB (see the official website publication about the official launching: [PPO52 - B.4 Official Launch](#)). The success in organization B was attributed to the commitment and perseverance of a long-experienced manager of procurement and supply posted in organization B. He has been the reference in e-procurement implementation and is praised by his colleagues, as demonstrated by the claim which was made by one of his colleagues from a different department and who participated in the research:

*If you want to know more about e-procurement, see Mr O.I of the <anonymized organization B>. He is a champion of e-procurement. O. has success but did only goods procurement. He drove the project and made it a success at his end Have you met O. from <anonymized organization B>?? Me (Yes already)..AMPSO: He is the best for e-proc implementation.(EPROC07).*

5.4.6.3 *Similarities and differences between the two success scenarios*

This section outlines the similarities and differences between the two successful instances.

**Similarities**

1. Project champion
2. Commitment and perseverance to face challenges.
3. Engagement with suppliers
4. Mock platform
5. Engagement with project drivers
6. Shared vision
7. High volume-high value procurement context
8. Training
9. Seeking internal stakeholders’ support for using e-procurement
10. Resistance to change inside the organization.

**Differences**

*Table 5.3: Differences between Successful Outcomes*

<b>Organization C</b>	<b>Organization B</b>
Project champion was appointed by top management to drive e-procurement implementation right at the outset	Project champion emerged naturally out of his personal interest in e-procurement and willingness to implement same. This project champion was endorsed by the legitimation seekers.
Top management support from the start of implementation till the end.	Top management support had to be sought by the project champion, but was gained at last

5.4.6.4 *Rejection of claims*

- The use of the online evaluation module in the successful instances could not be confirmed and as such their claims about usage of online evaluation module were rejected. However, they have shown willingness to move beyond online bidding in both instances.
- Contradictory claims from research participants of organization C about being the first public body to use e-procurement were rejected.

#### 5.4.7 First phase of implementation

In this phase, the project team of the Procurement Policy Office on-boarded 23 public bodies on e-procurement (PPO annual report, 2018) and carried out a series of legitimation activities in e-procurement implementation. In parallel, the training of suppliers was ongoing, and the project team of PPO received feedback about the expectations and concerns of the suppliers from the training sessions carried out.

##### 5.4.7.1 Construction of the legitimation target

The legitimation seekers from the project team of the Procurement Policy Office (PPO) aimed to secure top management support of the different public bodies to own the change and generate a change mindset to remodel staff behaviour to facilitate use of e-procurement. The legitimation seekers advocated that the challenge is more of management commitment from the public bodies than technological constraints. At this stage, previously constructed legitimation targets were still not yet achieved in some public bodies which were enrolled on a pilot basis. The legitimation seekers of the PPO project team also aimed at accompanying the public bodies in the learning process and routinizing e-procurement. In parallel, the legitimation seekers were also expecting a rise in the registration of suppliers including Small and Medium Enterprises (SMEs) which can gain benefit from using e-procurement (see PPO38-02 in [Table B.3](#) in Appendix B)

##### 5.4.7.2 Learning the norms of legitimation providers and spot gaps

#### **Resistant stakeholders of public bodies**

The legitimation seekers of the PPO found that public bodies' stakeholders were resisting changes in the pilot stage despite the fact that they worked in an IT-enabled environment and got the necessary training and despite PPO project team's willingness in providing all necessary support to them to use e-procurement, as affirmed by one of the legitimation seekers:

*The pilot phase did not work well in fact. We had a one-to-one with the CEO, we did demonstration with concerned persons, we sell the product. (How did you do it?) Training, demonstration, one person dedicated to one Ministry. (What were their reactions?) Most appear very receptive as if they are happy but with time we do not get encouraging response from them...Some had concerns like it's an innovation in procurement and they should be prepared...But we did request them to seek funds for buying equipment and get staff....(EPROC29)*

Resistance to change in this phase was mainly characterized by:

1. A lack of top management support underpinned by:
  - An overtly positive attitude about e-procurement in a kick-off meeting but no further commitment was evident, as commented by one legitimation seeker:

*They are very positive, enthusiast for using e-procurement. They give assurance that they will submit the list of potential users that will be using e-procurement on the next day itself. But once the meeting is done, over days and weeks, we cannot see commitment from the public body. SPOC (who is earmarked to do follow-up for this public body and assist the officers in preparing and launching tender online) does the necessary follow-up. But no commitment can be seen from the users. (EPROC04)*

- non-responsiveness to invitations for follow-up meetings

*We have got a problem with one public body: a meeting is scheduled but stakeholders do not turn up. When it arrives time to use the system – they did not show interest (EPROC01)*

## 2. Resistance to change by legitimization providers.

The legitimization providers showed a lack of interest in e-procurement, and they expressed openly their satisfaction with the paper-based method which they perceived as simpler and faster for carrying out procurement activities. After trying e-PS, they complained of a complicated and inefficient system that did not meet their requirements and which produced a negative economic outcome, as asserted by the claims of the different legitimization providers from different public bodies in table 5.4.7. All these factors combined led to a fallback to the paper-based method of procurement.

*Table 5.4: Complaints Related to E-Procurement Software*

<i>The template preparation takes time. Paper-based is faster. But we are still using the old platform of PPO for uploading OAB. (EPROC05)</i>
<i>Preparation of template is very time consuming, much more than paper based. We need to map each specification of the item for one item. Mapping re-starts for 2nd and 3rd items. It's very tiring (EPROC05)</i>
<i>On paper-based, my consultant will prepare the document and I can only modify it through word document. But on e-procurement, qualification for example, there is one line for each criterion. We handle big works/construction projects like drainage, bridges, infrastructure etc. we can have more than 100-200 criteria just for the supplier qualification item, in “works” tenders. Sometimes criteria can be changed. But it becomes extremely complicated to change criteria on e-procurement. Paper-based is much better and convenient (EPROC23)</i>
<i>I used e-proc to launch a bid for one project fully online but the second one could not be completed online. (EPROC23)</i>
<i>The opening of bid is also quite tricky. If we happen to forget the opening, we need to make an addendum. Without the assistance of the PPO, it becomes complicated. We have encountered this issue and had to postpone the opening. (EPROC06)</i>
<i>Each medical item has its own specification. We have high value of procurement, and we work with overseas suppliers. We have tried and we found that the e-proc system is time-consuming. The template preparation takes time. Paper-based is faster (EPROC05)</i>
<i>The template preparation is complicated, but assistance is obtained from PPO help desk. e-procurement is more time consuming than paper bids. bid opening is more complicated than the existing paper method. (EPROC10)</i>
<i>On the other hand, our pharmacist needs to vet bidding documents, but system caters for only one reviewer. Matter was escalated to PPO, but no action taken (EPROC06)</i>

*Slowness at opening of bids, fewer bids with e-procurement. Suppliers do not bid online. 10 downloads of tender documents noted but only 2 bids received .... For, whatever reasons...We have no other option than doing procurement on paper as we need to clear our backlog (OBS\_TRAIN02)*

*We need a sound system because procurement by the <anonymized Ministry> is critical. A project cannot be delayed. Opening of bids is time-consuming. Our actual paper-based system is much faster and simpler. (OBS\_TRAIN02)*

*We prepare bids and put on a system. The preparation process of bid should be simplified. We get negative feedback from suppliers. (OBS\_TRAIN02)*

### **Concerns of suppliers on lack of user-friendliness of registration and bid security and confidentiality on electronic platform.**

On the other hand, the legitimization seekers put much emphasis on the concerns of suppliers who complained about the lack of user-friendliness of the e-procurement registration system, problems with the token application and bid security and confidentiality. These concerns were reported by (1) the end-users of public bodies during their training sessions as per the claim (EPROC11) and (2) by suppliers which were following e-procurement training at the PPO (OBS\_TRAIN02):

*“You know the big problem with e-proc is supplier registration..suppliers should register..they find registration process complicated especially with the token. We cannot find the list of suppliers with whom we used to work in the suppliers’ database.” (EPROC11)*

*“R.S.: **Have you registered on e-procurement?** (trainer asked)*

*Observation: Most raised their hands. Only 2 of them sitting next to each other, in front of me, and appear to be from same company said they cannot register on e-procurement. They said the process is difficult” (OBS\_TRAIN02).*

Furthermore, in the frequently answered questions (FAQ) on the Government of Mauritius e-procurement portal, “how secure is e-Ps?” is the first and foremost frequently asked question, implying that stakeholders have concerned about the security of the electronic platform, E-procurement system of Government of Mauritius – FAQ (n.d.). In addition, in the former paper-based procurement method, all bids in sealed envelopes were dropped directly in a secured bid box under lock and key. The e-procurement project team of the PPO was also concerned about bid security and confidentiality in the e-procurement platform using the public internet because any leakage or hacking might tarnish the reputation of e-procurement, as affirmed by the IT manager of the PPO:

*E-proc has been made fully compliant with IT security guidelines...bids contain confidential information that should be protected, and we must make sure that the suppliers trust this platform. (EPROC02).*

#### 5.4.7.3 Legitimation strategies applied

After gaining insights into the norms of the legitimation providers, paying due attention to their complaints, the legitimation seekers assessed the legitimation gaps and executed several legitimation strategies through their project activities to close the legitimation gaps. These are elaborated in this sub-section.

##### 5.4.7.3.1 Re-assuring stakeholders about security and reliability of e-procurement

The legitimation seekers tested the security robustness of the system to re-assure the stakeholders of the security and reliability of the e-procurement. They attempted to conform to the norms of the stakeholders by addressing their concerns (see the FAQ response extract **FAQ\_PPO02** [Table B.3 in Appendix B](#)). They solicited the service of a third-party to undertake a full security audit of the system and henceforth reassured the stakeholders by giving speeches in training sessions about the reliability of the system. This was confirmed by the IT manager of the PPO (EPROC01).

*Project manager also pointed out about the security audit carried out by an <anonymized private company> to assess the security aspects of e-procurement. (EPROC01)*

In reply to the FAQ about “how secure is e-PS?”, the legitimation seekers re-assured the stakeholders that the data was encrypted, and the public body could access the bids and know about identity of bidders only after the bid opening. Thus, the e-procurement system meets the aim of preventing fraud. Furthermore, during a training session of suppliers, the researcher observed that the legitimation seekers also convinced the suppliers about the security robustness of e-procurement platform (see coded extract of OBS\_TRAIN03 below)

*“Supplier 1: How far does the decryption and re-encryption of bids that you are demonstrating provide guarantee that our bid information remains confidential?”*

*..R.S.: Nobody will be able to tamper with your bid when it is encrypted because the encrypted text comes in a format that cannot be understood.*

*..Supplier 1: So the system is guaranteeing that no public officers can open the bids without decrypting it? I am somewhat sceptical!*

*..R.S: the system has been thoroughly tested. You can rest assured that nobody can tamper with your bid without decrypting it and it cannot be decrypted before the closing, as shown in the demonstration. You can try it on the training portal.” (OBS\_TRAIN03)*

#### 5.4.7.3.2 Increase user-friendliness for suppliers

The project team enhanced the registration of e-procurement to increase user-friendliness and simplify the registration process of suppliers, as explained by the IT project manager:

*Concerning DSC, stakeholders Mauritius post, Ncb and e-mudhra were for DSC. e-procurement class was designed for DSC for bidders. e\_mudhra - the application for DSC was tedious. here the PPO has worked with the supplier to design a user-friendly application to facilitate the application for DSC by suppliers. Go on our portal and see the interface that we created for suppliers' registration. (EPROC01)*

#### 5.4.7.3.3 Enforce change management strategy through e-Ps cell and championship.

Reflecting upon the success of e-procurement in the two public bodies, the project realized that e-procurement-driven changes would not be possible without a project champion on site, irrespective of whether top management endorsed the idea or not (see claim of IT project manager EPROC01). The project team enforced their change management strategy by recommending an e-PS cell to be set up in each public body, led by a project champion in the respective public body to drive e-procurement (see extract **PPO33** in [Table B.3](#) in Appendix B). The e-PS cell is a dedicated unit for e-procurement operations. The team claimed that 'Kotter eight-stage change management approach' was applied to their e-PS deployment strategy to manage change, but the researcher could not verify the truthfulness of this claim.

*"E-PS cell should be set-up in each public body because we want commitment not simply compliance. Public body has to demonstrate that e-procurement is on their agenda. Government has 204 public bodies – 5000 procurement /year....e-PS cells on-site are believed to drive changes. What is required for success is change management and a team to drive changes on-site should be present where e-procurement is deployed (EPROC01)*

A few legitimization providers (including those who participated in the second phase of implementation) acknowledged that they were required to set-up e-PS cells, but they however pointed out that due to high workload and persistent shortage of staff, this aim was not realized.

*In practice, there is too many works and on top am alone here. No additional staff. I will have work overload burden because of lack of staff (EPROC25)*

*We have launched quotations only informal quotations. We have not yet structured our e-PS cell. Since 1 year, PPO advised to implement but there was some delay (EPROC11)*

#### 5.4.7.3.4 Build-up reputation of e-PS through showcasing

Built upon the success of e-procurement in two organizations which normally do high volume-high value procurement transactions, the legitimization seekers of the Procurement Policy Office (the project team)

decided to showcase the successful instances (public bodies B & C) in every meeting which was held with top management representatives of other public bodies. In so doing, the legitimation seekers were trying to make e-procurement the new norm in procurement such that “if others are using e-procurement, you should also use it”.

*We asked to a head of department with low e-procurement involvement about how come that <anonymized organization C> and <anonymized organization A> are launching > 600 bids online and why they are unable to do same? We talk about the success of e-procurement that happen in <anonymized organization C> and <anonymized organization A>. (EPROC01)*

This claim of showcasing, as mentioned above, was also acknowledged by the legitimation providers, but in some instances, there was a critical interpretation of the success as a few legitimation providers believed that the nature of procurement and administration differ from one organization to another as demonstrated by their explanations below:

*They said <anonymized organization C> is a success. S.R. said that <anonymized organization C> is doing lot of bids. But <anonymized organization C> bidding is not the same as its <anonymized parent Ministry> because here we do big tenders, big works and consultancy bids. (EPROC21)*

*Trainees: You should look at the procurement process. The approval stage in procurement at Ministries are different as compared to parastatal bodies. There is often one director, manager or CEO in parastatal bodies, and procurement report directly to management. Approval is then much easier. There is a problem of delegation of authority at Ministry level for DBC (departmental tender committee). (OBS\_TRAIN02)*

*Consider <anonymized organizations C> and <anonymized organization A>: the famous success stories that are repeatedly being told by the PPO in all meetings. They are receiving the format of specification as it should be/as required by e-proc. In <anonymized organizations C>/<anonymized organization A>, the technical department and administration block are physically located in the same building, all under one roof. But as far as we are concerned, Ministries and departments. The technical departments may be located elsewhere. Take <an anonymized Ministry> for example: they will not give us the specifications in the requested format. This is why in parastatal organizations like <anonymized organization C>, things are going fast: all departments are under the same roof. (EPROC21).*

Two participants<sup>16</sup> in the research allegedly mentioned that organization C recruited an IT officer who was once involved in the development and implementation of e-procurement and hence mastered the software well.

*<Anonymized organization C> is the show case. Why? There is an IT person who was involved in e-procurement and mastered it well was recruited by <anonymized organization C> in the procurement section and is doing everything on ‘e’. if we have somebody alike, the system will be used. (EPROC24)*

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<sup>16</sup> The second participant (EPROC27) was interviewed in the second phase of the implementation but mentioned this aspect in his interview.

*At the grass roots, when the system was being developed, <an anonymized Ministry> recruited some officers on contract-based to design the system. One among is Mr S.B, he was fully involved in the System design, development and implementation. When the system was completed, he understood the whole thing. He nurtured the baby. He then left PPO, and do you know where he was employed?? At the <anonymized organization C>, he is an expert on e-procurement. So, it is obvious that the <anonymized organization C> will become a success story of e-proc. (EPROC27)*

#### 5.4.7.3.5 Maintaining soft transition philosophy

Besides, as in the pilot phase, the soft-transition philosophy was applied. This was advocated by the legitimation providers involved in this phase.

*The template preparation is complicated, but assistance is obtained from PPO help desk (EPROC10)*

*We receive training in 2017 and implement eproc. During the training: We created template and upload, opening and closing of bids, clarifications on system, addendum, and extension. (EPROC13)*

*We had a 2-half day training session at the PPO (EPROC23)*

*Teamviewer is used by PPO staff to look at our problems that we encounter with the system, and they resolve the issues remotely. (EPROC26)*

The PPO published comprehensive training materials and instructions to suppliers which can be downloaded easily by suppliers (bidders) which wish to bid. For example, a user guide is available on the e-procurement portal in the “How to?” menu, providing instructions to suppliers about how to prepare and secure their bids, e-procurement system of Government of Mauritius (n.d.). With such guidance, suppliers were reassured and their confidence in electronic bidding was raised.

#### 5.4.7.3.6 Improve software to meet the needs of users

The legitimation seekers advocated that based on feedback received from the legitimation providers, they were working with the software supplier to improve users’ experience, and a new version was expected to be available in August 2018 (see extract **PPO33** in [Table B.3](#) in Appendix B).

#### 5.4.7.4 Impacts of legitimation strategies applied

Except for one successful instance in this phase, several public bodies fell back to the paper-method. Legitimation providers reported many complaints about the e-procurement system. Suppliers’ registration was still slow and below expectations. This was evidenced by negative economic outcomes in many public bodies whereby the number of bids received when a tender was launched online was lower than the former paper-based method, thus reducing competition and increasing prices of goods or services being procured:

*It's very tiring. 7-8 procurement have been done on e-procurement, but we obtained bids from few suppliers. (**How many?**) 3 out of 10. This is not cost-effective as prices rise with fewer bids. Only 3 suppliers were obtained for a big overseas tender exercise. Price will go up with few bidders and became less competitive (EPROC06)*

*The problem with e-procurement is low response from suppliers (EPROC10)*

*The number of bids received is lower than paper based. Got only 1 bid for the first one launched on e-proc and it was not responsive. So, I was already discouraged to continue with the system. (EPROC23).*

#### 5.4.7.5 Explaining success in organization A

##### 5.4.7.5.1 Summary of the organizational background

Organization A's business is related to the production and sale of electricity across the island of Mauritius. It produces around 40% of the country's total power requirements and the remaining 60% being purchased from Independent Power Producers (CEB, 2022). Organization A is responsible for the transmission, distribution, and supply of electricity to the population (CEB, 2022). It employs around 2,200 people. It follows government procurement law and directives from the PPO. The procurement unit of the company is well structured and is comprised of four core sub-units namely procurement, contract management, transport and warehousing, and supplier management. The organization follows the Procurement Act and rules/directives from the PPO. Appropriate separation of responsibilities has been established to maintain confidentiality and transparency in the system (CEB, 2020). A supply and procurement manager is appointed as the head of the procurement unit.

The main themes associated with the context of Organization A are shown in figure 5.11 and form the basis of the legitimation cycle inside organization A.

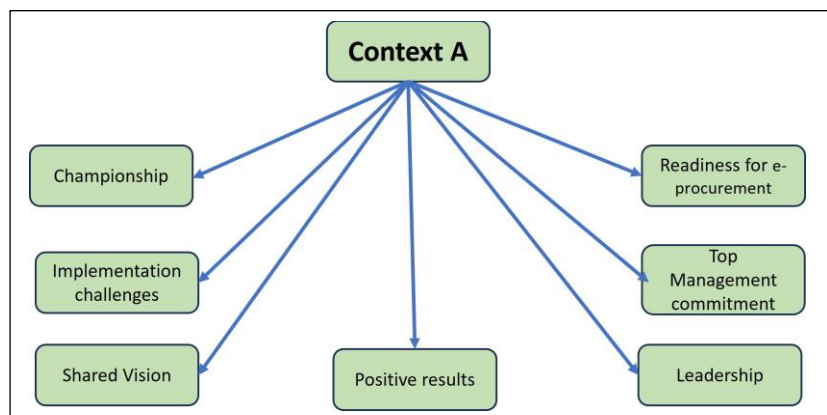


Figure 5.11: Coding Tree Context A

#### 5.4.7.5.2 Profile of the main legitimation seeker and construction of the legitimation target

- **Leadership, and shared vision**

The same CEO<sup>17</sup> who was behind the success of Organization C (see section 5.4.6.1.1) took a decision for e-procurement implementation in organization A as he was a board member in organization A. Upon his directive, management of organization A approved the implementation of e-procurement. The CEO, as a board member of organization A was in fact the initial legitimation seeker for organization A, as claimed by the champion of public body C (EPROC28). This was confirmed by a legitimation provider of organization A (EPROC13):

*We need a driver for the project. the GM, Y.I. who was a board member of <anonymized organization A> insist on <anonymized organization A> to use e-procurement. Insist? Yes, insist. He was one of the board of directors. He said no way traditional paper method. He wanted to achieve business excellence and so stop the traditional use of minutes and files.. make everything online. (EPROC28)*

*It was a policy decision of management to implement e-procurement (EPROC13)*

The supply and procurement manager of the procurement unit of the organization was entrusted with the responsibility to spearhead e-procurement implementation. The officer had a shared vision and aimed to go paperless in procurement. He became the legitimation seeker of organization A.

*We aim to go paperless and use laptop in BEC instead of loads of bulky stacks of papers. I have ordered the purchase of more laptops ... (EPROC13).*

The organization has a well-organized supply chain management structure (CEB annual report, 2020: pp 26)

*I am a supply chain manager and responsible for procurement. I have more than 10 years proc experience. The supply chain section has 4 supply chain managers each responsible for specific tasks: contract section, procurement, transport and warehousing, and supplier management. We report to the supply chain executive. I took the lead to implement e-procurement at the <anonymized organization A> (EPROC13)*

- **Readiness for e-procurement**

The supply and procurement manager advocated that the organization was ready for e-procurement. The organization was already using 'SAP' ERP system across the different functional units, as cross-verified from secondary sources (CEB annual report, 2020: pp25). Observation of ICT infrastructure by the researcher confirmed the same.

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<sup>17</sup> The information was cross-checked from the CEO's profile which was publicly published on LinkedIn.

*Well, here at the < anonymized organization A> we have the IT culture. Have a look here: we all use computers. We work on a SAP application system. We have no problem as such using e-proc. I have four officers working with me. (he called two of them and presented them to me). We have dedicated laptops that are used for opening of bids. (EPROC13)*

The supply and procurement manager had procurement knowledge and experience in the field.

*I am a supply chain manager and responsible for procurement. I have more than 10 years of proc experience. (EPROC13).*

#### 5.4.7.5.3 Learn the norms and spot gaps

The legitimation seeker understood the big challenge that resistance to change is normal where changes in work practices are concerned.

*Were the users convinced about e-procurement? Some, yes, but some no. It's natural to have resistance to change at the start. (EPROC13)*

He stressed that IT innovation was not his concern as the internal staff were already using 'SAP' ERP software across the organization and therefore, they have ICT norms.

*. Well, here at the < anonymized organization A> we have the IT culture. (EPROC13)*

#### 5.4.7.5.4 Legitimation strategies applied

- **Training**

The legitimation seeker, i.e., the supply and procurement manager, participated in e-procurement training and held meetings with the project team of the PPO to master e-procurement software.

*Yes...I participated in e-proc training..the SPOC Z.N. is a very nice guy..he organized and delivered the training. ...I met Z.N. again at PPO to clarify my doubts on some functionalities on e-PS...testing all scenarios was necessary. (EPROC13)*

- **Championship**

The legitimation seeker acted as the project champion to drive e-procurement implementation in organization B. He was aware that initial resistance to change is obvious, and he undertook a series of activities to gain stakeholders' support.

Were the users convinced about e-procurement? Some, yes, but some no. It's natural to have resistance to change at the start (EPROC13)

- a) Plan staff training and obtain their feedback.

*Targeted employees were sent for training, and they were requested to submit their views about the system. Initially we earmarked 3-4 people for training at the PPO. (EPROC13)*

- b) Make a demonstration of the system.

*As far as our employees are concerned, we did a presentation in 2017 on e-proc. (EPROC13)*

- c) Explain the benefits of e-procurement over the traditional paper-based method.

*We explain the staff e-procurement by constantly comparing the features with paper-based and pointing out advantages to use e-procurement. (EPROC13)*

- d) Use marketing technique to encourage the suppliers to bid online by following the instructions of guideline ([B.4 – 9. Organization A Bidders' sensitization](#)) and perform efficient suppliers' management.

*We perform a sensitization campaign of potential bidders. There's a section doing suppliers management and help us to identify potential bidders for specific products in restricted bidding. We normally encourage suppliers to register on e-proc when responding to request for quotation. We attach the notice with the rfq and post it to all potential bidders. In press, we did small slogan. (EPROC13)*

- e) Engagement with the project team of the Procurement Policy Office (PPO) for proposing software improvements to meet their needs.

The project champion acknowledged that he met an important implementation challenge. He complained about the lack of integration of the existing module of procurement in the 'SAP' ERP system and e-procurement. He engaged with the legitimation seekers for software improvement.

*The only issue is that the SAP system already contains the module dealing with procurement. This leads to duplication of work. For each tender launched, details must be updated on the SAP system manually. There is a system integration problem. but we are working with the PPO to try to find a solution. (EPROC13).*

#### 5.4.7.5.5 Impact of legitimation strategies and other legitimation gaps identified among users

- **Positive changes**

The bid opening staff who were initially resisting e-procurement changed their perceptions and started using e-procurement as they were influenced by peers who accepted e-procurement.

*But we were happy to observe that those who opposed (bid opening staff) to e-procurement at the beginning have changed their stands after seeing that their colleagues are using the system (EPROC13)*

- **Negative perceptions of other legitimation providers**

Negative perceptions among other staff about e-procurement still prevailed when e-procurement was implemented. Other participants in his team expressed their willingness to participate in the research.

Two staff, one engineer and one procurement officer participated in the research and gave their viewpoints. The engineer was a legitimation provider given that he used to prepare the specifications for equipment to be procured. He showed concerns about the difficulty that suppliers were encountering with e-procurement due to a complicated system. His norm was “*to retain responsive suppliers*”. He showed concerns also about the difficulty in getting good suppliers that could meet the electrical equipment specifications, and that Mauritius is a very small market. The engineer was also concerned about suppliers’ registration shortcomings related to Small and Medium Enterprises (SMEs).

*We have overseas bidders: Denmark, France, India, Germany. Bids at <anonymized organization A> are high value. The problem with e-procurement software is with the decryption and re-encryption at the supplier side. It takes 2 days. On some occasions we find that the supplier forgets to do this, the bid is considered as no-bid submitted. During BEC, we often find that we get good bids but should be rejected because of this issue. It’s not easy to get responsive suppliers that meet our equipment specifications. The bidders are very important to us. We cannot afford to let them go because of issues with the system..we should go manual with those bidders who are not interested to quote online. (EPROC14)*

Following the concern raised by this engineer, the researcher asked the supply and procurement manager (the legitimation seeker) about the bid responses received online. The latter acknowledged that generally they were receiving lower bid responses online, which indirectly confirmed the concern of the engineer.

*We generally receive lower response through online bids ..(EPROC13)*

Another officer working in the procurement unit participated in the research. He had a negative perception about e-procurement and complained that it is a complicated system which is time consuming and a lengthier process than paper-based methods. He also complained that the system did not meet his requirements because of inadequate validation and system rigidity. But he acknowledged that he received timely assistance from the SPOC whenever problems were encountered.

*The system is easy to use but the process is very lengthy on the system as regards to quotation preparation. We also have a problem with the price schedule. Once it is uploaded, it cannot be amended. Suppose that the bidder put the unit measure in inch and need to modify it in Kg, it cannot be modified. Nobody can change it. Even if there is an item missing in the price schedule, it cannot be amended once submitted. Price schedule fields are all mandatory and empty ones have to be filled with zero. The manual price schedule has to be then submitted. Now to respond to clarification to suppliers, it has to be done through system. But before e-procurement, these documents could be easily submitted by fax or email. (EPROC16)*

- **Positive results**

At this stage, despite the challenges of a complicated system and lower bid responses, the use of e-procurement by organization A was apparent from the number of IFB launched online (CEB, 2020). The organization had the highest volume and value of procurement. Nobody had the daring to challenge the policy decision of top management.

*We are the first public body to have launched an OAB tender on eproc. (EPROC13)*

The project champion also affirmed that continuous engagement with PPO project team was necessary to address users' concerns:

*See..we cannot get away with all problems at once..you are also in IT..so you understand well what I mean..problems with IT system are never-ending but what is important is the commitment of the office to work with PPO (EPROC13)*

The project champion also claimed that the evaluation module was being used but this could not be confirmed.

*We have moved to evaluation stage from August/September 2019. Evaluation was previously done manually and then uploaded on the system (EPROC13).*

## 5.4.8 Second implementation phase

### 5.4.8.1 Constructing new legitimization targets

The project team of the Procurement Policy Office initiated the second phase of implementation of e-procurement with the aim to enroll more public bodies on the project. However, the implementation of e-procurement, at this stage, fell short of the legitimization seekers' expectations due to considerable delays between kick-off and implementation of e-procurement, resource constraints, and discouraging fallback outcomes. They expressed their dissatisfaction with the progress of e-procurement implementation.

*I am not generally satisfied with the achievement so far. We have got a lot of resistance to change, and I hope you have got enough explanations. (EPROC01)*

*As per the return of procurement activities. It is stated how many bids, RFQ (request for quotations), restricted bidding is done through paper or online. So, we get an idea of how e-proc is being used. Let me tell you that we are quite surprised to see the number of paper-based procurement under urgent procurement. I am very disappointed (EPROC04)*

They changed their legitimization targets through a stakeholder exclusion and prioritization approach by focusing only on high spending public bodies (high-volume high-value procurement organizations) constituting a total of 54 organizations out of 204 (see coded extract PPO 32-01 in [table B.3](#) in Appendix B)

They aimed to secure the support of top management of those high spending public bodies as they felt that those institutions would benefit more from e-procurement than those having less procurement volume. Given time constraints and the urge to demonstrate that public bodies were reaping cost-savings benefit from e-procurement (see extract PPO 33-04 in [table B.3](#) in Appendix B), the legitimization seekers also felt that it was wiser to channel their resources and legitimization efforts on those high-spending bodies.

*We are no longer enrolling public bodies on e-PS as we did before. We do not chase public bodies to enroll. PPO has now changed the strategy of implementation to target public bodies in terms of spending. 54 heavy spending public bodies are enrolled so far. PPO concentrates on this critical mass that will be the hallmark for e-proc success. <anonymized departments> are among those departments representing 80% of volume of public expenditure, 95% worth annual expenditure budget of the civil service...98% volume of procurement transactions. (EPROC01)*

At the same time, they had a better chance of demonstrating the use of the e-procurement portal that could be accessed from anywhere in the world and therefore gained more reputation at international level. This will also contribute to improve their international score in ease of doing business with Mauritius (see PPO **28-05** in [Table B.3](#) in Appendix B).

They were also expecting timely implementation of e-procurement after having evaluated that implementation was taking too many years that risk outweighing benefits to cost. On the other hand, they were targeting more registration of suppliers because out of 10000, around 1100 registered as at that stage.

*We have an issue. Out of 10000 registered with Chamber of Commerce, how come that only 1100 are registered on e-proc? But if the registered suppliers use e-procurement as expected, this will encourage their counterparts to use e-procurement as they will tend to imitate. In a similar manner, if some public bodies take commitment seriously to embark on e-proc, others will follow. (EPROC04)*

#### 5.4.8.2 Learning the norms of legitimation providers and spot gaps

The project team has learnt from the first phase of implementation that fallback was again mainly due to resistant stakeholders due to:

- **Lack of top management support characterized by delays between kick-off and implementation**

*This training was indeed a refresher course. The batch of <anonymized department> already got the same training 2 years back (2017). He was hoping for uptake from <anonymized department> after a first abandonment in 2017.*

*We do not have any positive results over 6 weeks ... 2 months. Delays propagates at many level (OBS\_TRAIN02)*

Indeed, the delays in starting implementation was pointed out from the interviews of research participants of several public bodies:

*We had a kick-off meeting with PPO at first. We did not start immediately due to a problem related to changing CEs. (EPROC26).*

*I got training 2 years ago. Due to approval delays from our Ministry here, we started to use it recently. Yes, we got training but not on-the-job training. We got training in 2018 but implemented in 2020. (EPROC26)*

*Since 1 year, PPO advised to implement but there was some delay here at administration level, DBC and BEC level (EPROC11)*

- **Resistance of legitimation providers**

In this phase too, the legitimation providers were actively resisting by expressing satisfaction to the paper-based methods. When the end-users had reverted to the paper-based method launch bids, it implied that top management did not have any objection to their decision.

*Our older process – paper process was of course efficient, and we have used the process over many years. (EPROC11)*

*The manual system is faster. Whereas e-procurement, one RB is very time-consuming. We are back with Paper-based (EPROC22)*

The legitimation seekers finally realized that “*e-procurement is not the priority of management of those public bodies*” and uptake was slow because public procurement was not considered as a management function requiring top management commitment (**PPO33-04** in [Table B.3](#) in Appendix B). Fallback could be also identified through consistently low IFB statistics and through press cuttings on IFB launched by paper-based method (see coded extract **PPO53** in [table B.3](#) in Appendix B).

*Their priority is “there should not be shortage of stock on medicine”. So, if we introduced e-procurement, it demands some work to moving from their priority to handle e-procurement. This is one of the main barriers why many public bodies did not use it. (EPROC29)*

Despite training and handholding, recurrent forgetfulness on how to use the system was noted. This claim was supported as one legitimation provider reported about his forgetfulness as follows:

*We have hand-outs ..but we’ve forgotten .. it demands lot of practices...(EPROC11)*

*We often receive requested information for preparation of the tender at the last minute. We forget how to use the system again and after a short lapse of time. (OBS\_TRAIN02)*

Regarding the negative economic outcome following the first phase of implementation, the legitimation seekers blamed the public bodies for non-compliance with the directive for sensitizing the bidders and hence a lack of commitment to engage their suppliers. Thus, their legitimation strategy of encouraging stakeholders to sensitize their bidders did not have the desired impact.

*Public bodies should meet their suppliers with whom they work, just as <anonymized organization A> did. PPO also do engage with suppliers... Confidence of suppliers should be raised through refresher training in e-procurement... I am repeating again that how come <anonymized organization A> and <anonymized organization C> have learned and are using e-procurement comfortably? They have been serious in enrolling their suppliers. Their staff are also procurement cadre. they did it. We also have other public bodies which are following...like <an anonymized public body> , <a second anonymized public body>...see IFB online...they are doing online bidding (EPROC03)*

The legitimation seekers also learned that in one specific public body, the long-held norm of staff rotation impacted on the implementation of e-procurement whereby resistance to change by junior staff was noted after the head of department was transferred. The legitimation seekers felt that there was a lack of willingness on behalf of the legitimation providers to innovate in procurement.

*In one Ministry <anonymized>, there was transfer of a PS who was motivated to implement e-procurement in the Ministry. After his transfer, the involved group remain silent when asked to use the system. Worst, the new PS opposes the Ministry to use e-procurement. (EPROC01)*

*“What do you think about resistance from Ministry?..It’s because of lack of ICT skills you think?..No.. even a child can operate e-procurement. It is not difficult to use e-procurement...Willingness to learn and innovate – only one month is required to do it, staff have already put a barrier since at start that e-procurement is a mountain ..it is difficult...They think “I am happy in that I was doing”..so why using e-procurement?” (EPROC29)*

- **Perceived complicated and inefficient system conflicting with their timeliness norms in procurement.**

On the other hand, similar to findings from the first phase, end-users were dissatisfied with the system. A perceived complicated and inefficient system which was characterized by a time-consuming and lengthier process than paper-based method, conflicted with their timeliness norm in procurement (see coded extracts **PPO12; PPO14** in [table B.3](#) in Appendix B). Being risk-averse, they reverted to the paper-based method for procurement proceedings.

Duplication of work increased when low or no response from suppliers was obtained when bidding online. Several users were compelled to launch everything again using the paperbased procurement method. The end-users also pointed out that the system required knowledge of procurement to be operated:

*Table 5.5: Responses from Interviewees*

<i>An email or fax letter is easier and more effective. In paper based we can seek clarifications and do everything smoothly. (EPROC_GROUP_3_MPSO_ACCOUNT )</i>
<i>If we should purchase a printer, we have the bidding document on pen-drive, we change the item description and launch quickly..our old method was very efficient. But with the new system, we should fill the excel file one by one, prepare template and launch ..it is more time-consuming...(EPROC11)</i>
<i>e have more steps..opening..closing and download of documents..in old system these were not present..now if I launch quotation (EPROC11)</i>
<i>RB takes one day in paper-based but PPO themselves takes 3 days. (EPROC21)</i>
<i>But if we have to wait for 30 days like OAB, where is the ‘e’ profitable/ efficient? ‘e’ implies immediate reply(EPROC 21).</i>
<i>Preparing bidding documents is a chain of process. From engineer to secretary then to DBC and forward to us and send back to engineer and send back again to me then send to committee for approval. The steps are lengthier and complicated. (EPROC21)</i>

<i>We had to then launch by paper if we do not have bid on e-proc because time will lapse. We have a time limit for procurement. (EPROC26)</i>
<i>The procedure on e-proc is much longer than paper-based. Template preparation is complicated. We need to prepare the template in excel and then upload (EPROC26)</i>
<i>The format of the table is broken when we are preparing the bidding document. Data became missing. We need to undo then we will be able to retrieve the data. We need to extract from Microsoft word and copy and paste to excel. When we copy and paste, many items cannot be adjusted, and format broken. PPO staff themselves had issues when preparing the template. The template is not one whole template. We need to select our conditions and bring to our document (EPROC21)</i>
<i>I find it complicated..the system is not user-friendly at all and difficult to use...the system should be simplified(EPROC11)</i>
<i>We should (adapt or perish...we do not have the choice..we cannot resist to change.. we have some problems of adaptation..we often miss steps..but when we are using e-proc, we use our notes and guidelines in front of us and we follow the guide so as not to get problem..(EPROC11)</i>
<i>The steps are not easy to remember. The steps are not automatic. We need to choose a lot of conditions and parameters. These do not come automatic in the document. We need to pick and choose manually (EPROC21)</i>
<i>Now the opening and closing of bids should be done on two different days on the system. why they should be done on two different days? What is the logic? Why not do it on the same day as we are doing now? (EPROC21)</i>
<i>The issue is that consultant uses the document standard. When vetting, we need to transform the document to be compatible with e-procurement. This is an additional work. We need to do paper-based involving plenty of manual works and then transfer all in e-proc. Qualifications of contractor- system is not simple as google form or drop box. It is complicated. (EPROC23)</i>

- **Mismatch of e-procurement template with nature of procurement**

The users complained that the system was complicated mainly because of the template mismatch issue and the underlying complicated process workflow which had more steps than paper-based method.

The perceived mismatch of e-procurement templates with the nature of procurement of public bodies was reported in not less than the five (5) interviews excerpts in both implementation phases:

1. *E-procurement can be done. I am not against it. But user-friendly and proper documents. We cannot use old documents and transpose them in e-procurement.it does not fit the purpose. For works bidding, we should have a proper document for works. (EPROC21)*
2. *Then we have other sections. bid submission form which supplier has to signed, qualification information and experience of suppliers and we have general conditions of contract, special conditions of contract, particular condition of contract (conditions of works), payment, liquidated damage. This is normal works or normal bidding document. Now to use e-procurement, we need to prepare the normal bidding document first and then we should customize this bidding document. We discuss with PPO about*

*the customization of bidding document according to our nature of procurement (EPROC24)*

3. *We need to prepare a document using word and then transform it to be able to use it in e-procurement. For bids like works, this is complicated. We do not have specific templates for our nature of procurement. There are generic templates for works and goods. The templates are limited for our works nature. (EPROC23)*
4. *The reviewer is looking at a wrong end-product.. unless he scrutinizes the whole thing from scratch. It is not the standard bidding document. If the preparer took the wrong format, even the reviewer might not notice that the initiator has picked the wrong format. Reviewer will review the literatures in bidding documents, but template could be wrong (EPROC27)*
5. *The initiator, if he does not know procurement well, he risked picking the wrong template from the system. For a normal good, specification for paper, 80g and A4: for ordinary goods (EPROC27)*

- **Unmet expectations and conflict with ICT norm**

The end users also admitted that the system fell short of their expectations. The meaning they give to ‘e’ is “paperless and faster”. This was their ICT norm as they sensed ICT. But the use of e-procurement went diametrically opposite to their expectations, as reported by those end-users:

*We are not doing any paper savings contrary to what was proposed...It is important for you to note this: what is the purpose of ‘e’? faster and then we go paperless....You know there is more paper with e-procurement.....How come? There are loads of templates in e-procurement. Earlier before e-proc was introduced, there was a single standard document. Whereas for e-proc, I need to print the whole templates to give to evaluators for evaluation. We are not doing evaluation online and now need to print all templates and put in files. The format of templates contains choices (EPROC27)*

*The system was expected to make procurement faster but on the contrary it is much more time-consuming, more steps than paper-based procurement, loads of excel documents to be prepared. (EPROC25)*

*Why we talk about using ‘e’: cost-effective, less paper and faster (EPROC21)*

*Because of the ‘e’, procurement should have been much easier than paper, but officers of e-procurement were not available during lockdown (EPROC\_GROUP\_3\_MPSO\_ACCOUNT)*

- **Other key complaints**

Among the other most important complaints were:

1. Dissatisfaction with support services and with the training on e-procurement. The legitimation providers also noted a lack of concrete actions from legitimation seekers in response to their complaints or suggestions for improving the software (this was also pointed out by one legitimation provider in the pilot stage). The end-users also complained about the lack of user involvement at the ISD stage.

*Table 5.6: Responses from Interviewees*

<i>Training is important. But there are too few staff at PPO to act as trainers. No training has been provided as yet for 'e' evaluation... we wrote to them to request training of evaluators ... But there's too many delays. They called the evaluators for training when tenders were closing. In that case, when are we going to do evaluation?? This can delay evaluation and can cause bid validity to lapse! PPO should provide training for a whole pool of evaluators. (EPROC_GROUP3_MPSO_ACCOUNT)</i>
<i>User did not get training how to prepare the specification in the e-procurement format. (EPROC_PSO_FDL)</i>
<i>I asked a member of PPO: can you prepare the document in half a day? I can talk because I am retiring soon. They give lecture half a day a week. Training is not sufficient. What we do in the training and what we do actually is not the same. (EPROC21)</i>
<i>Nobody involved us when the project was under development.. after completion of the project, they impose on us like a fait-accompli.(EPROC22)</i>
<i>PPO never asked for our views when developing the system. They squarely imposed this system on us.(EPROC27)</i>
<i>The system has been imposed on us. India developed this system for us, and it is complicated. During the system development, we were not consulted. (EPROC21)</i>
<i>PPO staff bluff a lot but when we asked for help, we do not get the correct support. No e-procurement could be done because no access with system. When we seek help, PPO say ok ..yes yes but then total silence follows. Here we solve our problem by ourselves. (EPROC_GROUP3_MPSO_ACCOUNT)</i>
<i>I do everything from A-Z in procurement. I wrote a letter to PPO and described all problems that I had on the system, but they did not revert back. they even not replied to our letter. (EPROC25)</i>

2. Performance and security issues, particularly slow internet connection causing system slowness.

*The biggest issue is breakdown is frequent and internet speed not enough..for uploading a big-size document like e-social security project ..how to upload with slow internet connection?? This discourages people. the system time-out in the middle. (EPROC29A)*

*Another problem is internet ..in this building internet is slow...the support officers who came to troubleshoot the system said that internet is slow.(EPROC11)*

3. Supplier stakeholder problems – The end users had concerns for the suppliers. They were concerned about insufficient registration of small and medium enterprises (SMEs) with which they used to work. They claimed the lack of readiness of these small suppliers to operate the e-procurement.

*The drawback of the system is that all suppliers are not registered. Suppose I have a quotation like printers, IT they do quote. Material of constructions like “quincalleries” (hardware shops), they are not interested to bid. They are not computer literate...stationeries are not interested to bid. contractors of works and services ....small works and services are those who did not perform well at schools and are not good academically. How do you expect them to quote on e-procurement? (EPROC20\_GROUP\_4\_AMPSO\_ACCT)*

*Some suppliers like carpenters are not computer literate..how will they bid? if suppliers are not registered? Not all suppliers have got training. (EPROC24)*

*But the suppliers are not yet ready. Many small suppliers quincaillerie, snacks shop ..do you think these people will bid? There is a time frame to open and close bid. The time frame is embarrassing. To open the bid: the supplier has only a small lapse of time to open the bid and has to login to the system time and again to check whether the status is “ready”, and he can open the bid. Do you think that small vendors like “quincalleries” (hardware tools shop) are computerized? (EPROC25)*

*Some suppliers do not have enough personnel who are IT conversant. They do not have scanner to scan and upload document (EPROC26)*

*Suppliers like D., a big contractor in Petite Riviere, has a special section of procurement dedicated to the system. Small contractors like Team builders- have training but did not put in practice. Others Those who followed training left the company. Different suppliers have different types of problems (EPROC26)*

4. Some legitimation providers claimed to face psychosocial issues associated with the use of e-procurement.

*No additional staff. I will have a work overload burden because of lack of staff. And there are too many procurements. I encountered cardiac problems in the past due to work stress. The system made our life more difficult. (EPROC25)*

*For error correction, I have to chase the DBC member who worked on the 5th floor of the building. This is stressful. (EPROC05)*

- **System not meeting users' requirements.**

Many end-users found that the system did not meet their requirements, the most pertinent ones being:

(a) Data format limitation

*Now we need to take the specifications prepared in word, copy and paste content in Excel. We encountered formatting issues. (EPROC\_PSO\_FDL)*

(b) Lack of online self-help

*See the income tax filing system of MRA: when the system input is not ok, we cannot proceed further and the system shows where the problem is but regarding e-proc, when there is a problem of a comma or a dot, we need to search for the problem (EPROC27)*

(c) Lack of user-friendliness

*E-procurement can be done. I am not against. But user-friendly and proper documents. We cannot use old documents and transpose them in e-procurement. it does not fit the purpose. (EPROC21)*

*Now for inputting materials details on system (even for small items), details have to be loaded in excel and merged. Suppliers are often confused. Prices exclude vat. They confused on these things. System is 50 % user-friendly not 100%. (EPROC26)*

(d) Undesirable change in level of controls

*One person to process, one to recommend... one to approve. who is the PS... do you think PS has time for that he is busy... just to sign a document... I had to stand and wait for 30 minutes in front of the PS who is busy... do you think he will have time... he is not suppose to look at operations (EPROC24).*

*Bid is in possession of the secretary for paper-based tendering. But for e-proc, when we need information after bid has been processed, only the chair has access to the document when bids are processed on e-proc. The chair is the DPS. He is busy and does not have time. He is the only one who has access to the document. Now the requestor should have a login on the system or solicit a user having the login. Eg somebody in registry need information, he will not be able to retrieve it if it has not been printed. (EPROC27)*

(e) The users found that e-procurement was not practical for informal quotations which are normally recommended to effect procurement of low value goods and services. Previously, informal quotations were launched using fax machines.

*If I have a small repair (constructions), plumbing works, should I do it by 'e'. 1 July 2020 is next week! (EPROC27)*

*We managed with it...for the first quotation we had to cancel coz we did not fill the price schedule well...when we launched...supplier drew our attention to inform that they could not fill the price schedule section. This quotation had to be cancelled...price schedule...we should scroll down ...1,2,3 we tick but did not scroll down to get other items. When we clicked on OK, the system accepted it and did not prompt of errors...inadequate validation...the suppliers could not put their amount...when we've asked PPO if it can be corrected...they said it cannot be and we had to re-*

*launch...it's a waste of time.. if the items are not urgent, no problem but for urgent, then it is a problem...for urgent ones... it poses a problem... (EPROC11)*

- (f) One user had key concerns on the impact of a sudden unavailability of e-procurement platform on the online bidding process, whereby some suppliers could not submit their bids online while others already submitted theirs before the disaster happened. This would cause prejudice to the unfortunate bidders.

*What if a supplier has not been able to submit its bid because e-procurement became suddenly unavailable for X or Y reason...hmm an internet connection problem or power cut at GOC? But other suppliers have already submitted theirs before the event happened? Its bad luck for the supplier... but PPO should take note of this because it will be unfair to this supplier...it was not his fault (EPROC29A)*

- **Complaints about online evaluation module**

The users made several complaints about the evaluation module which did not meet their requirements and suggested improvements to be brought. The most important ones that conflicted with their norms were:

- (a) The online clarification process:

Referring to the former work practice for bid evaluation, in the middle of the bid evaluation process, if clarifications were required, bid evaluators were allowed to seek clarifications from the bidders through a well-established procedure in the procurement process. The procurement guideline recommended that the clarifications be sought through an official channel in the organization and in current working practice, the Bid Evaluation Committee (BEC) would write to the Departmental Bid Committee (DBC) to request these clarifications. The communication process between the committees and communication of DBC with bidders were normally duly “minuted” as these details were important in case an unfortunate bidder felt prejudiced and decided to make an appeal at the Independent Review Panel (IRP) (see coded extract **PPO14** in [table B.3](#) in Appendix B). However, in the online clarifications process, communication between committees was omitted and the process of online evaluation could not be temporarily stopped in the middle pending the clarifications, and then resumed. Instead, the online evaluation process should be completely aborted and re-started. The whole process of setting up the bid evaluation committee should then be repeated on the system. In short, the online evaluation module in its current form might conflict with the accountability norm as the user would not be able to account for the evaluation as a continued process whereby

in-between committees' communications could be related to the clarifications that were required and sought. These were affirmed by some of the legitimation providers:

*“The user: We have often to seek clarifications and then come back to evaluation. In case you disqualified a supplier, it will not appear on the screen. You have to make sure that necessary documents have been submitted. What are the steps for clarifications (OBS\_TRAIN04\_EVAL)*

*User: generally the DBC request clarifications, where is the instruction to send back to DBC for them to seek clarification and upload documents... You said documents submitted but documents will not be submitted to BEC but to DBC.. (OBS\_TRAIN04\_EVAL)*

*The trainer: Ok, you can send back to chairperson requesting the clarification ...You go to previous...or unfortunately you can ask clarifications offline. User: you cannot go back to chairperson. No, you can go back, but evaluation will be stopped. You can send it back to the chairperson of DBC ..Now we are going backward in steps (user) and it becomes a situation like “before evaluation”. Documents that will be submitted for clarifications will have to be evaluated ..(trainer) In the middle of evaluation, you have to do it offline then unfortunately. The evaluation should be totally stopped. But the chairperson can send back to BEC once the documents for clarifications are obtained.” (OBS\_TRAIN04\_EVAL)*

(b) Change in work practice for Bid Evaluation Committee (BEC) and remote access to bid data:

In current work practice, the BEC is held in a “closed room” and all documents related to the bid evaluation are accessible only within the committee to preserve confidentiality. No data is accessed outside the committee. However, with the new system, the data is accessible only to the chairman and may be even remotely. Users raised a concern of possible risk of fraud, though an audit trail is available. They claimed that by the time this fraud is discovered, and the matter is taken to court, several years would have lapsed.

*The user: From remote, the chair can access the system and there is a risk that he can manipulate the data remotely. In manual situation, the evaluation is done among committee members and everything is recorded on-spot and remained in the committee and the document is not available outside the committee what is the security????..but with e-proc, the chairman can access remotely even at home (confirmed by staff)...modify the result to favour a bidder, though auditing is available.... This may surface after years when the matter goes in court or if anybody happen to discover this fraud...(OBS\_TRAIN04\_EVAL)*

(c) Lack of a dissenting feature in the system:

Dissenting in the bid evaluation process is a norm that should have been inscribed in the e-procurement system. However, the legitimation seekers claimed that they do not expect dissenting to happen and prefer to reach a consensus.

*There is a possibility for a member to dissent? Where is the possibility for the dissent to be uploaded? It will be on the system on the summary report for evaluation, when you proceed further. (OBS\_TRAIN04\_EVAL)*

*Chairperson can then create a new BEC. Desenting report will be uploaded on the system? It's only the chairman who has access to evaluation data. He has to upload the desenting report. The evaluator will not sign the main report but will sign a desenting report. Normally, we do not expect this to happen in the sense that we expect the members to voice out then come to a concensus having one report. But we can have a situation. Normally members can seek guidance from PPO to reach a concensus. (OBS\_TRAIN04\_EVAL)*

(d) Automatic selection or rejection of bidders in online evaluation

The system was designed in such a way that the system automatically chose or rejected bidders based on the evaluation criteria having just a 'YES' or 'NO' response. However, in the bid evaluation process, bid evaluators often need to use their own judgment and as a result all the relevant accompanying documents of the bid are evaluated.

*We tried to do an evaluation on e-procurement in <an anonymized Ministry> but got lot of problems. We could not download documents. Suppliers were selected and rejected automatically by the system. System knows only "a...a", "b...b". What you feed is what you will get. But as human, we can use our judgement, expertise and enquire. (GROUP3\_MPSO\_ACCOUNT)*

*Now automatic evaluation, a bid can be automatically rejected based on criteria selected. Sometimes evaluation requires judgement on minor and major deviation. (EPROC21)*

The automation of evaluation therefore should be improved. The current form of automatic evaluation on the e-procurement system might conflict with the norm of the legitimation providers who were convinced that a sense of judgment is crucial in the bid evaluation process. However, several disagreements were noted on this issue. The legitimation seekers felt that public bodies should prepare their IFB unambiguously. However, legitimation providers insisted the problem did not lie with the bid preparation, but a sense of own judgment is needed to deal with major and minor deviations in the bid evaluation process, as they affirmed in the training session:

*The evaluation should be done over again as it is a question of judgement. If the bidder fails on a criterion, it indicates non-compliance (user). (Trainer), no not necessarily...you should have a knowledge on theory. A pass/fail criterion should not be included in a marking-based evaluation. But it depends on how the document (IFB) was prepared. For*

*example, if a bidder has less than 10 years of experience, the document should be clear to the bidder that it will fail if it does not meet that criterion. (OBS\_TRAIN04\_EVAL)*

- (e) Other shortcomings observed include amongst others, inadequate MIS reports, a limited choice of evaluation template, inadequate validation and system rigidity and the time factor of evaluation. This is affirmed by the legitimation providers in the coded extract below. The legitimation seekers took note and promised to escalate the suggestions to management.

*“I believe that it will not be that automatic because you are floating the tender, we know which tender that we have float. I cannot be asking a tender for goods when we know that we floated a tender for consultancy. So we cannot choose any automatic template for evaluation. Trainer: changes have to be done in the system. (User): it could mislead evaluators. It’s only at the end that they will notice that. Trainer: it has happened before .... (laugh).....*

*.....When I go down this form, and we click on the save, it brings me on the first page. Now this is one criterion and then I have to do all over again for the second criteria. It is not user-friendly....(Trainer): Ah!....*

*With the manual process, the DBC tells BEC about the evaluation period. But in the system, no such option of expiry of evaluation period. It is not time-bound on the system which does not take into account of the time-period of evaluation. User: it should have been there! But it is good practice for DBC to ask BEC to submit the evaluation period within a time frame.” (OBS\_TRAIN04\_EVAL)*

#### 5.4.8.3 Legitimation strategies applied

Having understood the various concerns and expectations of the legitimation providers through their complaints and their suggestions for improvement as highlighted in this second phase of e-procurement implementation, the legitimation seekers have applied several legitimation strategies through their strategic actions, as explained in this section, in an attempt to close the legitimation gaps.

##### 5.4.8.3.1 Improve software to meet users’ needs

The legitimation seekers advocated that an upgraded version of e-PS was released in 2019 whereby the users were experiencing higher speed in execution e-procurement transactions, and they also completed the resilience testing which confirmed e-procurement robustness for peaking usage (see extract PPO32 in [Table B.3](#) in Appendix B).

##### 5.4.8.3.2 Publish e-SBD to address users’ concerns on templates

Furthermore, to address the users’ concerns about procurement templates, the PPO worked on the digital procurement templates to match the different nature of procurement. Some templates were made available on the website in 2020 (PPO SBD e-PS, 2020).

#### 5.4.8.3.3 Humbly acknowledging shortcomings in e-Ps

In response to complaints from the end-users, the legitimization seekers humbly acknowledged the shortcomings identified with the information system and made promises to improve users' experience on e-procurement.

*Our system is not that perfect.,I have to admit. We have requested and escalated changes on many occasions..We do our best..trust us.. (OBS\_TRAIN\_04)*

#### 5.4.8.3.4 Additional Training on specifications in ready-excel format

Referring to the complaints of users regarding their difficulty for preparing Invitation for Bids (IFB) in Microsoft Excel-ready format for e-procurement, the PPO organized a special training to assist the users to prepare and submit specifications on e-procurement system in Microsoft Excel-ready format (see coded extract PPO31-02 in [Table B.3 in Appendix B](#)).

#### 5.4.8.3.5 Issue rule of offline mode for certain types of procurement including informal quotation

The project team issued a directive for launching informal quotation of low procurement value in offline mode to address the complaint related to time consuming process for launching informal quotation ([Annex B.4 – 10 PPO 20](#)). Furthermore, the loose coupling feature inscribed in the software facilitated the offline evaluation.

#### 5.4.8.3.6 Meet demands for refresher training

Furthermore, based on the feedback of the SPOCs who were in direct contact with the end-users, the legitimization seekers agreed to organize refresher training for those who had forgotten how to use e-procurement and to cater for lateness in implementing e-procurement after the first training. The training was held on the 2<sup>nd</sup> and 3<sup>rd</sup> December 2019 at the Procurement Policy Office and 9 participants from a large public body followed a refresher training. This batch of trainees were first trained in 2017.

*Table 5.7: Description of the training session*

Training on e-procurement (Refresher) –procurement cadre of Ministry of <anonymized> (9 participants)
Held on 2 and 3 December 2019 at the PPO (2 half-day sessions)
Researcher attended partly this training for observation (upon mutual consent with the trainer and trainees).
Training conducted by Mr. G.J., IT Manager and Mr. D.A., MPPO.

#### 5.4.8.3.7 Request successful stakeholders to help others

The legitimization seekers also requested public bodies which were struggling with e-procurement implementation to liaise with successful stakeholders ( such as successful organizations B and C described in section 5.4.6) to help them with e-procurement implementation.

*S.R. said that <Anonymized Organisation C> is doing a lot of bids. But <Anonymized Organisation C> bidding is not the same as Public Utilities because here we do big tenders, big works and consultancy bids.*

*They asked me to contact <Anonymized Organisation C> and I asked them to explain to us about the system. I am not agreeable. Everybody should get training (EPROC21)*

#### 5.4.8.3.8 Seek support of powerful stakeholders in private and public sector to improve uptake

In addition, the legitimisation seekers from the project team of the Procurement Policy Office (PPO), sought the support of another stakeholder which they believed could help to accelerate the uptake of e-procurement across the Government. The PPO sought the help of the Ministry of Public Service and Administrative Reforms (MPSAIR) which is responsible to spearhead e-government projects in the Government of Mauritius and to allocate human resources to different Governmental departments (see extract **PPO29-03** in [Table B.3](#) in Appendix B). This Ministry was supporting the PPO to monitor the progress of e-procurement implementation in the 55 public bodies, and they devised metrics for progress monitoring in terms of Key Performance Indicators (KPI). The legitimisation seekers felt that with this measure, a sort of competition will be created among the public bodies that will improve the uptake.

*The PTI will foster a kind of competition among public bodies that will encourage the uptake and usage of all functions of e-procurement. They will be motivated to make better scores to surpass their counterparts. (EPROC01)*

Along the same line, the project team sought the support of private sector stakeholder and re-doubled efforts to meet the private sector for boosting registration of private suppliers as they were already aware that insufficient suppliers' registration and hence lower number of bids would go diametrically opposite their vision and the aims established at the outset of the e-procurement project, The Mauritius Chamber of Commerce and Industry (2020). The initial strategies of the legitimisation seekers regarding continuous stakeholders' communication, training and ICT support services were ongoing in this phase, as already evidenced by the claims of the end-users enrolled in this phase.

#### 5.4.8.3.9 Issue of directive for bids cancellation

In response to users' concerns on sudden unavailability of e-procurement which lied outside bidders' control and that was likely to cause prejudice to them, the legitimisation seekers addressed this concern by issuing a directive to instruct the public bodies to recourse to bid cancellation whenever one or more supplier/s have reported that due to e-procurement related issues which were outside their control, they could not submit their bids online (see [B.4 - 11](#) PPO 11- Cancellation of Bids)

#### 5.4.8.4 Impacts of Legitimation strategies applied

A mix of part-usage and fallback outcomes emerged from this second phase. In this stage, nine public bodies which participated in this research were using e-procurement only partly that is the online bidding module only. They were not using the evaluation module while two public bodies fell back to paper-method in this phase. The claims from different legitimisation providers affirmed this:

*Not as such... how about evaluation? Not yet reached this stage. We are proceeding step by step as we have recently implemented e-proc. But training will be required for evaluators. They have not yet got training btw We need to familiarize with the system..we need assistance from PPO.(EPROC29A)*

*Well, In 2019, We got approval from our management to proceed and I took the lead. We have launched 10 bids online. Supplies are responding. We get queries from suppliers about bids launched. It means that they are accessing and using the system. We also update them by adding clarifications through the system. But evaluation is still paper based. Evaluators should get training in e-procurement. (EPROC17)*

*We are not yet fully e-procurement... now we are doing both paper-based and e-procurement. Evaluation is not at all being done on the system. We are still struggling with putting bids on the system. (EPROC20\_GROUP4\_AMPSO\_ACCT)*

*We are using e-procurement but for AOB only. We are prepared to use. Evaluation has been done paper-based in our Ministry. (EPROC27)*

Despite the legitimization seekers have attempted to convince top management of these public bodies to set up e-PS cell that could have contributed to smooth implementation, same was not yet realized, as affirmed by one legitimization provider:

*We have launched quotations only informal quotation. we have not yet structured our e-PS cell. Since 1 year, PPO advised to implement but there was some delay (EPROC11).*

#### 5.4.9 The fallback outcome

A query was executed in NVIVO software using the key criteria that are most likely to be associated with the fallback outcome and it was based on the legitimization providers' interviews and related observations. The results were then filtered on a query condition where "*fallback <> 0*". All interviews and observations related to fallback were retained, as shown in table 5.9. All criteria that display mostly non-zero were retained.

Six public bodies participated in this research fallback to paper-based method after using e-procurement for a while. The fallback outcome was due to a combination of two major factors: active resistance of legitimization providers to use e-procurement and lack of top management support of those public bodies to the initiative. The legitimization seekers, on the other hand, confirmed that they made all efforts possible to improve uptake.

*Yes, all efforts that you could ever think. All that you could ever imagine...we did (EPROC29)*

The legitimization providers had negative perceptions about e-procurement as indicated by the complaints made about the system and leading to praise for their former paper-based methods.

The negative perceptions and active resistance of legitimation providers were revealed through their complaints, the key ones being:

1. The time-consuming and lengthier process in e-procurement conflicted with the timeliness norm in public procurement and with the ICT norm of the legitimation providers.
2. Negative economic outcome due to slow uptake of e-procurement by the suppliers.  
The negative economic outcome was underpinned by the shortcomings in the registration of suppliers. When this happened, the concerned public bodies got a lower bid response that caused a hike in goods' prices. This effect conflicted with the responsiveness and competitiveness norm of the legitimation providers who normally expect large number of bids that promote competitiveness.
3. The legitimation providers demonstrated active resistance as they openly praised the paper-based method and criticized the success instances, and finally resorted to their former methods despite e-procurement being available. This active resistance was tolerated by top management of those public bodies who showed lack of interest in e-procurement and hence did not oppose the active resistance which prevailed. It went implicitly.
4. Given that the nature of procurement differs from one public body to another, the users faced major issues for matching the available electronic templates with their Invitations for Bids (IFB).

The causal relationships leading to a fallback outcome are illustrated in Figure 5.12.

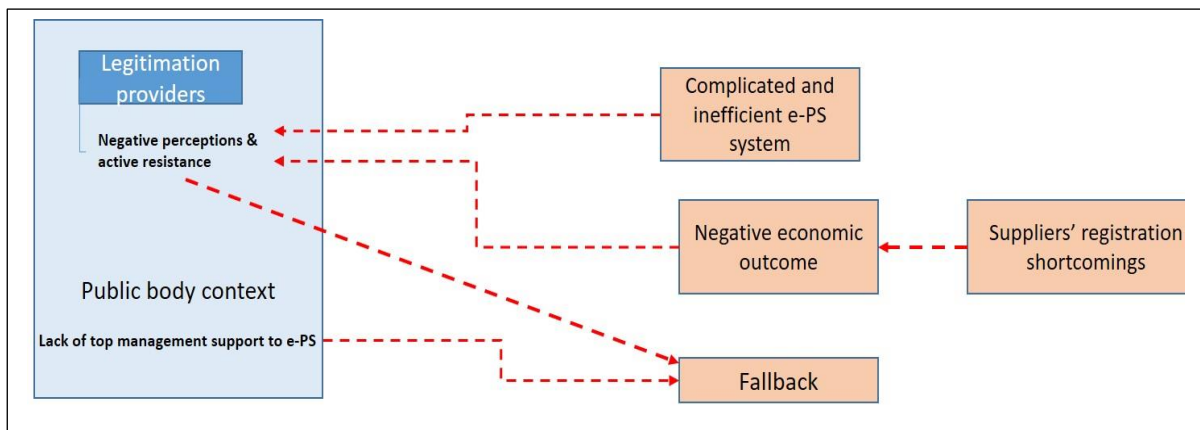


Figure 5.12: Causal Relationships in Fallback Outcome

## Key relationships

Table 5.8 depicts evidence underpinning the relationship uncovered between themes of the fallback outcome which are shown in figure 5.12. Examples of coded text fragments reflecting the relationship between the themes are provided in table 5.8.

*Table 5.8: Key Relationships between fallback themes*

Relationship	Examples of coded text fragments	No. of occurrences
<p>Complicated system causes lengthier and time-consuming online bidding process leading to negative perceptions</p>	<p><i>Our old method was very efficient. But with the new system, we should fill the excel file one by one, prepare template and launch.it is more time-consuming...(EPROC05)</i></p> <p><i>I work together with my consultant to understand how to prepare the document. I took one month to prepare my bid, I had to call an officer from PPO to help us regarding which packages to upload and if he did not tell us about duplication issue in package selection at this particular moment, we would not have known about this problem. (EPROC23)</i></p> <p><i>The system should have been simplified before we could re-use it. With loads of problems, we cannot continue with using the system. It has many more steps than paper based. (EPROC06)</i></p> <p><i>Preparation of template is very time consuming, much more than paperbased. We need to map each specification of the item for one item. Mapping re-starts for 2nd and 3rd items. It's very tiring. (EPROC21)</i></p>	<p><b>16</b></p>

<p>Shortcomings in suppliers' registration leads to negative economic outcome and fallback</p>	<p><i>The problem with e-procurement is low response from suppliers. Our suppliers on RB do not register...Whereas paper tendering works better, higher number of bids. Nature of tendering is mostly restricted bidding at the Ministry. Slowness at opening of bids, fewer bids with e-procurement. Suppliers do not bid online. 10 downloads of tender documents noted but only 2 bids received.... for whatever reasons...We have no other option than doing procurement on paper as we need to clear our back-log (EPROC26)</i></p> <p><i>Before introducing you to other staff, let me talk about &lt;anonymized Ministry&gt; again. I recalled that I got training in 2015. Because of no responsiveness of bids and especially the time that it took to launch bid, we reverted back to paper-based method. (EPROC21)</i></p> <p><i>Already.50 bids I have launched recently...all went smooth in paper-based...now just imagine that I had to do it using e-proc! (EPROC25)</i></p>	<p><b>10</b></p>
<p>Lack of top management support leads to the fallback</p>	<p><i>No problem as such in using the system. But management do not want to use the system and find it bulky and complicated. But here we are willing to use. I am a very busy man. (EPROC07)</i></p> <p><i>What does your CEO say? Put this system aside. We have already had problems with the system with the very first bid. they even not replied to our letter. (EPROC10)</i></p>	<p><b>13</b></p>

Table 5.9: Fallback Outcome Query

	complicated system	inefficient system	negative economic outcomes	Fall-back	lack of top management support	Active resistance		negative perceptions	Context attributes	
						critical interpretation of success cases	praise efficiency of paper-based method		ICT culture	specific nature of procurement
EPROC05	1	1	0	1	1	0	1	1	1	3
EPROC06	1	5	2	2	0	0	0	2	1	2
EPROC07	0	0	1	1	1	0	0	0	0	1
EPROC10	2	2	1	2	1	0	0	1	1	3
EPROC21	7	10	3	5	1	2	2	3	2	4
EPROC22	2	3	0	1	0	0	1	3	1	0
EPROC23	6	8	1	1	1	1	3	2	2	4
EPROC24	3	3	0	1	1	1	1	3	2	1
EPROC25	1	8	2	1	1	0	2	7	1	1
EPROC26	2	7	4	3	1	1	2	1	2	1
OBS_TRAIN02	1	2	1	2	1	1	0	2	0	2
No of files	10	10	8	<b>11</b>	9	5	7	10	9	10
No of references	26	49	15	<b>20</b>	9	6	12	25	13	22

#### 5.4.10 The part-usage outcome

To obtain deeper insights on part-usage outcome, a query was run using all interview excerpts and the relevant coded observations against the criteria which are highly likely to be associated with the part-usage. The result was then filtered using a condition “*part-usage <> 0*” in NVIVO. All criteria with non-zero values along most interviews were retained and the final results are shown in table 5.11.

The part-usage outcome was a combined result of the non-usage of the online evaluation module which was optional and the commitment of top management in the continued usage of online bidding module. However, the use of the online evaluation module was not a concern for the legitimization seekers as it was still optional. Figure 5.13 describes the different contextual elements that shaped the part-usage outcome.

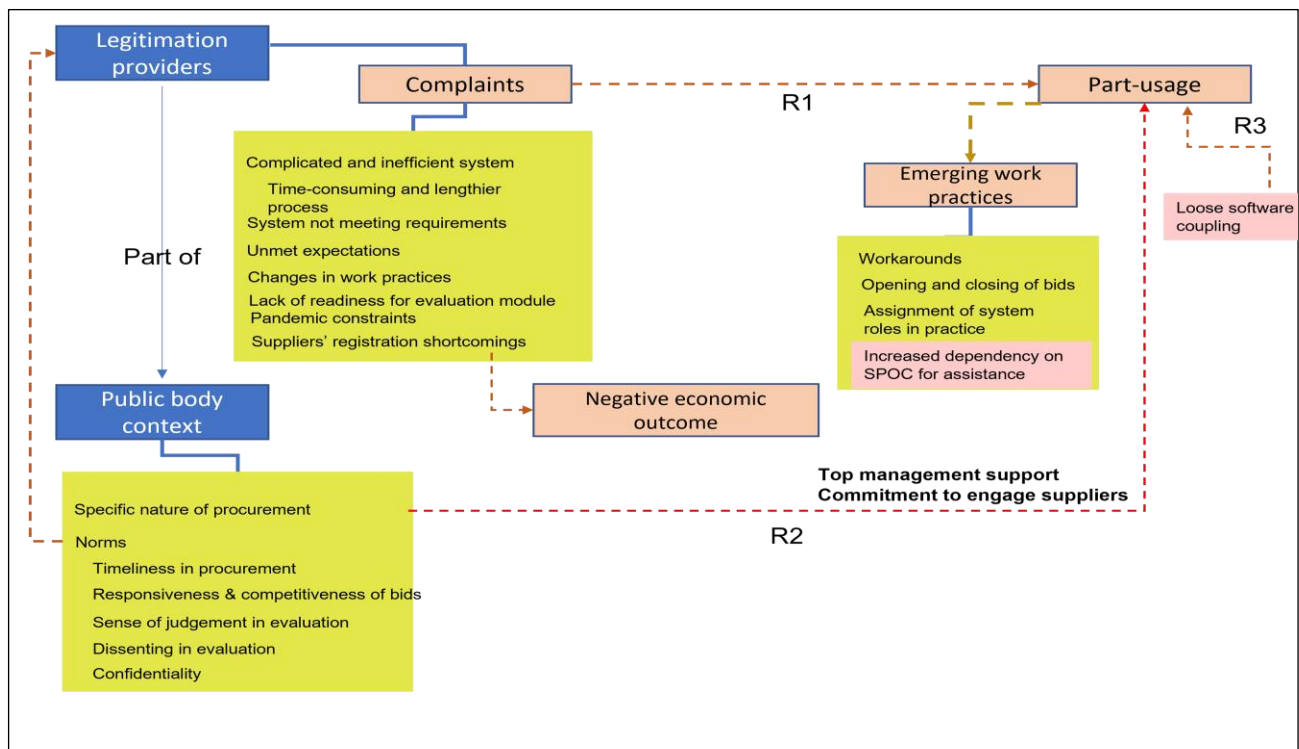


Figure 5.13: Causal Relationships in Part-Usage Outcome

Referring to figure 5.13, the main causes of the part-usage outcome are described as follows:

#### 1. Top management support to online bidding

The legitimization seekers recognized that top management of certain public bodies showed commitment in respect of cooperation with PPO for staff training, instructing staff to engage and sensitize their suppliers with whom they worked, and use of e-procurement for online bidding.

*They are at least cooperating. We have a holistic view of all bids launched by public bodies in real-time. Our IT department has reported positive trend for bidding online for some public bodies (EPROC29C)*

*The AMPSO welcomes all participants and thanks all respective departments for sending their staff in the evaluation training. (OBS\_TRAIN04\_EVAL)*

The only main difference between the fallback and the part-usage was the top management commitment in the latter case, as also evidenced from the accounts of the legitimation providers especially in terms of engaging the suppliers in the process.

*I am creating a supplier-buyer based relationship. I have already written a letter to inform them that we are going for e-procurement. We shall organize a workshop for suppliers later on to inform them about 'e'. We will annex the notice in all paper-bidding documents to encourage them to register in e-procurement. There are 500 suppliers that we can choose: supplier for vehicles, supplier for computers, suppliers for construction, stationery, agricultural (fertilizers, medicines, sprays, equipment, laboratory, poultry, engineering, animals, animal feeds, animal productions (various animal feeds and animals), constructions... (me: irrigation? ).no this is for <anonymized department>. We should also submit a monthly return on the list of suppliers that have registered online to the director. He should be aware of the progress...(EPROC\_GROUP3\_MPSO\_ACCOUNT)*

*See for my RB we have the list of suppliers. We contacted all the suppliers for registration but only the big ones registered. (EPROC29A)*

*Now we are doing RFQ, RB.. Suppliers should be registered. We write to them and put a notice in the bid document. Still, they do not register. We have pressures. We should report in the management meeting about suppliers' registration. (EPROC20\_GROUP\_4\_AMPSO\_ACCT).*

## **2. A Comply and complain scenario.**

Although the users in the part-usage scenario were still dissatisfied with online bidding, they had to comply with formal instructions from their respective top management to use e-procurement for online bidding. A “comply and complain scenario” then emerged. Three legitimation providers gave the impression of being desperate by affirming:

*“We either adapt or perish” (EPROC11; EPROC09; EPROC27).*

The “comply and complain scenario” gave rise to the adoption of multiple workarounds initially employed in trial bidding and an increase dependency on the SPOCs to “*get things done within target deadline*”.

*In which format they gave us? In Word format. Now we need to translate it into Excel and then input it into e-procurement..errors are liable in the chain. Specification should have been in the e-procurement format (EPROC27).*

As indicated earlier, the Procurement Policy Office (PPO) improved digital templates for e-procurement in the year 2022 and as a result this improvement may possibly eliminate the need of workarounds that were being employed in online bidding (see table 5.9). However, the researcher could not investigate further on this aspect.

The legitimation seekers advocated that there was a strong dependence on the SPOC whereby the procurement staff, being risk-averse by nature, were still fearing missing deadlines and rely heavily on the SPOC to launch bids. The routinization of online bidding as initially targeted by the legitimation seekers was not therefore achieved by the end of this stage.

*Normally it should have been completed by six weeks. But I have got complaints from my staff that despite being handheld on many occasions some procurement staff keep calling them for on-site assistance when bidding online. (EPROC01)*

*Mr R.S. prepares the template in excel by matching the item specifications with the template columns. Once template preparation is completed, the MPSO logs in the system and verifies the filled template before it is uploaded by Mr R.S. on the system. The MPSO then waits for Mr. R.S. to complete the whole operation. (EPROC08\_OBS)*

*When they have pressures from their management, they put pressure on us to come on-site to prepare and launch their bids on e-procurement. Despite they got training, and in some cases refresher training as well They are reluctant to launch bids on e-procurement and they feared of missing their deadlines and fear that things may go wrong when they are using the system. (EPROC29B).*

The lack of confidence of legitimation providers and risk-averse nature were evidenced in their explanation as follows:

*I have started implementation of e-procurement with the help of A.N. from PPO. Azhar has helped us a lot but I don't think I will be able to do one by myself. We are not well comfortable with the system and a supervisor is required to guide (EPROC21)*

*We can do it on our own but sometimes we do need help..we did get assistance..for big tenders..we will need assistance of PPO.(EPROC11).*

### **3. Emerging work practices**

The visible emergence of new work practices associated with the use of e-procurement in the part-usage scenario were observed by the researcher. The bid opening and closing process gave rise to a new work practice whereby the legitimation providers were noting the dates of bid opening and closing either on a whiteboard or in a diary because if these dates are missed, an addendum must be generated which would complicate the procurement process further.

*Opening and closing of bids should be noted in a diary or notice board as we are compelled to remember the date and time, failing which the bids will not be opened and addendum should be issued...for approval from administration. We have not yet launched RB or OAB...(EPROC11)*

*I noticed a whiteboard which is affixed in the procurement section: all active bids that are currently launched through e-procurement are written on it with their closing date and time clearly underlined. Enquiring about its purpose, they said that the closing date and time should be visible to all to ensure that closing and opening are not missed otherwise an addendum would have to be produced. (OBS01)*

Another new work practice which was worth noting was the assignment of system roles to staff in the procurement chain. In contrast with assigning a role from initiator to approver to different users which underpin the accountability practice as initially decided, it was found that two or more roles were assigned to a single user that may compromise the accountability inscribed in e-procurement.

*I am the preparer. PS is the assessor and reviewer. He is responsible for vetting the tender but is always busy. He should give the authorization to launch the bid. Without his approval, bid cannot be launched. (EPROC10)*

*I did both reviewer and preparer on the system (EPROC23)*

*I do preparer, publisher, closer and opener. Approver is CE but before deputy was approver. But new CE is not doing the approver role but we should explain to him how to do approval on system. (EPROC25)*

Furthermore, two research participants claimed that they felt pressure as a bid's closing time was approaching. They affirmed that they should constantly check notifications in their emails or on the system even at the last 5 minutes before closing of bids, to respond to clarifications submitted by bidders.

*I feel more stress than before with this 'e' system..especially with this automatic closing time on system .last Wednesday there was a closing of an informal quotation and you know what?... at round 10 minutes before closing, when I am checking email, I found that supplier asking for clarification... do you think this is nice?... In this section, we are already short of staff.. and now more and more stress for us with this new system. We must constantly check emails before closing now. (EPROC27)*

#### **4. Positive perceptions**

A few legitimation providers had some positive perceptions about e-PS though they disagreed with certain features (see table 5.11). The legitimation providers claimed that e-PS brings transparency to procurement transactions and may reduce fraud and corruption.

*Transparency as compared with old system is much better ..accounting officers are always scared of procurement but now they are happier with this system and feel more confident to give their approval.(EPROC29A)*

*E-procurement is however process where there is transparency. All are recorded and cannot be deleted, (EPROC\_GROUP3\_MPSO\_ACCT)*

5. **Rejection of the online evaluation module:** as discussed in section 5.4.8.2, many legitimation providers had negative perceptions about the online evaluation module during the training session and felt that the actual module might conflict with their norms.
  
6. **Loose software coupling:** the legitimation seekers of the Procurement Policy Office (PPO) catered for loose software coupling at the outset in the e-procurement design whereby the online bidding module functions almost independently of the evaluation module. After completing online bidding, a option is available on the system which allows a user to choose whether to continue with online evaluation or to move to offline evaluation.

**Key relationships**

Table 5.10 highlights the relationships unraveled between the themes of the part-usage outcomes (as depicted in figure 5.13). The tables also provide examples of coded fragments of interview extracts reflecting the identified relationships between themes in the part-usage scenarios.

*Table 5.10: Relationships among Themes for Part-usage outcome*

<b>Relationships</b>	<b>Example of coded fragments of extracts</b>	<b>occurrences</b>
Negative perceptions of legitimation providers on evaluation module impacts the uptake of online evaluation	<i>We tried to do an evaluation on e-procurement in &lt;anonymized department&gt; but got lot of problems. We abandoned. We could not download document;suppliers were selected and rejected automatically by the system. System knows only “a..a”, “b..b”. what you feed is what you will get. But as human, we can use our judgement, expertise and enquire. My conclusion is that officers will prefer doing everything offline and then upload scan documents in the system (laugh) (EPROC_29A)  We are not doing any paper savings contrary to what was proposed. (EPROC27)</i>	5
Lack of readiness for evaluation impacts the uptake of online evaluation	<i>Training is important to use evaluation module. But there are too few staff at PPO to act as trainers. No training has been provided as yet for 'e' evaluation... we wrote to them to request for training of evaluators. ( EPROC20_GROUP_4_AMPSO_ACCT)</i>	5

Relationships	Example of coded fragments of extracts	occurrences
	<i>Sure. How? But It depends on the readiness of management for doing evaluation online. I have been encouraging top management during meeting to go for online evaluation (EPROC09)</i>	
Top Management support to online bidding impacts online bidding	<p><i>When we launch tenders, we do not receive enough bids. I am creating a supplier-buyer based relationship. I have already written a letter to inform them that we are going for e-procurement. We shall organize a workshop for suppliers later on to inform them about 'e'. We will annex the notice in all paper-bidding documents to encourage them to register in e-procurement. (EPROC_29A)</i></p> <p><i>625 IFBs have been launched online as at date (EPROC11).</i></p>	5
<p>Part-usage leads to emerging work practices:</p> <ol style="list-style-type: none"> <li>1. Practices for bid opening and closing</li> <li>2. Use of workarounds</li> <li>3. Dependency on SPOC</li> </ol>	<p><i>Opening and closing of bids should be noted in a diary or notice board as we are compelled to remember the date and time, failing which the bids will not be opened and addendum should be issued...for approval from administration.(EPROC11)</i></p> <p><i>Another problem is the excel sheet...we need to fill the item..you work at &lt;anonymized department&gt; and you'll understand..suppose we have to purchase a laptop..the specs spans on 3-4 pages..with the new system, we need to convert this specs in Excel and input the item one by one. Whereas old system, we only annex the document with the major bidding document.. We should adapt or perish...we do not have the choice..we cannot resist to change We can download the bids and do some manual work, record key points on paper and then record all on the system. (EPROC27)</i></p> <p><i>When they have pressures from their management, they put pressure on us to come on-site to assist them to prepare and launch their bids on e-procurement. Despite they got</i></p>	8

Relationships	Example of coded fragments of extracts	occurrences
	<p><i>training, and in some cases refresher training as well They are reluctant to launch bids on e-procurement and they feared of missing their deadlines. It's becoming too frequent. Helpdesk is overflown with requests for assistance. We need SPOC to help us.</i></p> <p>(EPROC20_GROUP_4_AMPSO_ACCT)</p>	

Table 5.11: Query Outcome for Part-usage

	Comp laints	negative economic outcomes	Workarounds	emerging work practices	part-usage	commitment to engage suppliers	negative perceptions	positive perceptions	ICT culture
EPROC_29A	8	1	1	1	3	1	0	2	1
EPROC_GROUP _3_MPSO_ACC OUNT	13	4	2	0	4	1	7	1	3
EPROC_GROUP _3_PSO_ACCT	2	1	1	0	1	1	0	0	1
EPROC_PSO_FD L	4	0	1	0	1	0	0	0	1
EPROC09	3	1	1	0	1	1	1	0	1
EPROC11	12	1	2	2	3	1	0	1	1
EPROC17	0	1	1	0	6	1	0	0	1
EPROC20_GRO UP_4_AMPSO_ ACCT	7	1	1	0	3	1	1	0	1
-EPROC27	25	3	1	0	4	1	4	0	1
No of files	8	8	9	2	<b>9</b>	8	4	3	9
No of references	74	13	10	3	<b>26</b>	8	13	4	11

#### 5.4.10.1 Similarities and differences between the outcomes

The similarities between all the outcomes of e-procurement include ICT norms among public officers, the nature of procurement which is tied to the context of each public body, and the old public procurement portal which is still operational and used in parallel with the e-procurement system.

Table 5.12 shows the difference between fallback and part-usage outcomes whereas table 5.13 outlines the difference between part-usage and successful outcome of e-procurement implementation.

*Table 5.12: Differences between Fallback and Part-Usage*

<b>Features</b>	<b>Fall-back</b>	<b>Part-usage</b>
Top management commitment	Lack of top management commitment	Top management commitment

*Table 5.13: Differences between Part-Usage and Successful Outcome*

<b>Feature</b>	<b>Part-usage</b>	<b>Success cases</b>
Use of evaluation module	Rejection of evaluation module which conflicted with several norms	Shows interest to move beyond online bidding by testing evaluation module

#### 5.4.11 Mandatory use of e-procurement

Legitimation was not granted by most public bodies as demonstrated by the findings. As from January 2021, the use of e-procurement for online bidding was rendered mandatory by the Government (PPO directives, 2020a). All public bodies were instructed to launch bid online using the e-procurement portal of Government of Mauritius.

The old public procurement portal was still active and was not yet de-commissioned. On this portal, announcements for both e-procurement IFB and paper-based invitations were published. Therefore, some public bodies were still using paper-based methods (see [B.4 – 10 PPO20 Directive 47](#)). According to the latter directive, public bodies were allowed to use paper-based method for some specific types of procurement.

#### 5.4.12 Final assessment of e-procurement implementation – January 2021 – September 2022

This section presents the findings from a final assessment of e-procurement implementation for the period January 2021 to September 2022. Using reliable secondary data which are publicly available from various online sources, the coding pertaining to evolution in the implementation outcome was done in NVIVO. The findings are discussed in this section:

##### Changes in implementation outcome

###### 1. The status-quo

One public body that initially participated in the study remained at the fallback stage as of February 2022, as confirmed by an extract of the Auditor’s report below. Paper-based procurement for all real bid exercises persisted. Recurrent technical issues encountered with e-procurement and bidding document template mismatch cause bids cancellation, as confirmed by a coded extract of the auditor’s report:

*“The <anonymized public body> had encountered technical problems with the e-Procurement system, and the e-bidding exercise had to be cancelled twice due to bidding documents not properly customised, wrong selection of invitation for bids attributes and in one exercise, the offer of a bidder was not seen in the system -- The <anonymized public body> should consider providing further training on e-Procurement to its staff” (NAO, 2021: pp 286).*

###### 2. Changes in Fallback outcome

A rising trend in online IFBs for one public body is shown in figure 5.14, which might indicate a slow reversion of the fallback outcome after year 2020. In 2021 and 2022, the IFB statistics of this public body were being constantly monitored by the researcher from the e-procurement portal in order to obtain the trend in launching online IFB.

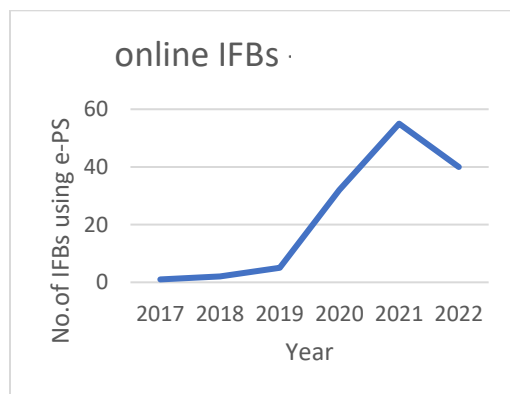


Figure 5.14: Trend in Online IFBs for One Public Body (Source e-Procurement system of Government of Mauritius (2022). Portal Statistics 2022; 2021.)

An upgraded version of e-procurement was launched and more e-SBD which matched the nature of procurement for different goods and services were uploaded on the PPO website (PPO SBD e-PS, 2022) might explain the change in the usage pattern of the online bidding module.

#### 5.4.13 Practices of Non-compliance

The analysis of reliable secondary sources shows that there are critical aspects of the procurement process that remain outside e-procurement and are associated with recurrent non-compliant practices. Some public bodies were severely criticized by the National Audit Office because of these non-compliant practices (see extracts NAO03-03, NAO04-05, NAO04-04, and NAO03-01 in [Table B.3](#) in Appendix B):

*“In particular, I am again drawing attention on lapses in procurement and deficiencies in the management of government projects. As significant sums are spent on the acquisition of assets and inventory items, and in the implementation of capital projects, the need to obtain value for money as well as strict observance of procurement rules and proper management of capital projects at the level of Ministries and Government Departments is reiterated” (NAO, 2021: pp 1)*

These critical aspects of the procurement process lying outside e-procurement, and which are often associated with non-compliant practices are outlined below:

#### **1. Choice of bidding method and selection of suppliers for restricted bidding**

Procurement officers must abide with the public procurement guideline which stipulates the criteria to select bidding methods by the value of procurement (see section 5.4.3.3). However, the e-PS<sup>18</sup> does not provide any sort of validation that compels the end-users to choose a bidding method by the value of the procurement. The choice of bidding method and the decision for allocating a duration for bid submission are often tied to the nature and timing of the procurement and is subject to the decision of top management of the respective public body. The wrong choice of bidding method has often been criticized as per the extract below:

*“The <anonymized department> resorted to the Direct Procurement Method under Section 25(2)(b) of the PPA and on 19 November 2021 awarded the contract for the supply of <anonymized item>. The <anonymized department> should have resorted to a competitive method of procurement as there was no comparative price to ascertain whether the unit price offered by <anonymized supplier> was fair and reasonable” (NAO, 2022 pp. 46).*

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<sup>18</sup> e-PS : e-procurement system

Furthermore, in the procurement process of “restricted bidding”, the e-PS does not cater for any validation to exclude non-performing suppliers. This opens a backdoor of potential corruptive practices whereby officers can select suppliers which have been reported for poor performance in the past:

*“Contrary to Directive 35 of the PPO, the Contractor was not excluded from the bidding exercise, despite having been reported to PPO for its poor performance in February 2021. Out of the 13 contracts, eight contracts were awarded to the same Contractor ...” (NAO, 2022: pp 90).*

## **2 Flaw in evaluation process of certain bids**

Public bodies have also been blamed for non-compliance in bid evaluation procedure with dire consequences as explained in the extract below.

*“The sole bidder quoted an amount of some Rs 26.1 million. A major deviation regarding the dimension of the fuel tank of the heavy-duty boat was noted by the BEC during the technical assessment of bids. However, no clarification of bid was sought. NAO (2020)”*

The actual e-PS therefore does not determine technical responsiveness of bids.

## **3 Shortcomings in technical specifications of bids**

Technical specifications of goods, works or consultancy are the core aspects of a bid that determine the bidding cost. Public officers have been blamed for shortcomings in technical specifications of bids that have caused a spike in contract cost as explained in the coded extract (NAO, 2021: pp7). The current e-procurement system does not cater for any feature (such as leveraging on artificial intelligence (Siciliani, 2023)) to guide the end-users on the preparation of technical specifications for bids. Unethical practice of tailoring specifications of goods to suit certain potential bidders is still totally possible if systems loopholes are successfully exploited.

*“Award of contracts was delayed due to issues relating to specifications, inadequate market survey and inaccurate cost estimates. Cases where specifications were inaccurate and works to be carried out were not properly determined, resulting in project delays, cancellation of projects and increase in costs.” (NAO, 2021: pp 7)*

#### **4 Risk of exploitation of emergency procurement proceedings**

According to a directive issued by the Procurement Policy Office (Procurement Policy Office directives, 2020), public bodies are allowed to adopt manual paper-based methods for emergency procurement. Some public bodies, including those which participated in this study were severely criticized for the exploitation of emergency procurement proceedings.

*“The Ministry had recourse to emergency procurement and the contract was awarded at an amount of nearly thrice the original estimated cost after negotiation with a Service Provider who was not invited to bid during the first bidding exercise and who did not respond to the second exercise”. (NAO, 2021: pp 327)*  
*“The department had recourse to emergency procurement for the construction of drains in high flood prone areas. Sixty projects were identified by the <anonymized> during the calendar years 2019 and 2020. As of October 2021, only seven of these projects were completed while 16 other projects were at construction stage”. (NAO 2021: pp 50)*

The implementing agency allowed flexibility in procurement policies for example, former method of procurement can be rightly opted for emergency procurement proceedings. Ethical compliance to such flexibility is expected as the Government of Mauritius has always encouraged the adoption of ethical practices in public administration. The National Audit office quoted the following in the National Audit report of 2020 (NAO 2022)

*“The whole public procurement process, including current legal provisions and procedures, must be reviewed with a view to strengthening accountability and transparency and ensuring that emergency procurement does not become a fertile ground for malpractices at the expense of taxpayers.” “For example, at the <anonymized department>, “proper records on emergency procurement as required under Directive 44 of the Procurement Policy Office were not kept. The absence of documentation flouted the principles of good governance, in particular transparency in the management of public funds” (NAO, 2022).*

#### **5 Ad-hoc paper-based procurement method outside of e-procurement**

An analysis of the content of the public procurement portal demonstrates evidence of the ad-hoc use of paper-based methods for launching bids instead of using e-procurement. These invitations for bids (IFB) could have been easily done on the e-PS platform. (see [F.5 in Appendix F](#))

#### 5.4.14 Qualitative Comparative Analysis

The findings indicate three implementation outcomes of e-procurement. This section explains a qualitative comparative analysis (QCA) undertaken to get a better unambiguous insight into the set of contextual attributes that might have influenced each of the distinct e-procurement implementation outcomes. Success of e-procurement implementation is interpreted as the routinization of online bidding whereas the reverse applies to fallback and part-usage outcomes. The researcher, however, is not attempting to establish a cause-and-effect relationship between the implementation outcomes and the set of factors demonstrated by the findings. Based on the implementation outcomes that emerged and based on the earlier findings including the legitimation-seeking analysis, a truth table is generated to expose what set of contextual attributes might have influenced the outcomes (see table 5.14 on next page). Referring to the truth table, successful implementation of e-procurement, underpinned by the routinization of e-procurement, might have been influenced by championship, the shared vision and legitimation strategies of the project team that altogether with the contextual conditions triggered successful ownership of e-procurement and successful registration of suppliers. On the other hand, with the absence of championship in the part-usage and fallback outcomes and, despite top management support in the part-usage, no routinization of e-procurement happened. In the part-usage outcome scenario, the suppliers' registration was progressing but did not achieve the expected results as the users were still complaining about the low bid responses with e-procurement.

Table 5.14: Truth Table Explaining Necessary and Sufficient Conditions

			KEY DRIVING CONDITIONS					CONTEXTUAL CONDITIONS					
Conditions			Champions hip	owners hip	top managem ent support	Success of supplier's registration	shared vision	Legitim ation strategi es	ICT norm	e- procurem ent readiness	Specific nature of procureme nt - challenge	competen ce of legitimatio n providers	Procure ment norms
Public Bodies	Outcomes	Interpretation of outcomes											
A	SUCCESS	routinization of online bidding	1	1	1	1	1	1	1	1	1	1	1
B	SUCCESS	routinization of online bidding	1	1	0	1	1	1	1	1	1	1	1
C	SUCCESS	routinization of online bidding	1	1	1	1	1	1	1	1	1	1	1
6 PUBLIC BODIES	FALLBACK	lack of routinization	0	0	0	0	0	1	1	1	1	1	1
5 PUBLIC BODIES	PART- USAGE	lack of routinization	0	0	1	0	0	1	1	1	1	1	1

## Chapter 6 Discussion of findings

### 6.1 Introduction

The preceding chapter presents the results of the research. The case study reveals both the success and failure of legitimation-seeking in the implementation of e-procurement in the Government of Mauritius. To gain a profound understanding of the case study, this chapter emphasizes key points that have emerged from the case and develops the research further both theoretically and practically.

This chapter starts with section 6.2 which elaborates on the established evidence of legitimation-seeking process in the implementation of a public (IOIS) in the context of a sub-Saharan African country. Section 6.3 gives an explanatory account of how the legitimation seekers built their reputation to appear credible to the legitimation providers. Section 6.4 focuses on the different phases of the legitimation seeking process by relating the case findings to similar past research and IS literature. It discusses the legitimation strategies that emerged from the findings and their importance in IS implementation. Section 6.4 emphasizes the legitimation-seeking process as it played out both at the level of the organization (the public body) and at the e-procurement project team level. Section 6.5 conceptualizes the legitimation-seeking process in the implementation of an IOIS. Section 6.6 outlines the importance of legitimation in IS research based on the findings. Section 6.7 offers a comprehensive structural analysis of the various e-procurement implementation outcomes. It describes the different legitimation structures and technologies-in-practice that emerged from the ongoing, situated interactions of the social actors involved in the legitimation-seeking process. The chapter concludes with the evidence of misfits between work practices and the e-procurement system, particularly for the evaluation module that were underpinned by conflicting norms, contributing to the emergence of the fallback and part-usage outcomes.

### 6.2 Legitimation-seeking process in the public sector

This study presented the evidence of a legitimation-seeking process which was implicit as part in the activities of the project team of the implementing agency at all the stages of the implementation of an inter-organizational system (IOIS) in the public sector of a sub-Saharan African country. The entire process of legitimation-seeking is summarized in table H.2 in [Appendix H.2](#). The process was guided by the soft-transition philosophy of the project team who believed that this strategy would mitigate resistance to change and would motivate and get the support of public bodies<sup>19</sup>. This was considered to be particularly suitable because these public bodies were believed to have a slow-to-change culture and are risk-averse. The soft-transition philosophy was characterized by the decision of a modular approach to e-procurement software deployment, a pilot approach to implementation, continuous stakeholders' engagement, training, mock platform, the handholding of public servants and progress

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<sup>19</sup> The term "public body" is used in academic research articles to define a government entity for example, Ozdemir (2019) and Sorte Junior (2022).

monitoring through a feedback system to evaluate their strategies and use corrective actions to handle failures. The project leader's soft-transition philosophy reflects a participative style of leadership as is common in NPM reform in the public service. A participative style of leadership is underpinned by teamwork whereby the leader seeks the buy-in from others and strives to build trust and confidence among the team members through continuous engagement (Gosling et al., 2013). The leader expects team members to commit and share their experience. Participative leaders used several tactics to gain commitment and trust of the relevant stakeholders under the belief that "we are in this together" and they strive to handle mistakes and failures in a supportive way (Gosling et al., 2013). Notably, participative style of leadership has been associated with positive psychological impacts on project team members of IT projects in the public sector context and thus facilitate the change management process when a large-scale information system project is introduced in an organization (Raghavan and Chinta, 2022). The style of leadership in the public sector is, however, contingent to the country context (Donkor et al., 2022) and may thus influence the legitimation-seeking process in IS implementation.

### 6.3 Credibility of legitimation seekers

The findings show evidence of image building to gain credibility in face of the legitimation providers. The team of legitimation seekers were competent in both procurement and IT domains. The implementing agency recruited an experienced IT manager who possessed strong IT competence from the private sector to lead the implementation team, built upon the belief that "*An IT manager from the private sector will perform better*" (see section 5.4.3.1 of Chapter 5). There is a generalized perception that managers with private sector experience will help public organizations to perform better (Diefenbach, 2009; Painter, 2011; Pollitt, 1990, as cited in Lapuente et al., 2020).

The implementing agency also actively sought International Organization for Standardization (ISO) certification and disseminated the accreditation news to all Governmental bodies to gain credibility. They also ultimately used this to build a trust relationship with the legitimation providers (section 5.4.5.3.1 of Chapter 5). Furthermore, even at public bodies' level, the project champions who became legitimation seekers in successful scenarios had key competence in terms of working skills, professional qualifications, and commitment (see for example section 5.4.6.1 in Chapter 5). Leaders should legitimize themselves to obtain the trust and support of stakeholders (Brown 1998; Kohli and Kettinger 2004; Devilliers and Molinari 2022). Mila-Gasco, Gil-Garcia and Luna-Reyes (2022) found that in a public sector inter-agency collaboration project aiming at the development of web portals, a credible leader that is characterized by teamwork, honesty, professionalism, competence, and trust building, is positively perceived by the webmasters in their interaction and coordination activities. Credibility of leaders may thus be necessary for undertaking a legitimation-seeking process for digital innovation in the public sector.

## 6.4 LAM framework

Focusing on the legitimation activity model (LAM) framework (Flynn and Hussain, 2004), the legitimation-seeking process of e-procurement implementation satisfied each of the stage of the LAM framework: construct legitimation target, identify the legitimation providers, learn their norms, assess the gap and apply legitimation strategies, monitor impact of legitimation strategies, and close the gap. The legitimation-seeking process is explained in detail in the previous chapter. The project phases were neither mapped on the LAM framework nor were the project activities forced onto the LAM stages.

The LAM stages did not unfold in a sequential fashion as portrayed in the model because they were contextually situated. For example, at the initial ISD stage, the legitimation seekers already identified the legitimation providers as assigned public officers in the procurement chain. At the time they constructed the legitimation target they were aware of the perception that some public officers are unethical but not all were necessarily “bad” (section 5.4.3.3). Identification of legitimation providers and learning of their norms may occur simultaneously and well before the implementation process, that is, in the ISD stage. A group of legitimation seekers in the project team were also public officers who had long years of service in the Government and were already acquainted with the public sector norms. Furthermore, the legitimation gap did not necessarily close at the end of each project phase thus demonstrating evidence that the LAM framework was not forced onto the project phases. The ‘construct legitimation target’ activity was undertaken at different phases of the project, but the constructed legitimation target was not necessarily achieved at the end of a specific phase of the project onto which it was defined. Several legitimation targets were constructed simultaneously because this large-scale system deals with multiple stakeholders and the construction of legitimation targets was implicit of the planning and execution of e-procurement implementation strategies.

### 6.4.1 Construct legitimation target

The legitimation targets that were constructed at different phases of the project are shown in table 6.1. The legitimation seeker preconceives the likely types of legitimations that they want to achieve. Legitimation target is conceptualized as the desired legitimation structure that one expects will emerge out of the interplay between the context and technology (Flynn and Hussain, 2004). The legitimation targets in this study encapsulated the expectations of implementors as have been discussed in past IS literature but were not examined in detail regarding their role in technology legitimation domain. The table below summarizes the legitimation targets that were constructed. Several concepts that are associated with the various legitimation targets were addressed in IS legitimation research for example, Flynn and Hussain (2004) advocated how the IT manager explains the aims and benefits of the intranet to workers. Joia (2007) also pointed out the importance of explaining the benefits of the new system to the target users. A failure to explain the objectives of new technology implementation can weaken organizational’s efforts to adapt to technological innovation (Vuori & Huy, 2015).

*Table 6.1: Legitimation Targets and Related IS Studies*

Stage	Construct legitimization	Related IS Studies
<b>ISD stage</b>	<p>e-PS is the new norm for public procurement.</p> <ul style="list-style-type: none"> <li>• Aims and expected benefits of the information system.</li> <li>• Change culture.</li> <li>• change in work practice and standardization of procurement process</li> </ul>	<p>Technological innovation as the new norm for public processes administration (Wang &amp; Song, 2010; Lohmeier, 2013; Hong, Kim &amp; Kwon, 2022).</p> <p>Aims and expected benefits of the information system (Flynn and Hussain 2004; Flynn and Du 2012; Joia 2007; Vuori and Huy 2015)</p> <p>Need for a change culture in IS uptake (Strong &amp; Volkoff, 2010; Maghrabi and Palvia (2012); Harti (2019)</p> <p>Changes in work practices (Strong and Volkoff, 2010; Choudrie et al., 2017); Joia (2007)</p>
<b>Official launching and the pilot phase</b>	<ol style="list-style-type: none"> <li>1. Creating a reputation for e-procurement to sell the product among all the public bodies.</li> <li>2. Secure support of suppliers to improve registration for success of pilot phase.</li> <li>3. Pilot stage involving a handful of public bodies at the start, will reduce the risk of failure and enable LS to gather information on the experience of LPs and improve the software thereof.</li> <li>4. To use the successful output of pilot for future showcasing</li> <li>5. Build trust relationship between stakeholders and legitimization seekers</li> </ol>	<p>Reputation for the software (Meissonier et al., 2012)</p> <p>Securing the support of stakeholders for IS success (Chan, Pan, Tan (2003); Poulodi et al., (2016); Ahmed (2017); Flynn and Hussain (2004);</p> <p>Minimize risk of failure of implementation by pilot stage (Brown et al., 1998; Bansler and Havn (2010); Hertzum et al., 2019)</p> <p>Trust relationship (Santa et al., 2018; Hooda et al., 2022)</p>
<b>First phase</b>	<ol style="list-style-type: none"> <li>1. Implementation in phases will facilitate both stakeholders.</li> <li>2. Secure top management support of the public bodies on-boarded in this phase, to own the change and generate a change mindset to remodel the behaviour of staff to facilitate use of e-procurement</li> </ol>	<p>Top management support for IS success (Masuda et al., 2019)</p> <p>Top management commitment and ownership in IS implementation (Masuda et al., 2019; Elbanna and Newman, 2022)</p>

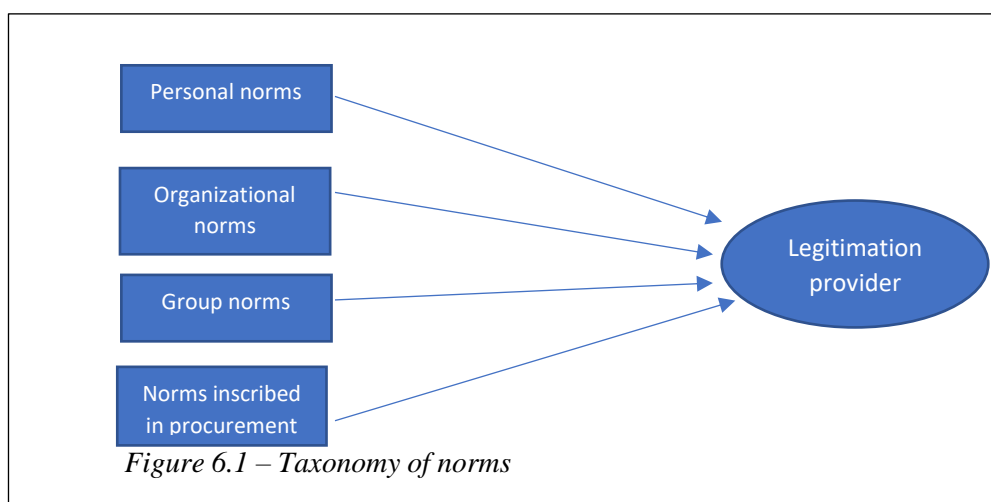
Stage	Construct legitimization	Related IS Studies
	<ol style="list-style-type: none"> <li>3. accompanying the public bodies in the learning process</li> <li>4. top management commitment and ownership</li> <li>5. Address users' concerns from lesson learned in pilot and needs to improve uptake</li> </ol>	
<b>Second phase</b>	<ol style="list-style-type: none"> <li>1. Focus only on high spending public bodies (high-volume high-value procurement organizations) and secure the support of their top management.</li> <li>2. Timely implementation of e-procurement after having evaluated that implementation is taking too many years.</li> <li>3. Address users' concerns and needs</li> <li>4. Routinize e-procurement.</li> <li>5. Operationalize online evaluation module.</li> <li>6. Progress self-tracking</li> <li>7. Management commitment and ownership</li> <li>8. Improve their international score in ease of doing business with Mauritius</li> </ol>	<p>Routinization of IS as key element for legitimization (Silva and Hirschheim, 2007; Hirschheim, 1995)</p> <p>Timeliness in IS implementation (Glyptis et al., 2020)</p> <p>Meeting objectives set for IS (Flynn and Hussain, 2004; Flynn and Du 2012)</p>

#### 6.4.2 Learning of norms and spot gaps

Chapter 5 describes in detail how the legitimization seekers learned the norms of the legitimization providers in all stages of the e-procurement implementation to understand the gap between the desired constructed legitimization and the norms of the legitimization providers. The findings partly corroborate with similar studies (Flynn and Hussain (2004); Flynn and Du (2012); Flynn and Puarungroj (2006)) with respect to personal, group and organizational norms of legitimization providers that the legitimization seekers tried to understand. In this study, key examples of group norms identified are “, “*SMEs group want equal opportunity to participate in government bidding*” and the ICT norms of the stakeholder group of public officers ([section 5.4.3.3](#)). Examples of organizational formal norms include organizational policies such as staff rotation and communication protocol in the public service ([section 5.4.3.3](#)). Furthermore, the norms underlying the procurement process ([section 5.4.3.3](#)) which are

distinct, become integrated with the organizational norms. Therefore, in the study of governance-driven information system, the legitimation provider in this specific context of procurement is a carrier of at least four types of norms: personal norms, group norms, organizational norms and norms inscribed in the standard public procurement process.

Positivist technology acceptance research points out the influence of personal and group or peer norms in user acceptance (Venkatesh et al., 2003; Bhattacharjee, 2001; Karahanna et al., 1999). The dynamics of norms become a complex phenomenon in the context of governance-driven inter-organizational information system such as e-procurement, which resembles more to e-governance (Bannister & Conolly, 2012). The research reported on in this thesis has demonstrated how legitimation providers carry the norms underlying the standard procurement process. Some examples are: (a) the concern of suppliers on confidentiality and data integrity of their bids when transacting online, (b) the importance given to compliance with timeliness in procurement process, (c) the ethical behaviours of many public officers underpinned by the good-governance principles of procurement and (d) the necessity to obtain higher number of bids in a bidding process (refer to section [5.4.7.2](#)). Furthermore, since e-procurement is an IOIS, stakeholders are linked while remaining independent (loosely coupled) with respect to their public bodies where they work. In addition to formal organizational norms, they also inherit informal group norm from their respective workplace cultures. It is worth noting that when dealing with good governance driven information systems, legitimation seekers should also learn the norms that have been carved into the process which should be digitalized. The legitimation seekers must ensure that these good-governance norms are properly inscribed into the IS to “close a gap between standards of good governance embedded in the process and the IS”. Therefore, learning of norms may originate from non-human entities. They are only actualized or instantiated in the actions of knowledgeable agents. To this end, the norms learnt can be classified according to the taxonomy depicted in figure 6.1:



*Figure 6.1: Taxonomy of Norms*

### 6.4.3 Monitoring and closing of legitimation gap

Legitimation gaps were conceptualized as the “gap” between the end-users’ norms and the desired legitimation target built by the legitimation seekers (Flynn and Hussain, 2004). When the expected and actual e-procurement implementation outcomes were analyzed and compared, the underlying legitimation gaps were “sensed”. As part of their outcome monitoring activities, the project implementors assessed the outcome gaps which implicitly encapsulated the legitimation gaps. The implementing agency faced undue delays in concluding the implementation of e-procurement which was still ongoing over 7 years. The e-procurement implementation challenges are shown in table 6.2.

*Table 6.2: e-Procurement Implementation Challenges*

<b>Implementation challenges of e-procurement</b>
1. Slow internet connection
2. Concerns of suppliers over lack of user-friendliness of registration
3. Concerns of suppliers over bid security and confidentiality on electronic platform
4. Perceived complicated and inefficient system conflicting with their timeliness norms in procurement
5. Dissatisfaction with support services
6. System not meeting users’ requirements (data format limitation, lack of online self-help, lack of user-friendliness, undesirable change in the level of controls, lack of its practicality for informal quotation)
7. Concern over sudden unavailability of e-procurement that could cause prejudice to suppliers
8. Dissatisfaction with the evaluation module that conflicts with their norms
9. Resistance to change by public officers and suppliers
10. Lack of top management support
11. Challenge of project champion to convince dominant stakeholders to use e-procurement
12. Implementation delays
13. Psychosocial issues
14. Unavailability of a project champion in most public bodies
15. Lack of registration of SMEs and lack of their readiness to operate the e-procurement

Some of these challenges are often documented in IS literatures such as resistance to change, lack of top management, unmet users’ requirements, a perceived inefficient and complicated system, and lack of user-friendliness of applications (Lapointe and Rivard 2005; Dale and Scheepers 2020; Krishna and Walsham 2005). Besides implementation challenges, legitimation gaps underpinned by normative concerns of end-users were among those factors responsible for long delays. For example, bidders had concerns about bid security and confidentiality in e-procurement online bidding. Islam et al., (2008)

advocated that in developing countries tighter IT security is demanded by the suppliers, describing the concerns of the suppliers about security of transactions over the internet and the confidentiality of bids information. Concerns of end-users on security breach in information systems are gaining momentum and are discussed in recent IS literatures (Bertino, 2016; Issa et al., 2015; Maynard et al., 2018). It may represent a strong basis of a legitimation gap. Furthermore, the bidders feared a lack of an alternative mode of bid submission in case of a sudden system outage which might cause prejudice to them and result in loss of business (section 5.4.8.3.9 of Chapter 5). A perceived complicated and inefficient system conflicted with the ICT norms of legitimation providers who perceived that 'e' is meant to be faster. This is another example of a legitimation gap. In the part-usage outcome, the comply-and-complain scenario, and the increased dependency of the end-users on the Single-Point-of Contact (SPOC) and the helpdesk team when executing the bidding process reflected lack of routinization and hence undermined the institutionalization and legitimation of e-procurement (Silva and Hirschheim, 2007).

Chapter five elaborates in ample detail how the legitimation seekers monitored the gaps that they identified between the norms of stakeholders and the legitimation targets, whereby they were assessing how far they must go to close a legitimation gap. This was not done in a very explicit way but was interwoven as part of their actions embedded in their legitimation strategies. For example, in section (5.4.7.3.1) of Chapter 5, the concerns raised by the suppliers about the bids' security and confidentiality when submitting online were reflected in the top-most frequently answered question (FAQ) on the e-procurement portal. The FAQ response was used to re-assure the bidders about the robustness of the electronic platform. The project team raised the confidence of the suppliers in the training session to re-assure them about integrity associated with a digital signature certificate and its legal implications, The project team also explained about robustness of the electronic platform whose security audit has been undertaken by a third party and was certified secured in the training sessions. An increase in the submission of bids electronically prior to mandatory enforcement of online bidding system might be indicative of success of the legitimation strategy that highlights the closure of this legitimation gap. However, a clear-cut cause and effect link could not be established because the bidders who are the only credible source to confirm that cause and effect did not participate in the research. This remains a limitation of the research.

The legitimation seekers used a variety of legitimation strategies in response to different events and at different stages. The legitimation seekers conformed to the norms of stakeholders in several instances as informed by their legitimation strategies. For example, in section (5.4.8.3.5) of Chapter 5, after realizing that informal quotation processing was a time-consuming task on e-procurement, the legitimation seekers were flexible and allowed for temporary manual submission of informal quotations. Furthermore, in response to users' demands for additional refresher training on e-

procurement and training on data format for procurement bids, the legitimation seekers met their demands.

The project team applied many strategies to motivate stakeholders to accept and support the e-procurement as shown in table 6.3. Legitimation strategies which were particularly successful. With the inscription of good-governance practices in e-procurement and the resulting instantiation of these rules in the work practices of certain legitimation providers, some aims of e-procurement have been achieved. With a role-based system requiring roles demarcation, the end-users were assigned different roles such as preparer, reviewer, publisher, and approver. As such, the principle of accountability was achieved. With the new mechanism of opening and closing of bids limiting interactions between public officers and bidders, the principle of ‘reducing human touch’ was achieved and as evidenced by the legitimation providers themselves. Legitimation providers have endorsed several good-governance principles underlying the e-procurement system which they recognized as being beneficial for them. Some legitimation providers had personal interest in e-procurement. They aimed to avoid blame or allegations by bidders (see section 5.4.12). With the reduced human touch via the electronic submission mechanism, their interest was achieved.

The overall success of e-procurement in the whole public sector should have been characterized by an increasing trend of IS routinization that would have in turn reflected institutionalization of the software across most public bodies. Based on the assessment findings generated from research data gathered during the past two years ([see section 5.4.12](#)), a rising trend in the launching of online IFBs was noted for several public bodies (figure 5.4.12 in section 5.4.12, chapter 5). This improvement in online bidding usage is logically associated with the enforcement of the Government policy for mandatory usage of e-procurement as from year 2021.

However, the overall result is indeed unsatisfactory and well below expectation as indicated by the findings of the e-procurement implementation outcome. Firstly, the old procurement portal ([Annex B.4 – 6 - Public procurement Portal](#)) was still operational after the e-procurement system went live. It is unusual to have parallel IS that are aiming to achieve the same function. Secondly, there was consistent trend of ad-hoc use of former procurement method to launch procurement bids that could have been easily executed in e-procurement ([section 5.4.11](#) of Chapter 5). Finally, the non-usage of the valuation module after 7 years of implementation efforts is indicative of dissatisfaction with the e-procurement system.

#### 6.4.3.1 Unintended Consequences

There were several major unintended consequences arising from some stakeholder actions. The LAM model of Flynn and Hussain (2004) has its roots in Structuration Theory which posits that a social system is produced and reproduced in interaction through rules and resources instantiated by knowledgeable agents and in the contextual existence of unintended consequences (Giddens, 1979; 1984). Giddens (1979; 1984) advocated that unintended consequences emerging from the instantiation of rules and resources are often unpredictable outcomes which would not have happened if the

knowledgeable agents have acted differently but that are not what the latter had intended to happen when they behaved in such a way. Unintended consequences happen because IS outcome is unpredictable and does not always follow a linear process. Unintended consequences can have positive or negative effects for the project and other entities involved. Despite an implementation plan having been drawn up at the outset, it is often difficult to plan and control everything, especially in an IOIS. As indicated by the findings in section 5.4.10 on “emerging work practices”, the electronic closing of bids placed a lot of pressure on the end-users by changing their work practice. They should constantly check notifications in their emails or on the system even at the last 5 minutes before closing of bids, to respond to clarifications submitted by bidders. Failure to do so might fuel queries from the aggrieved bidders. The legitimation seekers indeed aimed at facilitating the bidders’ tasks in submitting clarifications even when bid submission was approaching the deadline but in deciding how to provide additional benefits to bidders, they did not intend to exert pressure on the end-users of public bodies. The legitimation seekers had not envisaged or intended this to happen.

Another example is related to how certain stakeholders gain powers while others lose based on the unintended consequences of certain stakeholders’ actions. Based on the findings in section 5.4.8.3.8 of Chapter 5, the PPO was the main driving force behind implementation of e-procurement, but when they sought the assistance of the Ministry of Public Service Administrative and Institutional Reforms (MPSAIR) in monitoring the progress of e-procurement implementation, the latter gained more power and became dominant.

Furthermore, the fallback outcome happened when the legitimation providers have acted differently and not what they have intended to happen. When public bodies complained about the reduced number of bids received when using e-procurement system and since this was in indeed conflict with their norms of high number of bids for better competitiveness in prices, they fell back to paper-based method allowing paper-based submission of bids without intentionally doing it. This would not have happened if the bidders had acted differently. There was reluctance of suppliers to register and bid online, especially the SMEs. This had the consequence of automatic exclusion of SMEs which indeed was diametrically opposite to the policy of the government in giving fairness to SMEs in Government bidding. The unintended consequence was addressed by the legitimation seekers through their legitimation strategies.

#### 6.4.4 Legitimation strategies

Detailed analysis of the identified legitimation-gaining strategies reveals that some have been mentioned in previous IS research focusing on legitimation. Several of the legitimation strategies as shown in table 6.3 are coherent with the Flynn and Hussain (2004) and their co-workers and past studies focusing on legitimation-related research.

Table 6-3: Legitimation Strategies and Related IS Literatures

Nature of the legitimation strategies	Legitimation strategies carried out	Corresponding IS legitimation literature
Espousing socially accepted goals of the need to digitalize procurement	Stakeholder-wide communication of e-procurement stating its objectives and benefits	Flynn and Puarungroj (2006); Finney (2011);
Use of symbolic identity	The official nation-wide launching of e-procurement by a figurehead who justified the need of e-procurement	Flynn and Du (2012); Flynn and Puarungroj (2006)
Constitution of team members with diverse competence and organizational knowledge to approach the users	A project implementation team with ICT and procurement competence was constituted by implementing agency at the (ISD stage) for a proper image building to legitimize themselves	Brown (1998)
Stakeholder communication and engagement	In different phases of the project, stakeholders' communications and engagement happened.	Ahmed (2017); Poulodi, Currie and Whitley (2016); Klein and Hirschheim (1989); Flynn and Puarungroj (2006); Flynn and Hussain (2004)
Meeting stakeholders' needs	The legitimation seekers advocated that based on feedback received from the legitimation providers, they were working with the software to improve users' experience. The legitimation seekers released an upgraded version of e-procurement whereby the end-users were experiencing higher speed in execution e-procurement transactions, and they also completed the resilience testing which confirmed its	Poulodi, Currie and Whitley (2016); Flynn and Hussain (2004); Flynn and Du (2012); Flynn and Puarungroj (2006); Klein and Hirschheim (1989)

Nature of the legitimization strategies	Legitimation strategies carried out	Corresponding IS legitimization literature
	<p>robustness for peaking usage.</p> <p>Furthermore, to address the users' concerns about mismatch of procurement templates with the contextual nature of procurement, the project team worked on the digital procurement templates to match the different nature of procurement.</p> <p>The project team met the users' needs for undertaking very low-value procurement in offline mode due to time consuming process of such transaction on e-procurement.</p>	
Alliances of project promoters with powerful stakeholders	<p>Developing a partnership with the private sector;</p> <p>The project team of the implementation agency sought the help of another public body which is responsible to drive e-government and provide Government human resources to different Governmental departments to improve the uptake of e-procurement.</p>	Poulodi, Currie and Whitley (2016); Norberg and Ngwenyama (2005)
Advertising the system and the project	National awareness about e-procurement was raised by reports of a e-procurement launching event on TV and newspaper, celebrating, and advertising the success of e-procurement.	Brown (1998); Flynn and Puarungroj (2006)
Responding to	Justify the system by referring to	Flynn and Puarungroj (2006);

<b>Nature of the legitimation strategies</b>	<b>Legitimation strategies carried out</b>	<b>Corresponding IS legitimation literature</b>
institutional requirements or forces	other organizations and countries which have implemented similar systems. The implementing agency advertised in its annual report on the merit of the software and its success in a foreign country and justify why they chose the same supplier to implement same software in the local context.	Flynn and Du (2012); Kohli and Kettinger (2004); Meissonier (2012); Brown (1995); Pawlowski et al., (2006)
Mimic standards	Indicating that the software meets international standards and is therefore better.	Flynn and Puarungroj (2006); Meissonier (2012)
Obtaining support from enthusiastic stakeholders to accelerate project progress	In addition to training, ICT support services and encouraging the public bodies to enroll their suppliers, the project team extended special support to an enthusiastic public body by granting the project team the “green card” to liaise and work directly with the software supplier. This public body discussed its users’ requirements and customized the system to its needs, especially the e-procurement templates.	Flynn and Hussain (2004); Flynn and Du (2012);
Recruit friendly co-optees	Recruit public bodies’ representatives to participate in software UAT and project champions to implement e-procurement locally in public bodies	Flynn and Puarungroj (2006)
Organize and deliver	Proper organization and delivery	Flynn and Puarungroj (2006);

<b>Nature of the legitimation strategies</b>	<b>Legitimation strategies carried out</b>	<b>Corresponding IS legitimation literature</b>
training of end-users	of training of suppliers and end-users for demonstrating LS commitments, dissipating any negative attitudes to the e-procurement system, and let them feel the benefits in using the software	Flynn and Hussain (2004); Flynn and Du (2012)
Utilizing personal contacts and relationship to gain support	One of the public bodies which achieved success in implementation advocated that because of his good personal and past working relationships with the project team.	Flynn and Du (2012);

From table 6.3, not all the legitimation strategies were necessarily entirely successful. Strategies like meeting stakeholders' needs, obtaining support of enthusiastic stakeholders to accelerate project progress, recruit friendly co-optees, organize and deliver training and use of personal contacts and relationships were tagged as successful overall. It is worth noting that the use of personal contacts and relationships did not lead to legitimation success in the study of Flynn and Du (2009). Application of legitimation strategies is situational, and their impact is often difficult to assess given the abstract nature of the legitimation concept. The impact of legitimation strategies can only be gauged when the context is studied over a very long period.

The initial stakeholder communication using different channels aimed to raise awareness among stakeholders about e-procurement and to communicate the idealistic objectives, and list of benefits which the government as a buyer, the employees, and the suppliers as sellers of goods and services would gain. Hence, the project team espoused socially accepted goals of the need to move to an electronic platform that would be beneficial for all stakeholders and to combat corruption and to boost public cost savings. This legitimation strategy can also be viewed as a marketing campaign to sell the idealistic concepts of the electronic means of conducting procurement to all concerned stakeholders. Organizations achieve legitimacy because they offer proper and rationalized objectives that are acceptable to both the internal and external audiences (Elsbach & Sutton, 1992: 700). A similar finding was obtained by Flynn and Puarungroj (2006). This legitimation strategy had a positive impact on a few public bodies, but others were not necessarily enthusiastic. Dezdar and Ainin (2011) emphasized the importance of effective communication in IS implementation as a way of minimizing user resistance.

The endorsement of e-procurement system by a public figure head is also a commonly used legitimation strategy that can be employed to legitimize an innovation. Flynn and Puarungroj (2006) classified this legitimation strategy as using symbolic identity to gain legitimation.

#### *6.4.4.1 Soft-transition philosophy*

Several legitimation strategies that have not been addressed in past IS literature were discovered in this study, the most pertinent one being the soft transition philosophy to respond to the disruptive change underpinning e-procurement. The soft transition philosophy was characterized by a phased-approach to implementation of e-procurement aided by a loose software coupling, pilot approach, handholding, mock platform, intensive training amongst others. IS literature has pointed out the merit of soft approach in change management to enable smooth transition to digital innovation (Foster, Hawking, and Stein, 2004; Rooyen, 2000; Mitra, 2012).

#### *6.4.4.2 Employing group norms*

The legitimation seekers showcased successful cases to problematic public bodies which were reluctant to legitimize e-procurement. The aim of showcasing was to encourage these recalcitrant public bodies to endorse their peer group norms. This strategy constitutes a new contribution to the body of literature in the implementation of IOIS.

#### *6.4.4.3 Seeking certification.*

The implementing agency sought ISO quality standards accreditation which the director thought would play a key role to improve its credibility, positioning itself as a leading organization for implementing e-procurement across the whole Government of Mauritius. Some scholars have advocated that one of the key reasons that organizations adopt certification is to create institutional legitimacy for both internal and external audiences (Myer and Rowan, 1983; Lins et al., 2022). The importance of quality standards of organization in legitimacy is relatively scarce in the IS domain of research.

#### *6.4.4.4 Inscribing good governance principles in information system*

Key good-governance practices that formed part of the existing procurement process in respect of norms and ethics were inscribed in e-procurement. New norms were also inscribed to meet the aims of e-procurement underlying the legitimation target; noteworthy are those that prevent fraudulent and corruptive practices, such as the accountability feature, reducing human touch by online bid opening facility, prevention of fraud through database audit trail implementation, transparency by publishing comparative statements. A substantial body of literatures on e-governance in both public administration and information systems domains addresses the inscription of good governance in government information systems (Bannister and Connolly, 2012; Barthwal, 2003; Calista and Melitski, 2007; Saxena, 2005; Brewer et al., 2006).

By encouraging end-users to use e-procurement, the sponsoring organization was indirectly compelling the users to abide by good-governance norms and practices. This strategy also targetted defaulters. However, a causal link cannot be directly established between those stakeholders resisting e-

procurement and bad governance. The findings show that one public body which participated in this study was severely criticized for shortcomings in good-governance practices (non-compliance) in procurement (see section 5.4.12 of Chapter 5). This legitimization strategy will not work effectively if defaulters can still explore other routes for non-compliance.

#### *6.4.4.5 Readiness assessment*

The findings indicate the role of readiness assessment in the legitimization of information systems. The legitimization seekers carried out readiness assessment in respect of ICT infrastructure and equipment, the current workload, and human resources adequacy before registering public bodies onto e-procurement. In this study, a few legitimization seekers complained about shortage of human resources resulting in work overload that causes psychosocial stress. In past IS studies, readiness assessment is a key success factor for implementation of IS (Ajami et al., 2011; Nusantara et al., 2018). The components of readiness assessment include amongst others, ICT infrastructure readiness and human resources. Guha and Chakrabarti (2014) highlighted that lack of e-readiness is a key contributor to failure of e-government projects. Most legitimization providers that participated in the research were satisfied with the readiness assessment carried out by the legitimization seekers.

#### *6.4.4.6 Loose software coupling*

The loose software coupling at the ISD stage was a key factor in the execution of a phased approach to implementation. Though it is not directly related to a legitimization strategy, it plays an important role to ensure uptake of part of e-procurement and to give “time” to legitimization providers to get acquainted to e-procurement online bidding before moving to adopting the evaluation module. The offline facility for undertaking manual evaluation of bids minimized complaints from legitimization providers who perceived the electronic evaluation module as problematic. Orton and Weick (1990:208) elaborates on the “coupling concept” as “The transition from loose to tight coupling can occur among individuals, organizational units, organizations, hierarchical levels, organizations, and environments, and among ideas, activities, and interactions and actions”. Orton and Weick (1990: 203) further explained that loose coupling underpins “the concept that coupled events are responsive, but that each event preserves its identity and evidence of its physical and logical separateness.” Loose software coupling is a concept that is addressed in very limited research papers in the IS domain. Marabelli and Newell (2010) explored the benefit of loose software coupling in a large ERP implementation and claimed that loose coupling played a key role in the success of ERP implementation by allowing some degree of autonomy between business units. Coupling concept was also useful in the legitimization of IS when it served to decouple troubled module from the smooth functioning whole (Flynn and Puarunroj, 2006).

#### *6.4.4.7 Contextual consideration to address mistake of standardization of process*

The legitimization seekers attempted to propose a “one-size fits-all” system to all public bodies as a “proper” e-procurement system that would be beneficial to the end-users, to implementors and to developers. They assumed that their soft-transition philosophy would play a role in the de-legitimization

of current unwanted work practices and would help in the routinization of new desired work practices. They did not pay enough attention though to the nature of procurement of goods and services which inextricably ties up with the context in which the procurement is carried out from one public body to another. The legitimation seekers erroneously assumed that they would be able to fit the nature of procurement to the generic templates available in e-procurement system. This strategy in essence failed as evidenced by the fallback. The findings show that upon realization of this failure, the legitimation seekers have developed the e-SBD templates that are available for download from their organization's website (PPO SBD e-PS, 2020). These are templates that suit specific procurement and are ready-to-use and can even be saved and customized for future use. This plays a key role to slowly reverse the fallback as evidenced by the change in position of certain legitimation providers who initially fell back to paper-based methods. This demonstrated the importance of contextual factors in shaping the outcome of implementation of information systems (Lyytinen and Rose, 2003). Failures of one-size fits all of system implementation were advocated by Mitra (2012).

#### *6.4.4.8 Look and feel of application*

The project team increased the look-and-feel of the software to trigger a psychological impact on top management making them feel a sense of ownership. By introducing the concept of a child portal so that each public body had its own application URL containing its name, they felt they owned their individual portals. The psychological impact of the look and feel of portals on top management and its relationship to system ownership is a key contribution of this research work.

#### *6.4.4.9 Use of marketing techniques to enhance system usage*

E-procurement is a national system that is expected to be used by private sector suppliers. The use of marketing techniques to motivate suppliers to register on e-procurement is an emerging legitimation strategy to keep abreast with the innovation in technology and the changing norms of citizens towards ICT to gain their support.

#### *6.4.4.10 Encourage direct stakeholders to engage their stakeholders.*

Given that suppliers are not their direct stakeholders but the close working partners of public bodies, the project team of the implementing agency encouraged the public bodies to engage with the private suppliers to encourage them to embrace e-procurement. In the success and part-usage scenarios, the findings have demonstrated evidence of stakeholders' engagement. While the application of stakeholder theory in e-government projects mostly focused on engagement of direct stakeholders such as (Poulodi et al., 2016, Pandey and Gupta, 2017), this research makes further contribution to the body of knowledge as far as chain of stakeholders' engagement and its relevance to legitimacy.

#### *6.4.4.11 Re-assuring stakeholders about security and reliability of information system*

The legitimation seekers tested the security robustness of the system to re-assure the stakeholders of the security and reliability of the e-procurement. They attempted to conform to the norms of the stakeholders by addressing their concerns (Flynn and Du, 2012). They solicited the service of a third party to undertake a full security audit of the system and re-assure the stakeholders by giving speeches

in a training session about the reliability of the system. In reply to the Frequently Answered Question (FAQ) about “how secure is e-PS”, the legitimation seekers have re-assured the stakeholders that the data is encrypted, and the public body could access the bids and identified the identity of bidders only after the bid opening (section 5.4.7.3.1 of Chapter 5).

#### *6.4.4.12 Enforce change management strategy through local championship.*

Reflecting upon the success of e-procurement in the two public bodies, the project realized that that e-procurement-driven changes would not be possible without a champion on site, irrespective of whether top management endorsed the idea or not. As part of their change management strategy, they recommended a champion to be nominated in each public body. The findings have indeed shown the positive role of championship at the level of public bodies in improving legitimacy and hence in the success of e-procurement irrespective of the presence or absence of top management support. This discussion is taken further in section 6.6.1 later in this chapter.

#### *6.4.4.13 Acknowledging shortcomings in information system.*

The legitimation seekers humbly acknowledged shortcomings in e-PS on several occasions when confronted with the complaints of many legitimation providers about these shortcomings (see [section 5.4.8.3.3](#) of Chapter 5). They did not always take a defensive approach so as not to fuel frustration among the legitimation providers. Instead, they made promises to improve the user experiences on e-procurement whilst diplomatically motivating the suppliers to adopt online bidding.

### **6.5 Conceptualization of the new legitimation-seeking process**

In the legitimation-seeking process, it was observed that the project team undertook initial legitimation activities, monitored its outcome by following up on the reactions of the legitimation providers, grasping their norms before executing further legitimation activities. Thus, through the process of "seeing and doing", it can be deduced that legitimation seeking is a process in which opportunities and challenges which are unpredictable at the outset continue to emerge as the process unfolds (Orlikowski and Hofman, 1997).

#### **6.5.1 PLAN-DO-CHECK-ACT and Multiple loops**

The LAM framework (Flynn and Hussain, 2004) is a classic example of a continuous looping of the PLAN-DO-CHECK-ACT until the aims are achieved. With an inter-organizational system (IOIS) such as e-procurement involving different public organizations with different internal organizational contexts and different nature of procurement tied with the internal context, legitimation-seeking takes the form of multiple small loops of LAM (Flynn and Hussain, 2004) process inside a wider one. The wider legitimation gap will not be closed until the gaps in the smaller loops are closed. The wider legitimation gap is controlled by the project team of implementing agency driving the implementation of e-procurement. The description of an internal legitimation process that took place inside three public bodies are concrete examples of the multiple small LAM loops. In all the three organizations, the

internal legitimation seeker constructed legitimation targets, identified their legitimation providers, assessed perceived gaps and use legitimation strategies to close the gaps as described in section 5.4.6.

The findings have demonstrated that a legitimation-seeking process indeed took place inside each organization based on the claims of the project champion, some internal users, and references of their colleagues. This aspect is ground-breaking as compared to previous research in the domain by Flynn and Hussain (2004) and their co-workers.

Furthermore, one of the legitimation strategies undertaken by the legitimation seekers may have a key impact on the internal legitimation-seeking process. When the legitimation seekers found that legitimation gaps were not closing inducing delays in the implementation process, they excluded the problematic public bodies. Instead of escalating commitment in failure scenarios, an exclusion and re-prioritization of stakeholders was undertaken to exclude stakeholders based on the monetary value and volume of procurement (see section 5.4.8.1 of Chapter 5). The legitimation seekers then focused only stakeholders (public bodies) doing high-value and high volume of procurement that reached the acceptable procurement monetary value and monitor only their implementation progress. They channelled their resources to those privileged stakeholders to accelerate the uptake of e-procurement. Thus, using exclusion and re-prioritization of stakeholders, the gaps in smaller loops can be evaluated and some internal legitimation-seeking processes can be eliminated in an attempt to close the wider gap. The augmented LAM framework adapted for IOIS is shown in figure 6.2, where each internal LAM process represents legitimation-seeking in an organization:

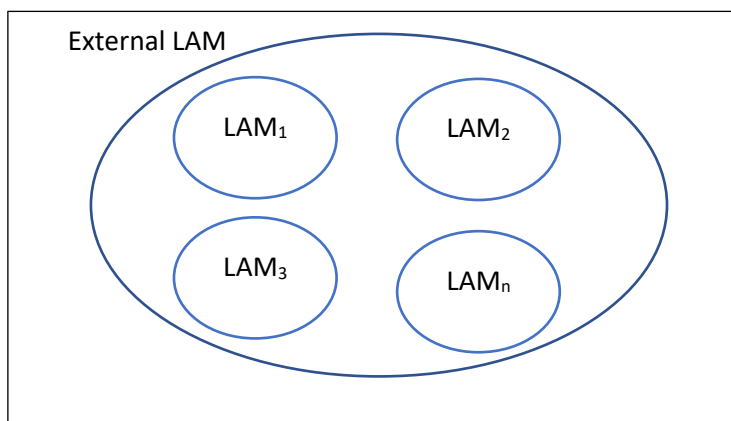


Figure 6.2: Augmented LAM framework for IOIS

### 6.5.2 LAM framework for governance-driven Information system

Demonstrated by this study, the elements of good governance underpinning procurement process are inscribed in e-procurement. These include amongst others accountability, reducing human touch by online bid opening facility, inscribing the norm of reaching consensus in evaluation along e-procurement, prevention of fraud inscribed by implementing database audit trail, transparency through audit trail, system-controlled daytime factor in closing and opening of tenders and declaration of conflict of interest. Furthermore, the e-procurement system is also surrounded by a set of environmental

normative rules embedded in its ethical practices that should be complied with such as the fairness to SMEs and competitiveness and responsiveness of bids amongst others as explained in section 5.4.3.3. It is crucial to assess any legitimation gaps between these normative rules of the existing procurement process and those inscribed in the system prior to embarking on the legitimation-seeking process with knowledgeable agents to ensure that the system embeds those normative rules. The LAM framework (Flynn and Hussain, 2004) can be extended by including the learning of norms based on non-human entities

## 6.6 Importance of legitimation in success of e-procurement implementation

The findings of this study are aligned with the notion that a successful implementation of information system in an organization "is contingent on the ability to ensure user acceptance" (Jensen & Aanestad, 2007). Organizational actors have the power to influence the acceptance and subsequent use of IS (Jasperson et al., 2005; Vaast and Walsham, 2005; Hekkala et al., 2022), and thus implementors should understand their perceptions and attitudes in the implementation process. In the case study, the project team expended substantial efforts and time in undertaking several legitimation strategies as part of their implementation activities. Chapter 5 elaborated in detail about the relevance of legitimation activities in terms of how stakeholder support, approval and acceptance were sought and obtained or sometimes failed. Technology can be appropriated by users. They can reject the information system proposed to them and re-define its functional characteristics, customize, or assign symbolic meanings to it. It was observed that perceptions of users about information systems are not fixed and can change with time if contextual situations have changed in their favour. The concept of legitimation that is addressed in this study is a potentially valuable framework for IS research as it involves user acceptance, stakeholders' participation and engagement and resistance to change that are often investigated in an unrelated manner. The case study exposes both acceptance and resistance that occur simultaneously within same users' population for a single information system that has been deployed. This study tends to corroborate with past research that investigated acceptance and resistance within the same context (Bhattacharjee et al., 2018; Boonstra and Seo, 2013).

The study demonstrates the importance of legitimation in success of implementation. Though this research does not attempt a direct relationship between legitimation and success of implementation of e-procurement, in all the three successful scenarios, when the users conferred their support to e-procurement which they found proper and acceptable as the new norm, successful routinization of online bidding of e-procurement was achieved. These users succeeded in motivating their suppliers to register on e-procurement and hence build their supplier base. The uptake of e-procurement underpinned by sustained increase in launching of online bids was apparent. The legitimation seekers of the project team performed a series of activities to gain legitimation by using different legitimation strategies, committing optimum resources, and providing sustained support to those enthusiastic stakeholders to achieve desired legitimation target which was eventually met. One successful public

body celebrated the success of e-procurement implementation. As a lesson learned, the legitimation seekers “*have realized that change will not be possible without a champion*” (see section 5.4.8.4 in Chapter 5) and they recommended that a project champion be nominated in each public body to spearhead e-procurement implementation in inter-organizational system.

#### 6.6.1 Importance of Championship in legitimation of e-procurement

The findings show that success of e-procurement implementation in three public bodies was the result of genuine legitimation providers in these organizations becoming champions in their own organizations. But this was contingent on the credibility they gained in their respective organizations, their competence, their personal norms and values and their ability to understand and address e-procurement implementation challenges. They all had a shared vision similar to the project team of the implementing agency. In fact, the legitimation seekers did not make big effort to identify those legitimation providers but instead they were volunteers in embarking on the project when the announcement about e-procurement implementation was done at the initial stage of the project. Even top management support was not a sufficient condition to have the desired impact of routinization marking legitimation. It was nevertheless necessary (see table 5.9). Ngwenyama and Norbjerg (2010) advocated that success of a software improvement process project may happen without top management support. One of the project champions had to actively seek the support of its top management to advance the e-procurement project.

Legitimation strategies were also employed in part-usage and fallback outcome cases by the project team who are external agents to the public bodies. However, this was unsuccessful as the project champions with the shared vision, who were present in the successful scenarios, did not really emerge in these public bodies, and hence the synergy they created and encouragement for the uptake of e-procurement was missing. In the part-usage scenario, top management support only encouraged the registration of suppliers (section 5.4.10 of Chapter 5). Despite alliances between the project team’s organization and powerful stakeholders to monitor progress of uptake of e-procurement using key performance indicators, legitimation was not finally conferred and electronic bidding had to be rendered mandatory (section 5.4.11 of Chapter 5). Hence the absence of legitimation-seeking had a material impact on the uptake of e-procurement.

Past studies emphasize the importance of a project champion as a critical success factor for IS implementation (Beath 1991). Past studies suggested that on top and above leadership and stakeholder management skills, the project champion plays a political role to get the stakeholders’ support and resources for IS implementation success (Pinto and Millet, 1999). Renken and Heeks (2013:129) define a project champion as “any individual who makes a decisive contribution to the ICT4D project by actively and enthusiastically promoting its progress through critical stages in order to mobilize resources and/or active support and cooperation from project stakeholders”. The project champion should ideally be a high-level executive who has the authority to set goals and legitimize change (Falkowski, 1998 cited in Nah, Zuckweiler & Lee-Shang Lau, 2003). The project champion should have several

characteristics such as leadership, shared vision, commitment, and competence amongst others to be capable of driving IS implementation and the findings corroborate with these aspects.

With multiple stakeholder inter-organizational systems (IOIS) such as e-procurement, there are different organizational configurations. As demonstrated in this study, though procurement process may be quite similar across different organizations, the nature of procurement in each organization is associated with the specific contextual function that it serves. Thus, each organizational context of a public body is different from its peer organizations, requiring a person on-site who understands the specificity of the context and the organizational configuration to drive e-procurement implementation. For example, the specific nature of procurement of an organization required procurement templates to be customized. This was well understood by project champions of the three successful public bodies and they implemented the customization of procurement templates by working in collaboration with internal staff in their respective organizations and the project team of the implementing agency. The sponsoring organization could only realize this challenge after these project champions addressed it and as evidenced by their actions in creating electronic standard bidding document (e-SBD) and publishing on the portal of the Procurement Policy Office (PPO SBD e-PS, 2022).

## 6.7 Structural analysis

Having analyzed the legitimation activities that took place in the e-procurement implementation, this section elaborates on the “endpoint” of the research, describing the legitimation structures that emerge when the users’ social practices become routinized, established, and legitimized within a specified context following the legitimation-seeking process and other contextually situated interplay between the technology and the different actors over the research period.

The structural analysis uses the Orlikowski (2000) technology-in-practice framework as the basis of the explanation of the different legitimation structures. Surprisingly, three implementation outcomes were noted, success, fallback, and part-usage, each of which is associated with emergence of specific legitimation structures. These context-bound outcomes are dynamic implying that they can change with time as the interplay between the technology and knowledgeable agents unfold, thus implying emergence of different legitimation and other accompanying social structures (Orlikowski 2000).

### 6.7.1 Structural analysis of the success instances

The findings demonstrate that the use of online bidding in e-procurement became an acceptable behaviour in some public bodies which achieved successful implementation of e-procurement. The end-users of these public bodies unanimously agreed to routinize e-procurement, endorsing the associated new rules and work practices. As their shared vision for an innovative system to carry procurement practices coincided with the initiative of the implementing agency for e-procurement project, the use of e-procurement for online bidding became the new norm in these organizations when it provided the means, techniques, or generalizable protocols that the users used in a situated action context to carry

out their procurement tasks (Jones & Karsten, 2008). Suggested by the findings, the accompanying reward for legitimizing the new norm was characterized by an international award won by one of the successful public bodies. This was accompanied by a celebration of success, raising the reputation and credibility of those organizations that can proudly claim the robustness of their procurement process, and the gain in power for the project champions. Given that each public body has a specific organizational context, key differences exist in the nature of the set of resources and rules that were instantiated by the end-users to constitute e-procurement use technology-in-practice and other legitimation structures in their daily work routines (Orlikowski 2000; Arshad, Bosua and Milton 2018).

#### *Enactment of technology in the first success instance*

Considering the first success scenario, the findings demonstrate that the e-procurement project was communicated at the right time when the public body had a major requirement to replace an inefficient manual procurement process with a digitalized procurement process to achieve efficiency. In structural analysis, one cannot overlook the structures of domination and signification which are intertwined with the structure of legitimation (Hussain and Cornelius 2009). Supported by the findings, despite top management has the authority over all the subordinates and power to control all resources in the organization, top management was aware that their actions should be legitimated to mitigate resistance to change and to achieve domination. Hence, top management appointed a project champion to drive the e-procurement implementation. When the project champion was designated by top management to drive e-procurement implementation, he was granted the authority to give directives to end-users from any level of the organizational's hierarchy and to exercise controls to monitor the uptake of e-procurement by those users. He thus gained more power and domination in the organization. When this domination is legitimated, it then facilitates the legitimation-seeking process inside the organization.

The structure of signification is linked to the end-users' perceptions and assumptions of e-procurement and how the same structure recursively yields their shared understanding and sense-making of e-procurement phenomena (Ogden and Rose 2005). By having a shared vision with the project team that e-procurement solution should be the new norm in the organization, the project champion unconsciously articulated and reinforced an understanding of e-procurement solution to the internal stakeholders, creating an interpretive schema that associated the procurement process with the e-procurement solution.

As part of the internal legitimation-seeking process, the findings in section 5.4.6.1.5 of chapter 5 shows that the project champion used multiple legitimation strategies to influence the end-users' norms such as training, handholding, explaining the benefits of the technology to end-users, engagement of suppliers and the use of an e-procurement mock platform to launch real bids. The end-users made sense of the facilities and rules implicated in these legitimation-seeking activities. Moreover, they also drew from the facilities available at hand such as readiness for e-procurement, high speed internet, ICT

infrastructure and a well-structured room for bid opening. In the course of the instantiation of these rules and resources, the end-users enacted the e-procurement use technology-in-practice by using consistently the online bidding module, and when it was recursively enacted, it strengthened their belief that e-procurement was necessary in their procurement functions. This belief was further reinforced when the organization bagged an award for their success in the implementation of e-procurement as explained in section 5.4.6.1.5 in Chapter 5. In the recursive enactment of e-procurement use technology-in-practice, other legitimation structures took shape such as the partnership with suppliers which was essential to meet the competitiveness norm in the procurement process.

The norm of an e-procurement champion was endorsed as it became taken for granted of an existence of a committed and dedicated “e-procurement champion or driver” in the organization and subsequently in exploring the technology beyond online bidding such as trial of evaluation module, the users would rely on the championship for guidance.

#### *Enactment of technology in the second success instance*

In the second successful scenario, the findings suggest the shared vision of the project champion for a digitalized procurement process motivated the implementation of e-procurement in the organization despite weak management support (see section 5.4.6.2.3 in Chapter 5). The project champion had previously experienced the benefit of technology in increasing the efficiency of the procurement process when his team was using email service to accelerate the processing of informal quotations and the receipt of tenders. Drawn from his experience, his competence in procurement and an innovative mindset, the project champion became enthusiastic to use e-procurement that was tailored for an efficient and fast procurement process. The findings imply that given the perceived benefit of technology and the facilities at hand in terms of ICT infrastructure and skills, the end-users were already enacting email use technology-in-practice before e-procurement was introduced, corroborating exactly with the findings of Agbeko, Effah and Boateng, (2021). The end-users then enacted a different technology-in-practice when e-procurement was adopted.

The facilities available at hand included a robust ICT infrastructure and additional facilities implicated in the legitimation-seeking activities of the project champion such as e-procurement training for all staff, timely support for e-procurement portal, the operationalization of mock platform for launching real bids. The empirical findings suggest how the belief that e-procurement should be the new norm became institutionalized when the associated legitimation activities to convince the end-users to conform to this norm became generalizable rules. These resources and rules are instantiated by the end-users to enact the ‘e-procurement use’ technology-in-practice.

Focusing on the structure of domination, this research found that by collaborating with the implementing agency for the grand launching ceremony of e-procurement by a figurehead at national level, the project champion gained more power in his organization. The latter then promoted the use of

e-procurement and reinforced the belief that e-procurement would bring benefits to the organization in terms of a more efficient procurement process. With this power position, the champion earned respect not only from his organization but became a reference in other public bodies which were deploying e-procurement (see section 5.4.6.2.6 in Chapter 5).

The e-procurement champion carried out a series of legitimation-seeking activities to gain the support of top management towards e-procurement, which was ultimately gained. The legitimation of e-procurement as a new norm by top management reinforced this perception in the organization leading to e-procurement use technology-in-practice being recursively enacted as it became routinized in the organization. This is evidenced by the findings related to the consistent usage of the online bidding module over time (see section 5.4.6.2.6 in Chapter 5).

The structurational analysis of the successful instances is depicted in Figure 6.3.

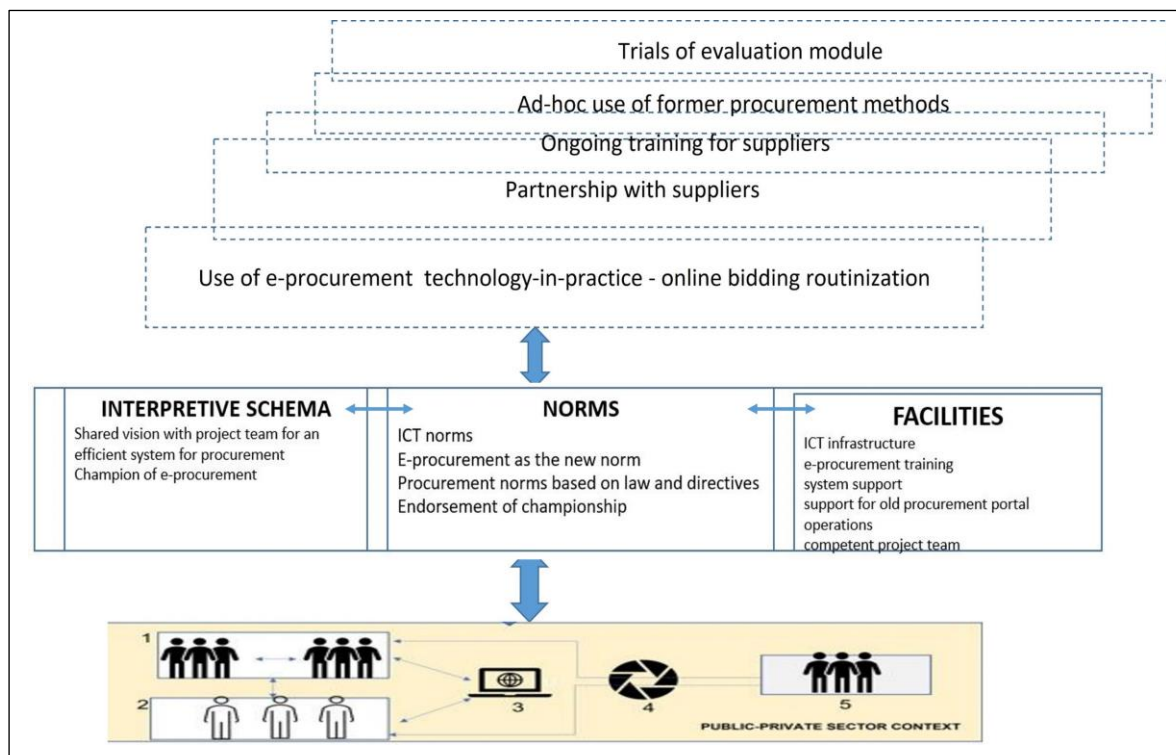


Figure 6.3: Structuration Analysis of Success Outcome

## 6.7.2 Structurational analysis of fall-back outcome

### Structures of legitimation

In response to the negative economic outcome of e-procurement use and a generalized perception of e-procurement as being complicated and inefficient, the end-users produced and re-produced the legitimation structure of the former method of procurement and old work practices. This involved the use of the old public procurement portal to upload notification of bids advertisement and awards documents while also using paper-based methods in the procurement process. These practices were unequivocally authorized by the top management of this group of public bodies, and they were

considered as acceptable by the end-users. However, to avoid sanctions because of non-compliance with the directive of Government authority to embrace e-procurement as the new norm, the knowledgeable agents maintain that “training on e-procurement is ongoing”. Learning about e-procurement became an ongoing process which became an acceptable and formalized informal rule endorsed by all end-users in those organizations.

The facilities at hand were the ICT infrastructure, flexibility for re-registering for training for e-procurement which is implicated in the legitimation-seeking activities of the project team, and the old public procurement portal which was still operational. The use of old procurement portal technology-in-practice that emerged out of the rules and resources instantiated by the category of stakeholders are shown in figure 6.4. The fallback outcome entailed a notable unintended consequence. Indicated by the findings, the suppliers must look at multiple sources to take note of new bidding opportunities in the public sector. On the other hand, the incongruence in the use of e-procurement between two mutually dependent stakeholder groups led to a negative economic outcome that went diametrically opposite to the objective of e-procurement for lowering goods’ prices. The suppliers have decided to act otherwise ignoring e-procurement properties after initial trials. It is well known that technologies-in-practice are not perpetual. With time, they may change. Different technologies-in-practice can be enacted, depending on how knowledgeable the users are about the technology and on the contextual circumstances of use. After two long years, advocated by the findings in section 5.4.12 in chapter 5, as the stakeholders took cognizance of the new formalized policy of mandatory usage of electronic bidding and an upgraded e-procurement system with better performance, the enacted structures would tend to change. But further research is mandated for getting more insights into the evolution in the enactment of technology by the end-users.

### **Structures of signification and domination**

The structure of legitimation does not emerge in isolation but is interwoven with the structure of signification and domination. The findings indicate that top management of public bodies with fallback outcome did not perceive e-procurement as a priority. Such perception reinforced the understanding across the respective organization that paper-based procurement mode could still be continued. As the end-users perceived e-procurement as complicated and inefficient causing negative economic outcome, the structure of signification was produced and re-produced. In this way, meanings and understanding that were produced pertaining to the use of e-procurement eventually served to guide the way end-users behaved with regards to e-procurement (Ogden and Rose 2005).

In terms of domination structure, the top management of a public body already had the formal authority for decision-making on procurement process. When the decision of non-usage of e-procurement was legitimated by the end-users, top management gained more power in supporting his ideology that ‘e-procurement is not his priority’, reproducing the structure of domination. To counter this, the implementing agency sought the support of another stakeholder, a public body which is responsible for public service administration, to monitor and encourage the uptake of e-procurement for public bodies

which were failing such as the fallback situation. In so doing, a stakeholder organization which was not in the picture initially gained substantial power for the monitoring of e-procurement implementation that would raise the status of the organization.

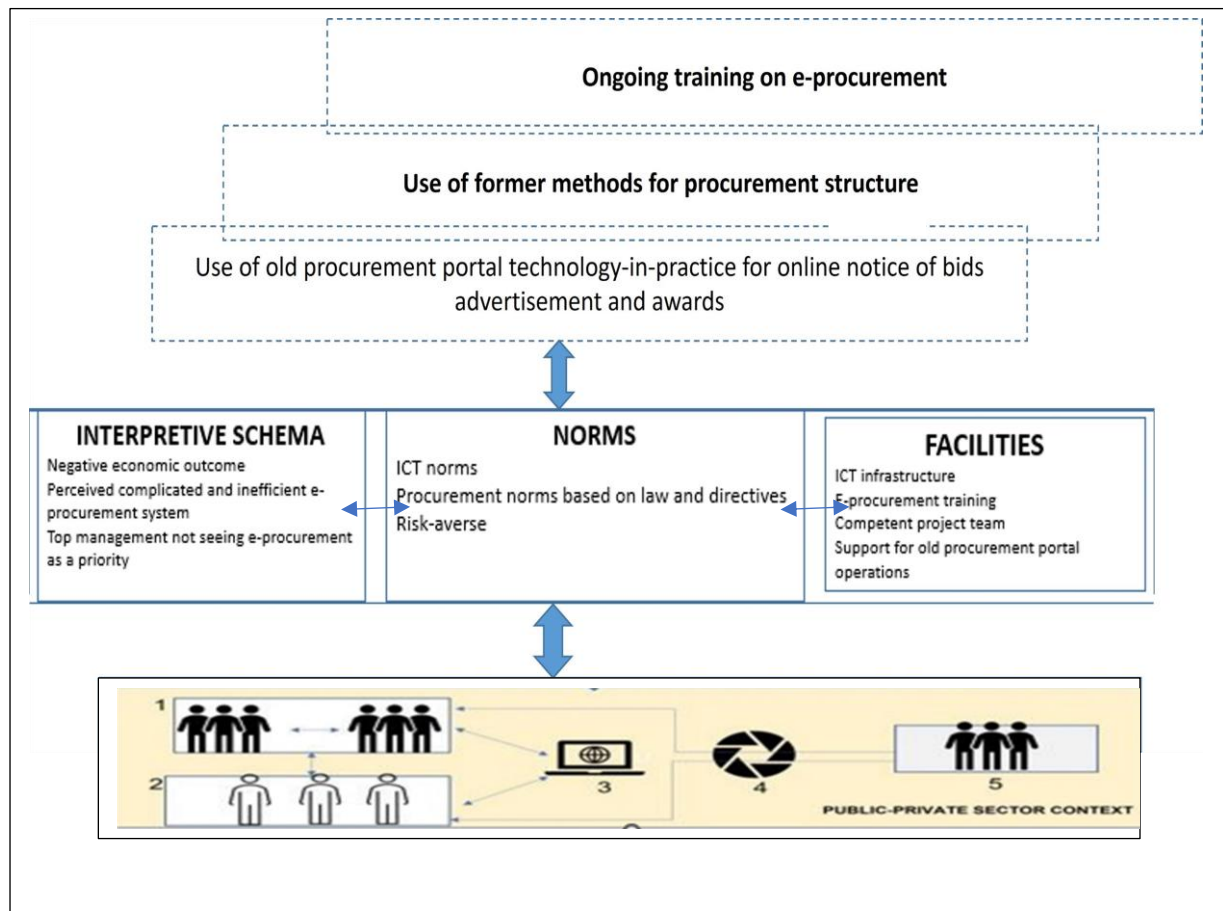


Figure 6.4: Structuration Analysis of fallback Outcome

### 6.7.3 Structural analysis of the part-usage outcome

Before elaborating on the structural analysis of part-usage outcome of e-procurement implementation, a concise overview of the part-usage outcome is presented to highlight its salient aspects.

The findings demonstrate that the part-usage outcome was characterized by the usage of online bidding module only. The part-usage outcome is a consequence of a combination of:

1. The endorsement of electronic bidding by top management showed commitment to engage suppliers motivating them to register on e-procurement to address the negative economic outcome.
2. The use of the evaluation module which was rendered as optional through the loose coupling feature. The aim of making the evaluation module optional was to give time to the end-users

for trial and acquaintance.

3. The end-users complied with the directives of top management despite their strong dissatisfaction with the e-procurement system giving rise to a ‘comply and complain’ scenario.

### **Structures of legitimation**

Focusing on the structurational analysis of the phenomena, by deploying e-procurement in their procurement business function, top management of these public bodies unanimously complied with rules, supporting e-procurement as the new norm. This was formally articulated, and all users were instructed to routinize the associated formal practices such as the engagement of suppliers to organize their training and to motivate them to register on e-procurement to avoid unintended consequence of negative economic outcome. Dissatisfied with the system, the users, against their will, agreed to the directive of their respective top management to avoid sanctions for non-compliance. In so doing, they created heavy dependency on the SPOC to operationalize online bidding to meet the timeliness norm of the procurement process. Dependency on SPOC was an unintended consequence of coercion over the end-users to use online bidding. This became a “normality”. By continuously reaffirming such a rule through social interaction is a means of users' production and reproduction of structures of legitimation. The end-users had available resources at hand in terms of ICT infrastructure, facilities implicated in the legitimation-seeking activities of the project team such as e-procurement training and e-procurement portal support. When these rules and resources were instantiated by the end-users, the e-procurement use technology-in-practice was enacted, as shown in figure 6.5. An important unintended consequence of the usage of online bidding happened in respect of the function of electronic opening and closing of bids. The users routinized new work practices involving noting down the dates for opening and closing bids on whiteboard and in their diaries so as not to miss those critical dates.

The users will enact different technology-in-practice in the future as they become more knowledgeable about the properties and benefits of the technology. The findings indicate that the project team, as part of their legitimation strategies, was working on electronic standard bidding documents (e-SBD) templates for meeting the needs of the different nature of procurement (see section 5.4.8.3.2 in Chapter 5). This activity was under progress as only a few templates were uploaded on the Public Procurement Portal at the time of data collection (Procurement Policy Office SBD e-PS, 2022). The availability of a full comprehensive set of e-SBD will facilitate the preparation of bids and will eventually decrease the dependency of the end-users on the SPOC in the future. It thus implies that the knowledgeable agents will develop new experiences as their interaction with technology deepens, shaping their norms.

Other legitimation structures finally took shape around the use of e-procurement. It becomes an acceptable formalized practice for the parallel use of the old procurement portal to comply with the fairness norm towards potential bidders (see section 5.4.4.3.1 of Chapter 5). This shows that some form of technologies-in-practice existed before the introduction of e-procurement system which corroborates

with the findings of Agbeko, Effah and Boateng (2021). Furthermore, the findings also revealed the articulation of a formalized policy with sufficient flexibility that permit the use of the former method of bidding subject to certain conditions. All public bodies unanimously agreed that this flexibility is necessary for emergency procurement. The users continued to produce and re-produce these structures of legitimation. Thus, the paper method was not eliminated with the introduction of e-procurement system (Agbeko, Effah and Boaten 2021).

### Structures of signification and domination

By supporting that e-procurement should be the new norm in the organization, top management unconsciously articulated and reinforced the understanding and belief to the whole organization that despite problems with e-procurement in respect of lower response of bids, the end-users should not give up. This produced and re-produced the structure of signification that e-procurement should be the new norm in the organization.

In terms of domination structure, in the end-users' struggle with the perceived complicated system, the SPOCs gained power and achieved domination when the users became increasingly dependent on them to operate the online bidding process. These SPOCs, because of this power position, gained much respect from the procurement officers from these public bodies. The dependency legitimation structure that eventually emerged.

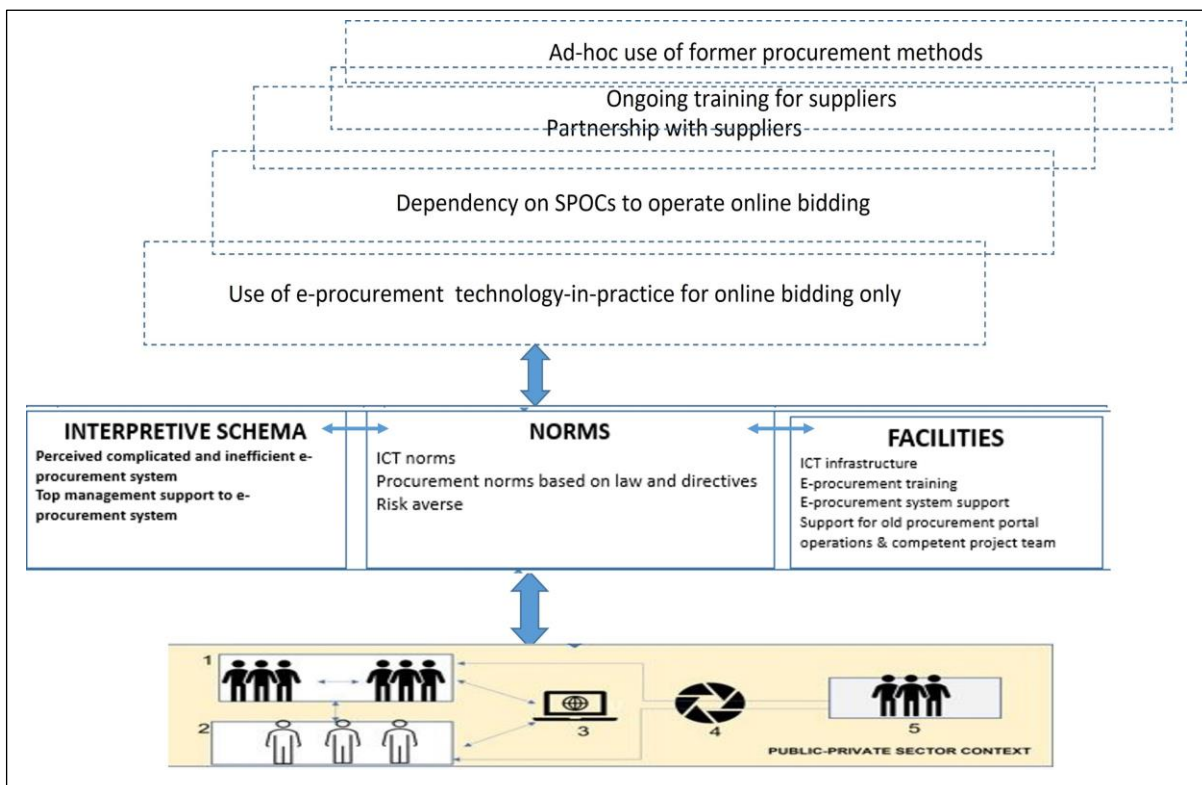


Figure 6.5: Structuration Analysis of part-usage Outcome

#### 6.7.4 Non-compliance around e-procurement as an emergent legitimation structure

The finding in section 5.4.13 highlights evidence of non-compliance around e-procurement use. This tends to point to an emergent legitimation structure of non-compliance alongside the e-procurement use

technology-in-practice. The mutual shaping that happens between the social and technological domain is a strong basis for explaining the non-compliance (Bernardi 2017). On one hand, the end-users had the available resources at hand in terms of ICT infrastructure, e-procurement portal support. Furthermore, the end-users also made sense of the existing norms around e-procurement technology in terms public policies that catered for the flexibility for using paper-based method in emergency procurement situations, freedom to manually choosing bidding methods, subjective decision on the duration for bid submission, flexibility of applying own judgements in evaluation of bids and subjective approach to drafting technical specifications of bids. These facilities and norms were expected to influence the extent to which the end-users of public bodies were engaged with e-procurement. On the other hand, new norms and meanings that drove the use of e-procurement were related to the opportunities that the material features of the new system offered (Bernardi, 2018). These influenced the way the end-users interpreted e-procurement.

The public policies pertaining to the use of paper-based methods for emergency procurement, freedom to choose duration of bid submission amongst others were formally articulated in all public bodies. However, knowledgeable agents of a few public bodies, which after engaging recurrently with e-procurement technology and given, their strong competence of procurement, found ways to “tweak” the norms prescribed in the public policies thereby re-interpreting the e-procurement technology, producing and re-producing a non-compliance legitimation structure as shown in figure 6.6. The users gave a different meaning to e-procurement “as a tool for doing electronic bidding and a mere information recording system” instead as “a tool for combatting corruption and enhancing accountability and transparency”.

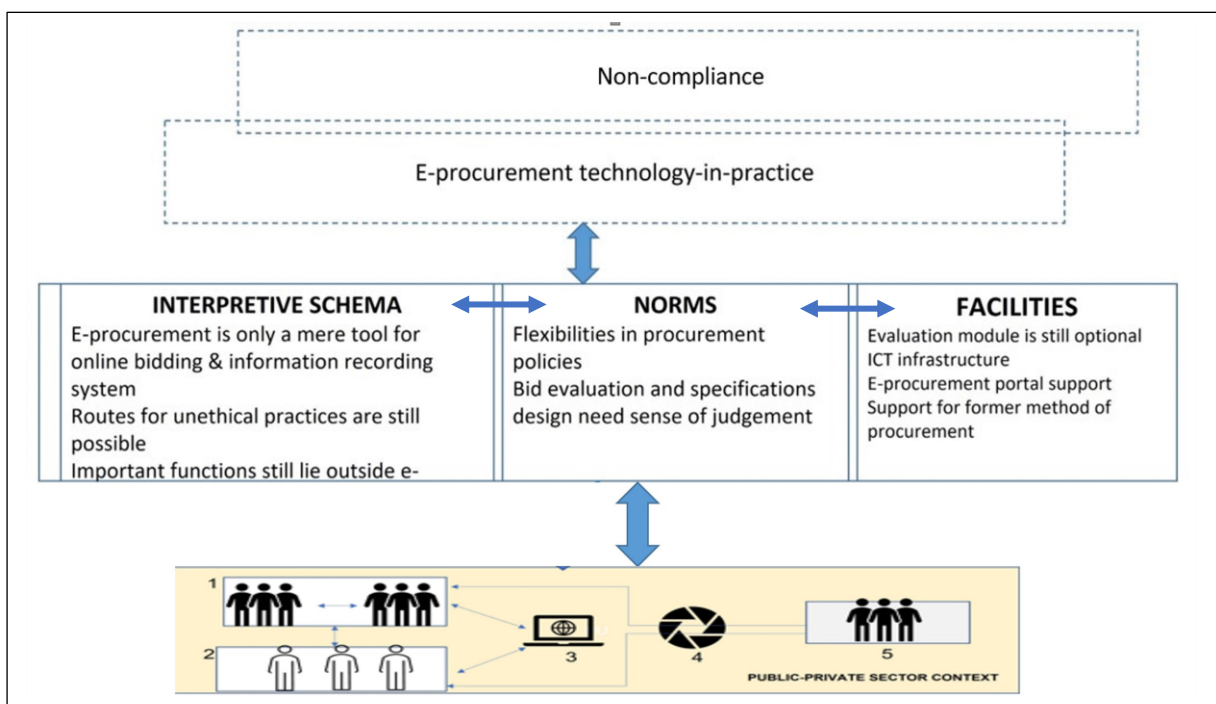


Figure 6.6: Structuration Analysis of Non-compliance

## 6.8 Norms and work practices misfit

This section outlines the different misfit between norms underlying work practices and the e-procurement system revealed by the findings that contributed to the fallback and part-usage outcome of e-procurement implementation.

### 6.8.1 Fallback outcome

The cause of the fallback was mainly due to active resistance to change by public bodies that was allowed and even encouraged by the lack of interest of top management in e-procurement system. Initially, the resistance to change was totally understandable given the “misfit of norms” with the functionalities of the new e-procurement system. Strong and Volkoff (2010) advocated that “*Organizational culture misfits occur when an enterprise system requires ways of operating that contravene organizational norms*”. Van der Hoof and Hafkamp (2017) demonstrated how end-users resisted an electronic health record system when it conflicted with organizational and professional norms.

As shown in figure 6.7, the specific nature of procurement that was tied with each public body serving a specific function in the public sector was incongruent with the standardized templates that were available in the system for bidding document preparation. Thus, the standardization process that was undertaken by the project team did not meet the requirements of producing bidding documents for the nature of each type of procurement. Due to this incongruence, the procurement officers spent a lot of time customizing the templates according to their needs. This incongruence coupled with the perception of a complicated system underpinned by process flow difficulties caused the procurement process to become time-consuming. A lengthier bidding preparation process then became incongruent with the timeliness norm of procurement, and the ICT norms of the officers who normally gave the meaning of “paperless” and “faster” to the ‘e’ of the e-procurement system.

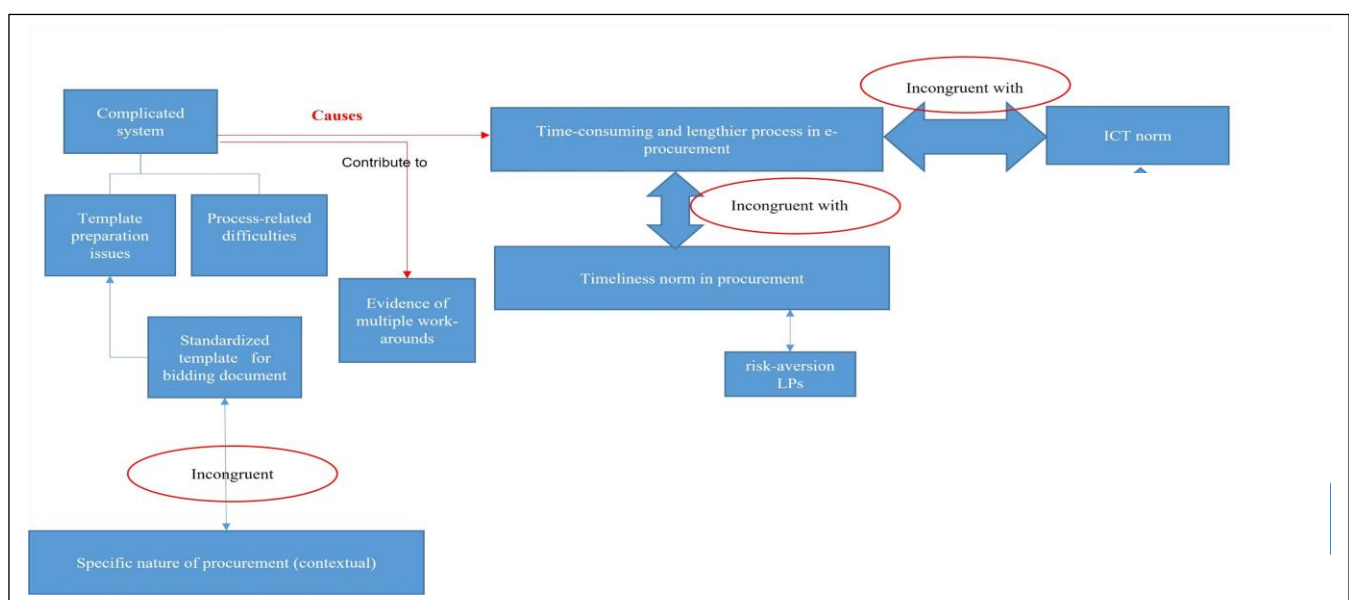
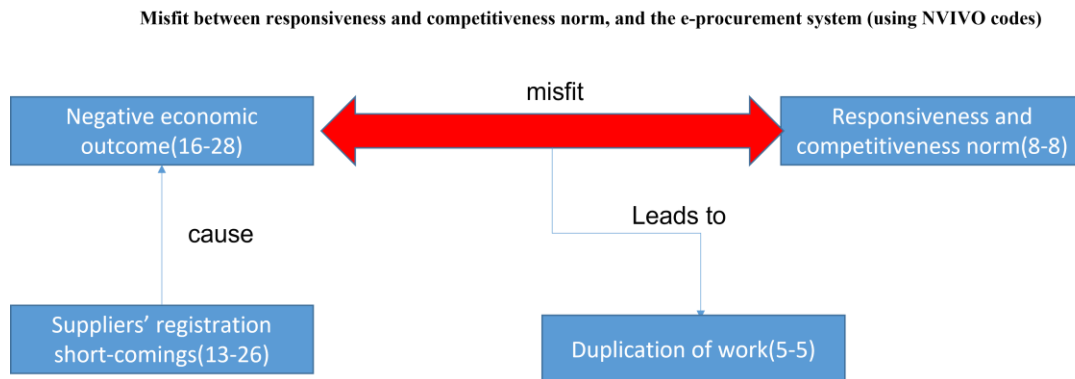


Figure 6.7: Misfit in Norms Causing Fallback.

As depicted in figure 6.8, the users witnessed a negative economic outcome characterized by lower response in bids when using electronic bidding which in turn caused a hike in goods price as compared to what were normally obtained with the paper-based method. This was incongruent with the norm of competitiveness in bidding, and it was a consequence of lower registration of suppliers especially SMEs on e-procurement.



*Figure 6.8: Misfit between Responsiveness and Competitiveness Norm, and the e-Procurement System*

#### 6.8.2 Part-usage outcome

The findings in section 5.4.10 of chapter 5 reveal how the norm and work practices misfit resulted in the users' dissatisfaction with the evaluation module of e-procurement which they were unwilling to use. Even those public bodies which successfully implemented e-procurement did not routinize the evaluation module but were using it on testing or trial basis. The unwillingness of use was due to several perceived misfits that were observed between the users' norms and the digitalized version of the workflows in e-procurement system as shown in figures 6.9, 6.10 and 6.11. Firstly, the users perceived that the norm of accountability that underpins the manual process of seeking clarifications from bidders during the bid evaluation process was absent in the corresponding digital process. Secondly, with the absence of the dissent process in the e-procurement system, the dissenting norm was not fulfilled. A dissenting process normally follows when a member of a bid evaluation process decides to make a dissent as stipulated in public procurement law. Thirdly, the norms of confidentiality and access to evaluation data restricted to within the committee only, could be compromised by the e-procurement feature that allow the chairman remote access to the evaluation data. The end-users perceived that a risk of tampering with evaluation data on the e-procurement system is therefore possible. The users strongly opposed the remote access of evaluation data by the chairman despite audit trails. This is because once an online evaluation process was completed, the bid evaluation committee would be dissolved, and the members would not have any access to the evaluation data to verify if any changes were made after the evaluation took place.

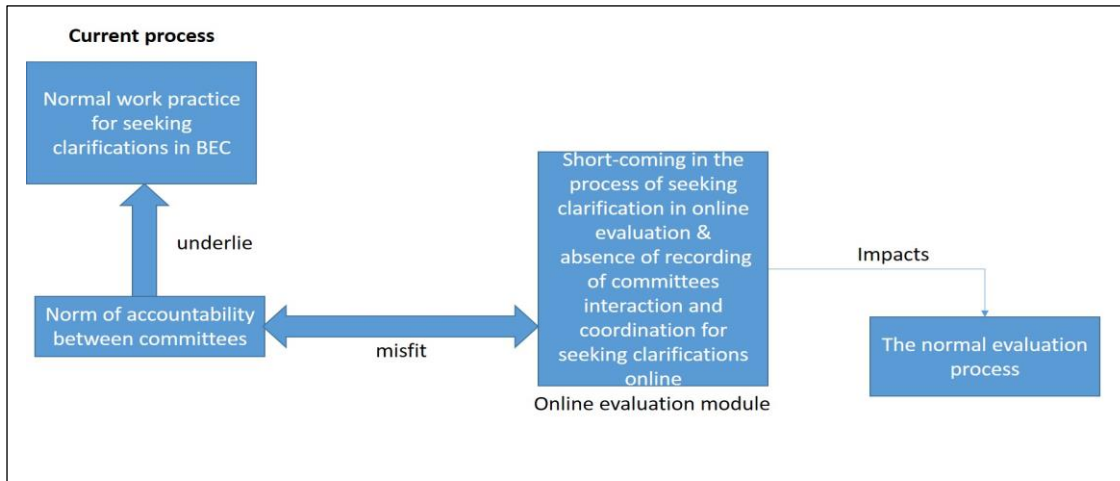


Figure 6.9: Perceived Misfit between Norm of Accountability between Committees, Inscribed in the Procedure for Seeking Clarifications in Evaluation, and the System

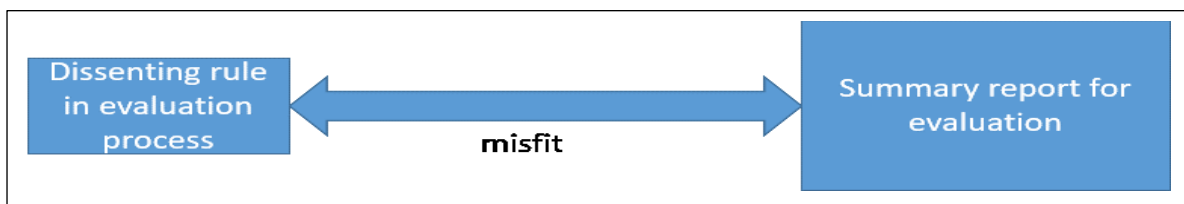


Figure 6.10: Perceived Misfit between Dissenting Norm and Evaluation Summary Report

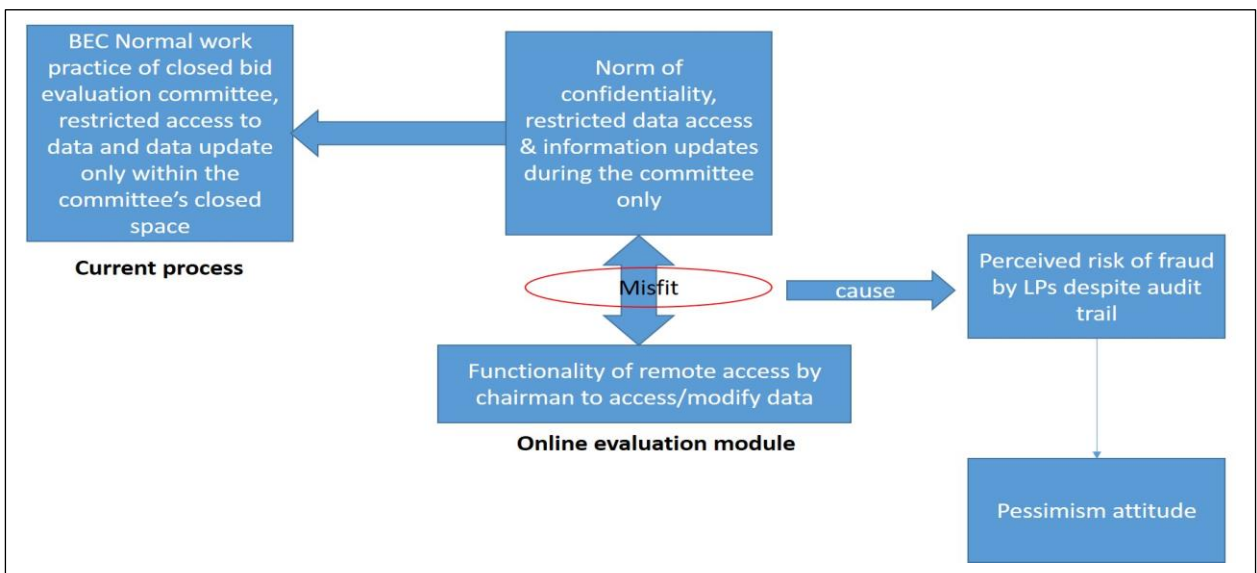


Figure 6.11: Norms Misfit with Work Practices in Bid Evaluation

The impacts of norms misfit with information system on acceptance of information system has been advocated in past research (Strong and Volkoff 2010; Hoof and Hafkamp (2017)). This study adds to the body of knowledge pertaining to norms and work practices misfit for a good governance driven IOIS. There is a need for carefully planned demand-side stakeholders' engagement and participation at the ISD stage of a governance-driven IS project. Project leaders should involve demand-side stakeholders in the design and development of information systems to capture their expectations and

concerns that carry their norms because it is crucial to understand stakeholders' views and system requirements. Past IS literatures emphasizes the need of stakeholder involvement and participation in the design and development of information system and failure to do so may lead to an expectation failure in information system implementation (Chan and Pan 2008; Gary, Shan and Flynn 2004; Sjostrom and Goldkuhl 2010; Lyytinen and Hirschheim 1987). A carefully-planned engagement of demand-side stakeholders is mandated because if the participants feel that the system will not be beneficial to them or perceive it as a threat to their position, their participation at the IS design stage will not have the anticipated effect because they will already have preconceived ideas and may not be honest in their views, Stanley-Brown and Weistroffer (2019).

## 6.9 Summary

This chapter has provided useful insights into the legitimation-seeking process that unfolded in the implementation of an inter-organizational system (IOIS) in a public sector context of a sub-Saharan African country. Stakeholders' support and acceptance towards e-procurement were actively sought by the project team. As pointed out by Flynn and Du (2012), legitimation is emerging as an alternative and powerful concept to traditional discourse related to IS acceptance, as also demonstrated by this study.

Figure 6.12 summarizes new theoretical concepts that emerge from this study highlighting their relationships with other existing concepts that shape the dynamics of legitimation in the implementation of a good governance driven inter-organizational system. The figure emphasizes the various inextricably linked elements identified throughout the process. Notably, a participative style of leadership in the public sector coupled with the credibility of public sector leaders promote a healthy legitimation-seeking process. A qualitative comparative analysis of the three distinct implementation outcomes shows that championship at organizational level was a sufficient condition for contributing to the success of the legitimation-seeking process while top management support was necessary but not sufficient. In the undertaking of a successful legitimation-seeking process, the power position of the project champion at organizational level is reinforced. The legitimation-seeking process provides valuable insights into the taxonomy of norms of the legitimation providers exposing misfits between their work practices and the inter-organizational information system (IOIS). Such misfits manifest as legitimation gaps, which the legitimation seekers attempt to close through several cycles of the legitimation process, employing various legitimation strategies. The ongoing cycles of closing legitimation gaps go into a downward spiral form, shaping the outcome of implementation of IOIS. These outcomes are interpreted through the lens of technologies-in-practice that are enacted by the end-users. The activities embedded in the legitimation strategies are implicated in the rules and resources instantiated by the end-users. Technologies-in-practice and accompanied legitimation structures evolve dynamically as the legitimation-seeking process progresses through different cycles.

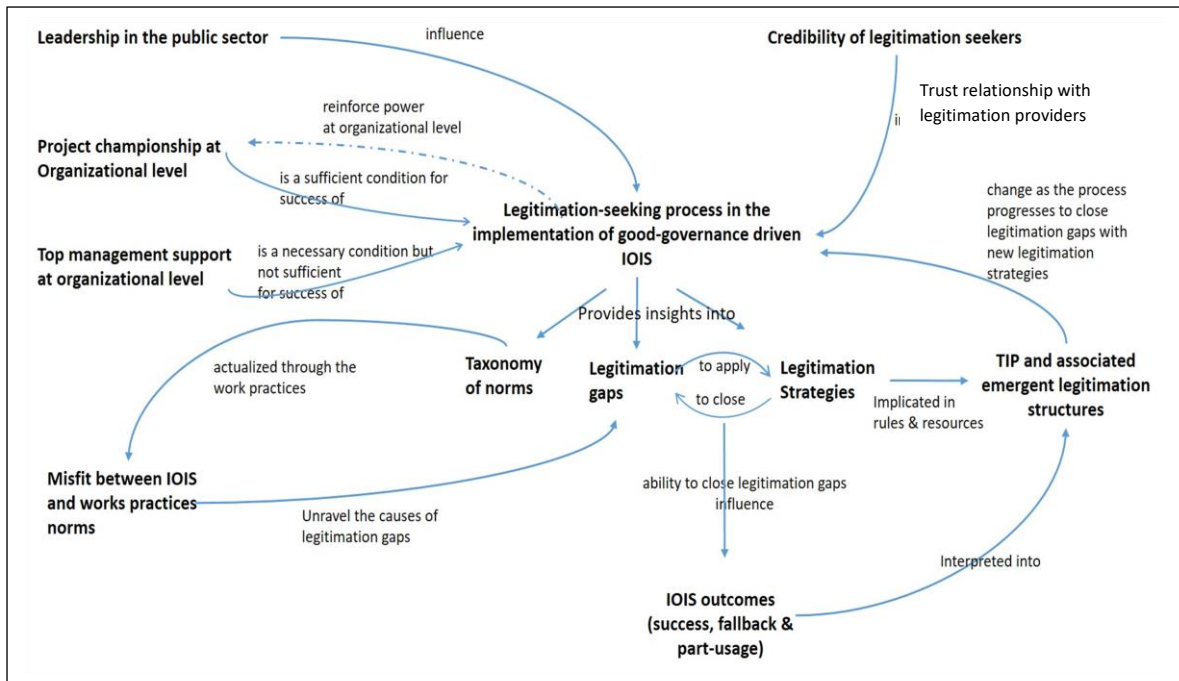


Figure 6.12: New theoretical concepts and their relationships

## Chapter 7 Evaluation of research

This chapter explains the process used to assess and evaluate the quality of this research work. Depending on the research paradigm, IS researchers should choose an appropriate set of principles for research evaluation. This research is interpretive in nature and is based on the understanding that reality is socially constructed based on which theories concerning reality can be formulated (Walsham, 2006). Past researchers in the domain of information systems advocated the suitability of the seven principles of Klein and Myers (1999) in evaluating IS case studies (Kardoso and Ramos, 2012). It does not mean to be a strict checklist for researchers using the interpretivist paradigm but as recommended by Walsham (2006), it is desirable that IS researchers “think about their own research works according to the principles laid down by Klein & Myers (1999)”. These principles cannot be applied in isolation but are connected to each other, and when applied responsibly and reflectively in the evaluation of research works, it helps researchers to develop interesting, plausible, and convincing accounts (Yadav, 2021).

This section elaborates about how the research presented in this thesis satisfies the Klein and Myers (1999) set of seven principles in a holistic manner (table 7.1) in respect of the methodology, data analysis and findings. It starts with the first principle of the hermeneutic circle and ends with the last principle of suspicion.

*Table 7-1: Seven Principles for Evaluating IS Case Studies (Adopted from Klein & Myers, 1999:72)*

<b>Principles</b>	<b>Key description</b>
The fundamental principle of the hermeneutic circle	This principle suggests that human understanding is achieved by iterating between considering the interdependent meaning of parts and the whole that they form. This principle of human understanding is fundamental to all the other principles.
The principle of contextualization	Requires critical reflection of the social and historical background of the research setting, so that the intended audience can see how the current situation under investigation emerged.
The principle of interaction between the researchers and the subjects	Requires critical reflection on how the research materials (or "data") were socially constructed through the interaction between the researchers and the participants.
The principle of abstraction and generalization	Requires relating the idiographic details revealed by the data interpretation through the application of principle one and two to theoretical, general concepts

Principles	Key description
	that describe the nature of human understanding and social action.
The principle of dialogical reasoning	Requires sensitivity to possible contradictions between the theoretical preconceptions guiding the research design and actual findings ("the story which the data tells") with subsequent cycles of revision.
The principle of multiple interpretations	Requires sensitivity to possible differences in interpretations among the participants as they are typically expressed in multiple narratives or stories of the same sequence of events under study. Similar to multiple witness accounts even if all tell as they saw it.
The principle of suspicion	Requires sensitivity to possible "biases" and systematic "distortions" in the narratives collected from the participants

### 7.1 The fundamental principle of the hermeneutic circle

The principle of the hermeneutic circle implies grasping an understanding of a complex whole phenomenon from ‘*preconceptions about the meanings of its parts and their interrelationships*’ (Klein and Myers 1999). In effect, this means that a researcher can understand a particular phenomenon from the field on study such as the procurement process in a particular public body and the related stakeholders’ activities and then develops a more general understanding of the whole context (implementation of e-procurement in the whole of government). The reverse can also happen whereby the researcher gets an understanding of the whole context which leads back to an improved understanding of a small part of the context. Initially, regarding learning about the norms of legitimation providers, the researcher had preconceived ideas about their norms after consulting the different sources of literature (for e.g., annual reports and circulars issued by the Procurement Policy Office (e.g. PPO Annual report 2021; 2020; 2019) and based on the accounts of the legitimation seekers from the implementing agency. This formed the part. But when the researcher participated in the research, interacting with the participants in several public bodies, a shared meaning was developed that improved the understanding about the norms of public officers. This finding, however, partly validated the preconceived ideas. A nuanced image of the norms emerged from the shared understanding whereby not all public officers are necessarily slow-to-change and risk-averse as it was initially believed. Secondly, regarding the soft-transition philosophy of the project team which they employed as part of

their approach to seek legitimation, the publications of the different annual reports (PPO Annual report, 2020; 2019; 2018; 2017; 2016) of the implementing agency highlighted their soft approach in terms of training, handholding, meetings with stakeholders to improve uptake of e-procurement. This was the basis on which the “preconceiving ideas” were built. This understanding was confirmed and even strengthened when the researcher interacted with the participants who came from different public bodies. Moving back, the researcher was able to categorize the different activities that resembled the soft approach into a soft-transition philosophy which eventually led to an understanding of the participative mindset of leaders in the public sector.

## 7.2 The principle of contextualization

The principle of contextualization ‘needs critical reflection of the social and historical background of the research setting, so that the intended audience can see how the current situation under investigation emerged’ (Klein & Myers, 1999: 73) and explain why outcomes may differ for a similar digital innovation in different contexts. The research defines which context should be explored, whether an organizational setting, national context, historical, political, or economic context. This research studies the implementation of a system that brings both users of public bodies forming part of the public sector context and private suppliers from the private sector context on a single electronic platform to conduct procurement proceedings. Hence it involves two distinct contexts, the public and private sector.

In the public sector context, each public body has a unique organizational context whose attributes impact the use of e-procurement such as the readiness of the public body and its nature of procurement. Thus, to understand legitimation activities, the organizational forces affecting the individual public body should be understood. Furthermore, the procurement process of public bodies is governed by the implementing agency which is also a public body, and which issue a generic procurement guideline and ad-hoc procurement policies that should be complied with by all public bodies across the whole Government. Each public body should also comply with procurement law of the country, general rules, and policies of the Government such as rotation of staff in the public sector, the communication protocol in the Government and use of the ICT infrastructure provided by the Government.

Considering the private sector context, the suppliers are impacted by wide environmental forces such as internet penetration, digital literacy, procurement legislation and government policies for bidding (Statistics Mauritius, 2021; PPO Annual report, 2021; 2015). Mauritius has a high index of internet penetration, digital literacy and proper internet connection which make this research feasible. The internet penetration rate stood at 64.9 percent of the total population at the start of 2022 (Statistics Mauritius, 2022). These were the key elements that were considered as part of the fieldwork. The research gathered a variety of relevant and rich contextual information to analyze legitimation activities. The procurement legislation, the procurement guidelines and the different policies issued periodically

by the implementing agency served to inform the understanding of procurement norms that are at the core of this study. Based on a published government policy, the researcher learnt that the Government demonstrates fairness to SMEs to bid for public procurement by giving them a margin of preference. But on the other hand, e-procurement legislation also compels them to buy a digital certificate costing two thousand and five hundred Mauritian rupees, which is valid for only two years (PPO Annual Report, 2015). This rule is a contextual factor that caused some reluctance on the part of SMEs to register on e-procurement at the initial stage of e-procurement implementation. The stakeholders were considered to be producers, contributors or influencers of the context and not simply the products or ‘victims’ of the context.

The legitimization-seeking process is also indirectly dependent on the wider national culture and political history of a country, as pointed out in the literature review. Unlike a democratic country like Mauritius, legitimization-seeking may not hold in communist countries which wields authoritarian power at all levels in the Government. Furthermore, the national culture of certain countries such as Bhutan and Thailand which follows the Buddhist culture, may impact a legitimization-seeking process. In these countries, there is compliance with a strict chain of command and protocol. Each rank has observed privileges and “*employees show loyalty, respect, and deference for their superiors in return for protection and guidance*” (Pimpa, 2012). Nevertheless, absence of resistance to change is not assumed for such countries.

### 7.3 The principle of interaction between the researchers and the subjects

Klein and Myers (1999) claimed that research participants can turn into interpreters and analysts of situations as they change their horizons in the presence of the researcher in interviews. Their changed horizon can alter their subsequent course of actions. Therefore, a researcher should pay particular attention to the interaction with participants through which the primary data is constructed and collected. This case study used semi-structured interview as the primary data collection method. The researcher used the government portal of Mauritius to retrieve the contact details of the relevant potential participants of the study and prior to the meeting, an appointment was made by phone during which the purpose of the research was explained briefly, and an assurance is given that all ethical standards would be complied with. The COVID-19 pandemic presented a key challenge for the data collection process. Before the pandemic, all meetings were done by face-to-face contact but during the pandemic, there was a three-month lockdown period during which potential participants stayed at home and could not be contacted. When the lockdown was lifted, these participants were not keen to participate in the research even through online meeting. Public officers are said to be very risk-averse. They preferred on-site meetings and anonymous recording of interviews instead of a virtual meeting which can be recorded. The data collection resumed in August 2020 with face-to-face contact meetings with the potential participants. The researcher was aware of the importance of building trust relationship with the potential participants prior to conducting the interview. In some instances, the researcher solicited

the help of the project team of e-procurement to establish contact with potential participants who worked in parastatal public bodies and not in central government. These participants were important for the study as they strived to achieve success in e-procurement implementation. In some cases, the participants referred the researcher to other potential participants who were their working colleagues. It was evident that the participants trusted the researcher who was also a public officer and felt at ease when participating in the intensive interviews. They appeared relaxed when narrating their experiences in e-procurement implementation revealing their interpretation and perception of the project under the study. This informed the researcher's study of how legitimation-seekers sought to obtain legitimation from them. The researcher did not express her personal views on events of e-procurement implementation which were described by the interviewees. However, at the end of the interview, the researcher did advise the participants who complained about different aspects of the project to set-up relevant meetings with the project team to discuss problems and propose or brainstorm solutions.

#### 7.4 The principle of abstraction and generalization

Klein and Myers (1999) noted the importance of relating theoretical abstraction and generalization to the field data; this made the logic employed by the researcher to reach the theoretical insights that she is proposing clear to readers. At the core of this research is the theoretical concept of legitimation-seeking process in e-procurement implementation. However, it should be stressed that prior to delving in the data analysis of the legitimation-seeking process, the researcher has to re-construct the different phases and events of the e-procurement project, including the ISD stage, to get hold of how the implementation of e-procurement unfolded in different stages. At this point, no theoretical lens pertaining to legitimation was used. This step was crucial as the "ground preparation" for analyzing the legitimation-seeking process. Thereafter, the legitimacy concepts were wholly based on the interpretation of the participants' narratives. For example, when suppliers raised concerns about security and confidentiality of bids submitted via electronic platform during the training sessions, the project team learnt that norm and addressed the issue to restore their confidence. Evidence of this awareness was obtained firstly from the project manager and, secondly, through the analysis of the secondary data of FAQ (Frequently Answered Question) on the e-procurement portal (Chapter 5 section 5.4.7.2). Learning of norms was part of the legitimation-seeking process. Another example is when some users confirmed their support to the e-procurement system in their narratives thus granting their legitimation. The data interpretation has revealed idiographic details that were related to concepts of legitimation theory underpinning the LAM framework of Flynn and Hussain (2004).

#### 7.5 The principle of dialogical reasoning

Klein and Myers (1999) suggested that IS researchers can find contradictions between theoretical preconceptions (theoretical lens to be used at the outset) that guided the design and conduct of the research with the actual findings that are obtained following the data analysis. There is a risk that the findings may not support the initial theoretical lens at all; and in the worst-case scenario this can lead

to either an abandonment or modifications of the whole research. To demonstrate the application of dialogical reasoning, it is essential to highlight the “historical intellectual basis” of the research and how the findings tend to converge or deviate from the theoretical preconceptions. The research in this thesis and the understanding of the case study has been based on the legitimation-seeking model (LAM) of Flynn and Hussain (2004) and the findings support all the stages of that model to a large extent. However, nuances were observed that tend to contradict the initial position of Flynn and Hussain (2004) on their framework. Some stages may occur in parallel rather than being sequential. Furthermore, the learning of norms may not be triggered by human entities but by processes embedding good governance. Moreso, in the context of inter-organizational system, a legitimation-seeking cycle can start within another bigger legitimation-seeking process and this led the researcher to improve the framework for adaptation in IOIS situation.

#### 7.6 The principle of multiple interpretations

This principle ‘requires sensitivity to possible differences in interpretations among the participants as are typically expressed in multiple narratives or stories of the same sequence of events under study’ (Klein & Myers, 1999:72). The researcher should remain alert to spot any contradictions that may exist in the multiple viewpoints of participants and any conflicting interpretations of participants for the same event should prompt the researcher to review his understanding accordingly. Given that understanding of legitimation-seeking process require the input of both the legitimation providers and legitimation seekers, the accounts of both the legitimation providers and legitimation seekers on the same sequence of events were collected and examined to shed light on the nature and outcomes of the legitimation strategies. Several data collection and data analysis methods were used to ensure the integrity of the findings. Triangulation tactics were also employed not only to ensure that the data collected from the participants were verified but also to ensure that the researcher was interpreting in a way that was compatible with the social context in which the phenomenon of legitimation was being investigated. As an example, the mechanism for opening and closing of bids using digital certificate in e-procurement was interpreted by the legitimation seekers as a means to prevent fraud associated with bid box. However, several legitimation providers interpreted this as beneficial to them by protecting them from allegations from bidders. Hence this group of legitimation providers supported the system although the process was not user-friendly, and they had to write the opening and closing dates on a whiteboard or in a diary so as not to forget the dates. Another common contradictory multiple interpretation example was related to the bidding document description. Some legitimation providers referred to the bidding document as templates in e-procurement while others specified them as packages from e-procurement. Some research participants referred to the bidding documents as simply documents. The technical jargon of procurement was interpreted in different ways. Another contradictory interpretation that impacted legitimation was related to the governance aspect of the evaluation module. While the legitimation seekers found that it was beneficial that the chair of the bid evaluation committee obtained

remote access to control bid evaluation data, the legitimation providers interpreted this as a threat to good governance principle of confidentiality of bid evaluation committees.

### 7.7 Principle of suspicion

Klein and Myers (1999) recommended that a critical perspective should be taken when collecting data by abstaining as far as possible to take the views of research participants at face value during the data collection process.

For example, when users of a public body claimed that they were doing consistent online bidding, this claim could be checked through triangulation by examining the bids being advertised by the public body through publications on the old procurement portal and in the local press over a range of dates (see [F.5](#)). The old procurement portal was still operational to advertise bid notices and awards (see B.4 – 5 Public Procurement Portal in Appendix B). It was observed that some bids were launched using former methods of bidding instead of online bidding. Another example was when the project team shared the viewpoint that the e-procurement implementation was progressing well in one public body and hence did not recognize any legitimation gap at that time. However, the researcher found that there was a legitimation gap after examining the narratives of multiple legitimation providers in that public body at that stage realizing that the project team's perspective was misleading. When the researcher was interviewing a participant who was the head of a public body, the participant pointed out that online bidding has been routinized and suppliers have registered. However, when other participants of the same public body were interviewed, they highlighted technical issues with e-procurement and bottlenecks encountered by suppliers for registration leading to lower number of bids than former bidding method. The researcher sought to re-confirm the second (contradictory) claim with the head of the public body again to get his views on the status of competitiveness of bids when using e-procurement. The latter then validated the second claim.

### 7.8 Summary

In this chapter, the seven principles of Klein and Myers (1999) have been applied to evaluate the research. Indeed, the research satisfied to varying degrees all the seven principles of Klein and Myers (1999) thus reflecting quality and rigour in the research design, data analysis and the research findings. The research does carry some limitations, and these will be discussed in Chapter 8.

## Chapter 8 Conclusion

### 8.1 Introduction

The goal of this study was to investigate the legitimation-seeking process in the implementation of e-procurement in the Government of Mauritius. The aim was to obtain a rich understanding of the legitimation activities carried out by a project team as well as of the perceptions of the other stakeholders regarding these activities and the emerging legitimation structures.

The literature review unveiled an account of the importance of legitimation in IS and highlighted the aspects of e-procurement implementation that remain problematic. Chapter 3 described the emergent theoretical lens that underpinned the study followed by research methodology and data analysis in chapter 4. Chapter 5 presented the case study and research findings. Chapter 6 described the results in which the research findings and theoretical lens were linked by an analysis of the empirical evidence. The research evaluation was given in Chapter 7 using the highly esteemed Klein and Myers' (1997) hermeneutic principles for conducting and evaluating research of an interpretivist nature. This final chapter reviews the extent to which the research question and the aim of the study have been addressed.

The rest of this chapter is organized in the following ways: Section 8.2. revisits the research question of the study, Section 8.3 provides a summary of the research findings, Section 8.4 then describes the theoretical contribution, Section 8.5 explains the research implication for practice and Section 8.6 concludes by reviewing the limitations of the study and proposing future research that can be conducted in this domain.

### 8.2 Revisiting the research question

The research question was: *“How does the project team of the implementing agency seek legitimation from the demand-side stakeholders in the implementation of public e-procurement in the Government of Mauritius?”* To address the question and hence to explain the legitimation structures emerging as a result of the legitimation-seeking process, this study employed an integrated theoretical framework which consisted of (1) the Legitimation Activity Model (Flynn & Hussain, 2004) and (2) Orlikowski's (2000) technology-in-practice. The case study findings provided in-depth insights into how legitimation for e-procurement was sought through the project team's strategic actions at all stages of the e-procurement implementation process in the public sector context of Mauritius. Thus, the research question has been answered. It is discussed in detail in subsections 8.2.1 to 8.2.3.

#### 8.2.1 The legitimation-seeking process in implementation of e-procurement

Initially, doubts existed as to whether legitimation-seeking process is at all feasible in the public sector context which is traditionally characterized by an autocratic style of leadership and a command-control management. As stated in the literature review chapter (see section 2.4.5), the style of leadership in an organization and the wider historical politics and national culture of a country influence the process of gaining legitimacy. The findings show that legitimation-seeking process does happen in the public

sector context of a Sub-Saharan African country and a participative style of leadership prevails. This claim is supported by evidence of the findings revealing the style of communication with the stakeholders, the continuous stakeholders' engagement and collaboration in the e-procurement implementation process.

Legitimation-seeking happened implicitly as part of the implementation efforts undertaken by the project team and all supporters of the project at the level of public bodies. Based on the LAM framework of Flynn and Hussain (2004), the study isolated the abstract legitimation-seeking process cycles from the e-procurement implementation activities in its different implementation phases. Informed by the LAM, the sequence of the legitimation-gaining activities has been conceptualized as a four-stage process in each of the implementation phase: (1) e-procurement as the new norm (2) identifying influential individuals and their norms, (3) assessing the legitimation gap and applying closing strategies, and (4) achieving legitimation.

The Government of Mauritius did not initially impose e-procurement on the end-users of public bodies and suppliers of goods, services, and consultancy. By virtue of the participative style of leadership, sufficient time was given for carrying out legitimation-seeking activities to promote uptake of e-procurement during five long years. Thereafter, selective coercion for e-procurement usage targeting high-value high-spending public bodies was imposed to accelerate the generation of concrete results at the national and regional levels. As a member country of the World Bank which was closely monitoring e-procurement implementation in Mauritius (World Bank 2021), the country has an obligation to deliver results.

The findings indicate both success and failure of legitimation of e-procurement. On one hand, success of e-procurement legitimation in three public sector organizations contributed to successful implementation of the software and consistent usage of online bidding module. In the success instances, local championship at public bodies' level, coupled with the unflinching support of the project team were sufficient conditions for facilitating the legitimation-seeking process, through various strategic actions that addressed and closed legitimation gaps. On the other hand, a failure to obtain the legitimation of stakeholders was associated with fallback and part-usage outcomes of e-procurement implementation in other public bodies. In these instances, the absence of local championship despite the efforts of the project team was a major reason for which legitimation stalled leading to fallback and part-usage implementation outcomes. Even top management support was not an initial sufficient condition for achieving stakeholders' legitimacy.

Many legitimation strategies that were employed by the legitimation seekers corroborate with the past studies focusing legitimation-seeking process (Flynn & Hussain, 2004; Flynn & Puarungroj, 2006; Flynn & Du, 2012). In the research reported on in this thesis, emergent legitimation-seeking strategies that were used to gain social acceptance from the stakeholders. The legitimation seekers employed a

soft-transition philosophy throughout the implementation period to assist the stakeholders and convince them to use e-procurement, whilst giving them enough time to realize the benefits of the technological solution. The study found that the legitimation seekers adhered to group norms whereby the successful public bodies were requested to encourage “defaulters” to embark on e-procurement. Other key emerging legitimation strategies include the following:

- Seeking quality standards certification to improve organizational’s credibility in face of the legitimation providers.
- Inscribing good governance principles in e-procurement to achieve e-procurement aim to combat corruption. The findings indicated that the legitimation seekers aimed to compel defaulters or unethical stakeholders to comply with rules and at the same time met the needs of ethical stakeholders who expected good-governance work practices to reflect in e-procurement.
- Carrying out a readiness assessment in terms of ICT infrastructure, current workload, and human resources to gauge whether the users were ready to implement e-procurement in the respective public bodies.
- Implementing loose software coupling in e-procurement. Though it is not directly related to a legitimation strategy, it played an important role to ensure uptake of online bidding and to give “time” to legitimation seekers to get acquainted to e-procurement online bidding before moving to the online evaluation module. This also facilitated the demonstration of concrete results to international organization monitoring the uptake of e-procurement in Mauritius.
- Giving attention to contextual consideration to address the mistake of standardization of process. The legitimation seekers realized their mistakes in deploying a “one-size-fits-all” system without taking consideration of the contextual nature of procurement which may be different from one public body to another.
- Implementation of a customized look and feel of child portal for each public body to improve sense of ownership by the respective top management of the public bodies which in turn might improve social acceptance of e-procurement.
- Using marketing techniques to promote suppliers' registration.
- Encouraging the direct stakeholders (public bodies) to engage the secondary stakeholders (suppliers). Given that suppliers were not the direct stakeholders of the implementing agency but the close working partners of public bodies, the implementing agency encouraged the public bodies to engage their suppliers to embrace e-procurement.
- Reassuring stakeholders about security and reliability of information system by convincing the stakeholders of the positive feedback that the project team got when security tests were carried out on the e-procurement platform.
- Enforcing change management strategy through local champions – the legitimation seekers realized that e-procurement implementation success would stall without a local champion

nominated in each public bodies, after they sensed failure of implementation in several public bodies. They then encouraged public bodies to nominate a project champion to drive the implementation of e-procurement in their respective organizations.

- Humbly acknowledging shortcomings in information system was a perfect tactic for seeking attention and emotionally influenced the users not to abandon e-procurement thereby gaining sufficient time to address these shortcomings.

### 8.2.2 Technologies-in-practice

As indicated by the findings, the implementation of e-procurement yielded three different outcomes: fallback, part-usage and success reflecting surprising nuances in the implementation outcome of a single generic inter-organizational system. Orlikowski's (2000) Technologies-in-practice lens was applied to obtain a better insight into the multiple legitimation structures underlying each of the outcomes and which emerged from the interaction of the social actors in the legitimation-seeking process.

In the fallback scenario, the end-users reverted to former method of procurement basically "paper-mode" after an initial trial of e-procurement. Their decision was supported by their respective top management which did not see e-procurement as their priority after the users have related their main concerns such as suppliers' registration problem that compromised their norms of receiving high number of bids to increase competitiveness. Additional concerns include: a complicated and lengthier system that conflicted with their timeliness norm for procurement and mismatch of e-procurement bidding template with the nature of procurement in their respective workplace. Furthermore, the fallback was also an unintended consequence of the continuous support of the old procurement portal operations by the project team. To stay compliant with the decision of the government in using e-procurement, these public bodies showed their willingness to engage with the legitimation seekers, and to participate in continuous training of the staff, but resistance to change was apparent for some public bodies. A few public bodies started to use e-procurement consistently after two years. The dynamics of legitimation and technology-in-practice may therefore change with time, but this could only be confirmed through a research extension.

In contrast, in the part-usage outcome, e-procurement was not abandoned despite a similar fallback situation being encountered. Instead, top management demonstrated commitment to e-procurement despite users' resistance. Top management issued formal instructions to use e-procurement, but the end-users created a comply-and-complain scenario. Given numerous technical issues encountered with e-procurement, especially in the preparation of the template, they became increasingly dependent on the SPOC<sup>20</sup> to assist in every bid that was launched electronically. Learning and training became an ongoing process. The use of online bidding module of e-procurement technology-in-practice emerged but without real routinization by the end-users. Hence other legitimation structures that emerged include

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<sup>20</sup> Single Point of contact – The officers of the Procurement Policy office (PPO) who give support to public bodies on e-PS

dependency on the SPOC to launch online bids, partnership with suppliers, ongoing training for suppliers, ad-hoc paper-based bidding for specific procurement as per provision made in procurement policies and the use of the old procurement portal technology-in-practice.

In successful outcomes, the routinization of online bidding was completed as the whole implementation was duly driven and accelerated by the project champions on the respective sites. These champions have worked actively with the legitimation seekers who gave special support to them to customize their bid templates and resolve all issues encountered with e-procurement. These public bodies were using the evaluation module of e-procurement as trial and testing, but no evidence could be gathered regarding their perceptions about this module. The use of online bidding module of e-procurement technology-in-practice emerged. In these cases, there was full routinization of e-procurement online bidding as the end-users were using e-procurement independently. A trial of evaluation module technology-in-practice also emerged. There was also the legitimation structure related to the use of ad-hoc paper-based method for specific procurement as per the provision made in procurement policies accompanied by the use of old procurement portal. The legitimation structure was old procurement portal technology-in-practice.

#### 8.2.4 Non-compliance around e-procurement legitimation structure

The findings of this research have shown that the Government of Mauritius issued flexible procurement policies alongside the use of e-procurement to cater for procurement contingencies and functionalities in the procurement process chain lying outside e-procurement and depending on the nature of procurement. An emergent legitimation structure of non-compliance was produced and re-produced alongside the e-procurement use technology-in-practice. This arose from the exploitation of formal norms inscribed in the public procurement policies. When rules are not adhered to, sanctions may be invoked (Jones and Karsten 2008). However, the findings also indicate that these non-compliances are only reported from year to year by the National Audit Office (NAO, 2022; 2021; 2020;2019) without any concrete sanctions.

### 8.3 Theoretical contribution

*“A contribution is a contribution by virtue of its originality and novelty”* (Agerfalk and Karisson, 2020). Theoretical contribution includes theories which have been completely or partly modified and have significant implications for practitioners in addressing context-specific problems (Agerfalk and Karisson, 2020). This research makes the following novel and original theoretical contribution as explained in the subsections.

#### 8.3.1 Providing valuable experiences of legitimation seeking in information system projects.

This research has shown how legitimation activities are constructed, carried out, and assessed by the project team in IS projects, and how users respond to these activities. These experiences provide valuable lessons for future research and practice, which are not obtainable in literature due to the lack of research in this field. It adds to the body of knowledge in legitimation in IS projects. It is believed

that this is the first time that the legitimation-seeking process is studied in an inter-organizational (IOIS) information system.

### 8.3.2. The LAM framework as a PLAN-DO-CHECK-ACT and the concept of multiple loops for IOIS

The legitimation-seeking model, LAM, proved to be a valuable framework for understanding and examining the legitimation process with discernment. For example, how a project team planned and executed the legitimation strategies, how the judgments towards legitimation are made, how legitimation is monitored and whether legitimation is conferred or not. In the analysis of legitimation, these are claimed to surpass the classic Structuration Theory (Walsham and Han, 1990).

This research recognizes the LAM framework of Flynn and Hussain (2004) as a PLAN-DO-CHECK-ACT process whereby the legitimation seekers plan their legitimation activities, execute same and reflect on the outcome of their strategies. Then the norms of the legitimation providers are learnt again before applying other legitimation activities until their goals are met.

Furthermore, this study conceptualizes the legitimation-seeking process in the context of an inter-organizational system as multiple loops of LAMs (Flynn and Hussain, 2004) that take place at the different ‘child’ organizations forming part of the parent organization. In this case study, the Government as an institution is the parent organization, and is composed of public bodies which are the ‘child’ organizations. Until the identified legitimation gaps are closed in the child-organizations, the wider legitimation gap will not be closed.

### 8.3.3 The taxonomy of norms

The research has demonstrated the importance of the taxonomy of norms of an end-user which is useful when researching a good governance driven information system from a normative perspective. The taxonomy of norms identified are personal norms, group norms, organizational norms, and governance-based process norms. Learning of norms may also originate from non-human entities when studying governance-driven systems such as e-procurement and accounting systems.

### 8.3.4 The emergent legitimation strategies

The emergent legitimation strategies make key contributions to the body of knowledge not only in the legitimation-seeking research domain but in the whole of information system focusing on acceptance and failure of implementation of information system. Addressing the following concepts will contribute to gain support of end-users towards digital innovation: security and privacy concerns of end-users, inscription of norms in information system, a soft-transition philosophy, alliances with powerful stakeholders to gain end-users’ support, use of marketing techniques to gain support of stakeholders, customization of look-and-feel for each organization in the context of an inter-organizational based system, improvement of credibility of implementors in face of end-users.

Overall, this study has identified several legitimation strategies that can be considered by project managers and implementors. However, this research suggests that selection and application of these legitimation strategies will largely depend upon the judgement of the legitimation seeker towards the legitimation targets and the norms of the end-users. Upon monitoring of legitimation, project leaders or implementors may adjust the legitimation strategies to suit the real IS project in its context.

#### 8.3.5 The credibility of legitimation seekers

As pointed out in literature review section 2.3, e-government research is littered with failure and the reputation of public sector leaders has often been damaged as a result. This is believed to be the first research that takes this aspect consideration which is relevant to legitimation-seeking because success of some legitimation strategies may be contingent on the degree of trust relationship between the project leader or manager and the end users that in turn depend on the credibility of the project leader or manager. Demonstrated by the findings, the implementing agency sought quality standards certification and built a competent implementation team coupled with committees to monitor the progress of e-procurement of implementation at different levels of the organizational hierarchy. These were used as marketing devices to gain credibility with the end users. Other researchers in the information system domain focusing either on acceptance or failure of e-government or information systems should take this factor into consideration because a lack of trust between the implementation team and end-users due to shortcomings in the credibility of the implementation team is likely to undermine the implementation of information system.

#### 8.3.6 E-procurement as good-governance driven information system.

E-procurement has been recognized as a good-governance driven information system instead of a mere technological tool to handle the procurement process. It is believed to be the first research which has analyzed how the *good-governance* principles are inscribed into e-procurement, though these principles might be contextual. This said, legitimation and legitimation-seeking are totally relevant to e-procurement as stakeholders are expected to have normative concerns. On the one hand, stakeholders who are supporters of good-governance principles underpinned by the procurement process and their current working practices will expect to see these principles to be reflected in the e-procurement system. On the other hand, unethical stakeholders may find ways to circumvent the properties of e-procurement to achieve their goals. E-procurement as a good-governance driven information system presents a promising research lens not only from the field of information system but also in the domain of e-government or public administration. Legitimation-seeking represents a useful lens for studying acceptance for other governance-driven systems like accounting systems and other systems encapsulating IT governance like COBIT.

#### 8.4 Methodological and Empirical contribution

The study uses the Legitimation Activity Model of Flynn and Hussain (2004) as a sensitizing lens for data collection and data analysis of the legitimation-seeking process. At a later stage of the data analysis

process, the Orlikowski (2000) technologies-in-practice framework was found to be useful to explain the technologies-in-practice and other legitimation structures resulting from the legitimation-seeking process. The interplay between the two theories was fully explained in Chapter 6. This is the first interpretivist research on legitimation-seeking in e-procurement implementation that has been carried out in Mauritius and even first in the context African Sub-Saharan region.

### 8.5 Practical contribution

This study has raised awareness by informing practitioners of the importance of legitimation-seeking in public sector information systems, putting more focus on the power of public officers irrespective of their position in the hierarchy to influence the outcome of an inter-organizational information system (IOIS), thus challenging the notion of the techno-centric view of e-government systems. The research is still relevant to the implementation of e-procurement which has already taken five long years. Yet in 2022, implementation was still in progress as the evaluation module was not fully implemented. The implementing agency recently launched an expression of interest for improving e-procurement system (African Development Bank Group, 2022). The research has also an important implication for Sub-Saharan African countries which are embarking or is currently implementing e-procurement. Practitioners should be cautious about the risk of a “one-size-fits-all” system.

The Mauritius Government used a rich set of legitimation strategies, many of which have had positive impacts in legitimation of e-procurement. Other African countries can benchmark on the promising implementation methods and strategies used by the Mauritian Government to advance their e-procurement initiatives. The research also is beneficial for international organizations like the World Bank which is financing e-procurement initiative in the African region as it explains in detail how the implementation of e-procurement progresses and the legitimation-seeking process that unfolds. These findings can also help practitioners and members of international organizations to improve their definition of “what is e-procurement” to focus more on e-procurement as a governance-driven information system instead of marketing e-procurement as a mere technological tool.

A rich picture of e-procurement implementation in the context of African country is presented in this research work especially on how “the good” stakeholders support the initiative and how “bad stakeholders” are still attempting “bad practices” around e-procurement. It appears that this emphasis has been overlooked by practitioners, compromising the expected objectives behind e-procurement. The latter claim appears to have been reported in the press but has never been systematically researched. This research will enlighten practitioners not only in the IS domain, but in the e-governance and public administration arena.

This research has shown the degree of non-compliance around e-procurement. Legitimation of e-procurement therefore may not necessarily imply that the expected e-procurement objectives “carved in stone” in policy papers are achieved. A major overall conclusion is that aims behind e-procurement in practitioners’ papers may be overstated and expectations about e-procurement are far beyond what

the decision-makers want. Considering the current configuration of the e-procurement system in Mauritius, unethical stakeholders may continue to exploit flexibility that lies outside e-procurement for lucrative contracts and waste taxpayers' money. This corroborates with the findings of Inuwa and Ononiwu (2020) that despite digitalization, corruptive practices may continue to exist, or new ones can emerge. Some countries which have proudly reported their success cases of e-procurement implementation have been soiled in corruption in the post-implementation phase. For example, in Bangladesh, the introduction of e-procurement was announced with pride and that it was predicted that it would render the public procurement process totally paperless (Mahmood 2013). Regrettably, even after 10 years that the system was introduced, the results were not as expected as unethical people devised innovative means to beat the system. *“According to a report of the Transparency International Bangladesh (TIB), the system is still hamstrung by political influence and syndication. And it is these cabals that determine who win a particular contract”*. This applies particularly to four government institutions <anonymized> which were allotted about 20 percent of the country's annual development budget in the 2019-2020 fiscal year” (Can public procurement process be freed of corruption? 2020).

## 8.6 Recommendations

The findings of this study lead to useful and realistic recommendations that the implementing agency may consider for reducing legitimization gaps and move forward to complete e-procurement implementation:

1. The implementing agency should maintain their soft-transition philosophy in the public e-procurement project. As discussed in section 6.2, such a legitimization strategy facilitates the change management process in the implementation of large-scale information system. Past literatures have emphasized the importance of change management process in the success of the implementation of IS projects (Butler, 2003; Panda et al., 2024).
2. Designation of project champions at public bodies level coupled with the creation of the e-PS cell should be enforced by way of a formal policy. Project champions have a major role to play not only in driving e-procurement implementation but ensuring that e-procurement is routinized and institutionalized. The importance of project champions in IS projects is advocated by several IS research papers (Beath, 1991; Pinto and Millet, 1999; Renken and Heeks, 2013:219, 2019).
3. When revamping the e-procurement system, an alternative ISD approach could be considered (such as the agile development method) drawing representatives of public bodies into the development of the evaluation module to ensure that normative concerns and the expectations of the users are recognized and attended to.
4. The implementing agency should maintain their strategies regarding continuing stakeholder communication and engagement throughout the development of the new e-procurement system

which is crucial in IS implementation. Stakeholders' communication and engagement is a necessary pre-condition in the legitimization-seeking process.

5. Recalcitrant officers were blaming the system for technical shortcomings that were conflicting with their norms. The implementing agency should earmark a pool of young public officers, providing capacity building on functional aspects of e-procurement to enable them to give timely technical and operational support to the resistant end-users across the Government. As a reward, they can be sponsored towards the Chartered Institute of Procurement & Supply (CIPS) certification that will be beneficial for their career path. Training or capacity building of public officers is part of the Government human resource policy.
6. Artificial Intelligence (AI) is now the 'buzzword' across all public sector organizations as public sector leaders are contemplating on how it can be leveraged in e-government systems to improve efficiency of administrative processes (Nagitta et al., 2022). Reflecting on the complexity and the sensitive nature of the procurement process, this thesis proposes a realistic integration of AI in e-procurement to improve and raise the efficiency of the helpdesk operation. To this end, a chatbot can be easily implemented on the Government e-procurement portal to handle the requests for e-PS support from the stakeholders.

## 8.7 Limitations and Directions for further research

### 8.7.1 Limitations of the research

This research carries some limitations as explained in this section.

#### 1. Data collection limitations:

##### 1. Research time Horizon

The researcher acknowledges that the time horizon for field data collection of one (1) year starting November 2019 could have been insufficient due to Covid-19 challenges to the data collection process and an extension of the time horizon after November 2020 would not have made any material impact on the data collection due to high uncertainty associated with the Covid-19 pandemic. Nevertheless, the researcher strived to enroll the maximum number of participants after the lockdown was lifted in June 2020. From January 2021 to September 2022, considerable efforts have also been made to update the research data through secondary data from publicly available data sources.

##### 1. Legitimation seekers as research participants

Among the legitimization seekers, the analyst and senior analysts working in the 'Procurement templates and innovative practices' unit should have been interviewed following concerns raised by several research participants concerning procurement templates. However, the researcher has not interviewed any officers from this unit. These officers are responsible, amongst others, the tasks for:

- Developing and testing bidding and contract models to be used in the public sector.
- Customizing digitalized standard bidding documents' templates for the e-procurement system.

Their viewpoints would have been useful in understanding the real concerns of the end-users as well as in triangulating the users' arguments. However, given that the improvement to digital procurement templates were made in 2021 to facilitate the choice of templates by end-users, it seems clear that the key issues with the digital templates giving rise to many complaints had been recognized.

## 2. Legitimation providers as research participants

At least five users across the procurement chain in each public body should have participated in the research to provide a richer picture of the state of matters of e-procurement implementation and for more efficient triangulation of accounts. However, fewer than expected participants enrolled per public body constraining the researcher to triangulate the accounts with the legitimation seekers and reliable secondary sources. Furthermore, the researcher could not explore in detail the internal legitimation-seeking process by enrolling more end-users' participants from each of the organizations.

This study also carries an important limitation. An attempt to reach the suppliers' community to get their opinions and perceptions about e-procurement failed because of the COVID-19 pandemic. The researcher devised an online questionnaire using Survey Monkey and invited the suppliers to participate in the online questionnaire survey which contained broad questions relevant to legitimation-seeking. However, due to a very low response rate, that data collection effort was abandoned. Valuable perceptions and opinions of the suppliers on e-procurement would probably have had important additional findings in this research. However, the researcher attempted to get their feedback through the public bodies which were dealing with them.

Last, the research should be extended to enroll more participants for better insight into the dynamics of legitimation after the use of the e-procurement software has been rendered mandatory.

## 3. Convenience for interviews

The interviews were conducted with "those who were accessible and would cooperate" (Webb et al., 1966). The researcher met a few refusals from potential participants after initial agreement for interviews. It is still possible that those participants who withdrew could have held valuable information and perceptions about the phenomenon. The researcher used some tactics to ensure quality of interviews. She created trust-building relationship with the potential participants when requesting for a meeting to open honest and easy conversation with them.

## **2. Country's culture**

One of the important limitations of this case study is that it is based only on one country's culture, that is the Mauritian culture. For example, legitimation strategies like "using symbolic identity" "*The official nation-wide launching of e-procurement by a Hon Minister who justified the need of e-procurement*" may not be appropriate in other country's culture.

## **3. Partly retrospective study**

This study was partly retrospective because the implementation of e-procurement started in late 2015 while this study started in 2019. One major disadvantage of retrospection is the likelihood of erroneous historical recalls in interviewees' accounts. Furthermore, it is highly likely that the interviewees neglected the key historical events or gave their own judgment in the narratives. It was necessary to get the interpretation of the interviewees of e-procurement implementation events, their perceptions and meanings of their different actions that they took as part of their experience with e-procurement. To avoid potential biases of the interviews, the researcher consulted reliable documents that recorded historical information about the project since the kick-off. This facilitates the researcher to get a proper understanding of the historical timelines and descriptive events. The advantage of studying public sector IS projects lies in the completeness and accuracy of the documentation of the project milestones.

### 8.7.2 Directions for further research

#### **An extension of the research in the same context over a longer period**

An extension of the research in the same context is strongly recommended to gain an understanding on the evolution of the outcomes of e-procurement implementation in the different public bodies to observe how enacted structures have changed over time as a result of the continuous legitimation-seeking process and to discover the impacts of legitimation strategies that are being applied by the project team. Furthermore, given that the Government of Mauritius has recently launched an expression of interest to revamp the system, a research extension is feasible and relevant.

#### **Conduct same research in other sister African countries using the augmented multiple loop LAM framework**

Given that sister African countries are also implementing e-procurement, legitimation in e-procurement in those countries can be studied using the new legitimation framework proposed and the findings can be compared for better insight into e-procurement implementation.

### **Conducting research in other types of inter-organizational systems in the public sector.**

Legitimation research in the public sector is very scarce. After this research has provided some initial insights into the legitimation-seeking process in a public sector information system, it should be extended for other IOIS or governance-driven IS in order to generalize and to reinforce the findings of this research. Further research in the stream will open avenues to explore new perspectives of legitimation.

### **Using action research method for conducting legitimation in IS projects**

Research method improvements are desirable. Avison et al., (2001) suggested for action research whereby the researcher takes part in the research to capture the rich interaction between the key actors and provide instant recommendations about what and how legitimation strategies should be undertaken to address legitimation gaps and obtain legitimacy for IS projects. Moreover, in action research, the researcher will have an opportunity to explain the importance of legitimation in mitigating user resistance to IS.

### **Using the augmented multiple loop LAM framework in legitimation in other IOIS and governance-based systems**

The legitimacy perspective on governance-based information system is a promising research lens given that norms are at the core of governance-based system. This perspective will give a better insight into how stakeholders support and approve governance-based IS. Besides, the new LAM framework can also be applied to other IOIS. Prior to this research, most legitimation-based research has been carried out in health care settings (Flynn and Hussain 2004; Flynn and Puarungroj 2006; Brown 1998).

### **Study de-legitimation alongside legitimation**

The findings of this study have highlighted de-legitimation alongside legitimation especially in the context of public body C but did not research about it in detail. Oliver (1992:564) refers to de-legitimation as a process whereby an organization gets away with established and institutionalized practices. De-legitimation process may occur in parallel to legitimation like learning and unlearning. It was advocated that when a new information system started to conflict with long-held norms in an organization and institutionalized work practices and norms, these long-held norms and institutionalized work practices should be de-legitimated before a new system can be introduced in the organization (Kohansal and Haki, 2021).

## References

- Abubakre, M., Ravishankar, MN & Coombs, CR (2015). The role of formal controls in facilitating IS diffusion, *Information & Management*, 52(5): 599-609.
- ADB. 2013. *E-Government Procurement Handbook*. Available: <https://www.adb.org/sites/default/files/institutional-document/34064/files/e-government-procurement-handbook.pdf>
- Addo, A. 2019. IT and government corruption in developing countries: A literature review and reframing. *Proceedings of Information and Communication Technologies for Development. Strengthening Southern-Driven Cooperation as a Catalyst for ICT4D: 15th IFIP WG 9.4 International Conference on Social Implications of Computers in Developing Countries, ICT4D 2019*. Dar es Salaam, Tanzania. May 1-3, 2019. Springer International Publishing. Part I 15. 402-413. [https://doi.org/10.1007/978-3-030-18400-1\\_33](https://doi.org/10.1007/978-3-030-18400-1_33)
- Adebayo, V.O. & Evans, R.D. 2015. Adoption of e-procurement systems in developing countries: A Nigerian public sector perspective. *Proceedings of 2nd International Conference on Knowledge-Based Engineering and Innovation*. Tehran. IEEE. 356-376.
- Afolabi, A., Ibem, E., Aduwo, E. & Tunji-Olayen, P. 2020. Digitizing the grey areas in the Nigerian public procurement system using e-procurement technologies. *International Journal of Construction Management*. 22(12):2215-2224. <https://doi.org/10.1080/15623599.2020.1774836>
- African Development Bank Group. 2022. *EOI - Mauritius - e-Procurement System (e-PS) Expert - e-PS Technical Assistance Project*. <https://www.afdb.org/en/documents/eoi-mauritius-e-procurement-system-e-ps-expert-e-ps-technical-assistance-project> [31 March, 2023].
- Agbeko, M. N., Effah, J. & Boateng, R. 2021. Electronic procurement practices in the public sector: The case of an inter-organizational information system in Ghana. *Proceedings of Responsible AI and Analytics for an Ethical and Inclusive Digitized Society: 20th IFIP WG 6.11 Conference on e-Business, e-Services and e-Society, I3E 2021*, Galway, Ireland, September 1-3, 2021. *Proceedings 20* (60-70). Springer International Publishing. [https://doi.org/10.1007/978-3-030-85447-8\\_6](https://doi.org/10.1007/978-3-030-85447-8_6)
- Ågerfalk, P.J. & Karlsson, F. 2020. Artefactual and empirical contributions in information systems research. *European Journal of Information Systems*. 29(2):109-113. <https://doi.org/10.1080/0960085X.2020.1743051>
- Ahmad, T., Aljafari, R. & Venkatesh, V. 2019. The government of Jamaica's electronic procurement system: Experiences and lessons learned. *Internet Research*. 29(6):1571-1588. Available at SSRN: <https://ssrn.com/abstract=3681704>
- Ahmed, Z. 2017. Government IS implementation: A framework for stakeholder orientation. *Journal of Information Technology Theory and Application (JITTA)*. 18(2).
- Ahmed, Z., Eryilmaz, E., & Alzahrani, A. I. (2022). IS diffusion: A dynamic control and stakeholder perspective. *Information & management*, 59(1), 103572.
- Ahn, M.J. & Brestchneider, S. (2011). Politics of E-Government: E-Government and the Political Control of Bureaucracy. *Public Administration Review*. (71)(3). pp. 414-424.
- Ajami S., Ketabi S, Isfahani S.S. & Heidari A. 2011. Readiness assessment of electronic health records implementation. *Acta Inform Med*. 19(4):224-7. doi:10.5455/aim.2011.19.224-227
- Ajzen, I., 1985. From intentions to actions: A theory of planned behavior. In *Action control: From cognition to behavior*. 11-39. Berlin, Heidelberg: Springer Berlin Heidelberg.

- Aladwani, A. M. 2016. Corruption as a source of e-government projects failure in developing countries: A theoretical exposition. *International Journal of Information Management*. 36(1):105-112. <https://doi.org/10.1016/j.ijinfomgt.2015.10.005>
- Albano, G. L. & Dae, I. K. 2010. Public Procurement: Introduction. *J. Public Proc.* 10(3):572-605.
- Al-Moalla, A. & Li, D. 2010. Organisational issues with electronic government procurement: A case study of the UAE. *EJISDC*. 41(1):1-18.
- Alomar, M. A. & De Visscher, C. 2019. E-public procurement: Which factors determine its acceptance by small-to medium-sized enterprises and large companies in Belgium?. *International Review of Administrative Sciences*. 85(2):356-376.
- Aman, A. & Kasimin, H. 2011. E-procurement implementation: A case of Malaysia government. *Transforming Government: People, Process and Policy*. 5(4):330-344. <https://doi.org/10.1108/17506161111173586>
- Anthopoulos, L., Reddick, C. G., Giannakidou, I. & Mavridis, N. 2016. Why e-government projects fail? An analysis of the healthcare gov website. *Government Information Quarterly*. 33(1):161-173. <https://doi.org/10.1016/j.giq.2015.07.003>
- Arshad, N.I., Bosua, R. & Milton, S. 2018. Understanding technology-use through the lens of technology-in-practice. *PACIS 2018 Proceedings*. 314. Available at: <https://aisel.aisnet.org/pacis2018/314>
- At Least \$14m Lost to Corrupt Deals in Rwanda. 2021. *The East African*. 18 Sept. [www.theeastafrican.co.ke/tea/business/at-least-14m-lost-to-corrupt-deals-in-rwanda-3554644](http://www.theeastafrican.co.ke/tea/business/at-least-14m-lost-to-corrupt-deals-in-rwanda-3554644) [3 Dec., 2022].
- Avgerou, C. 2001. The significance of context in information systems and organizational change. *Information Systems Journal*. 11(1):43-63.
- Avgerou, C. & Bonina, C. 2019. Ideologies implicated in IT innovation in government: A critical discourse analysis of Mexico's international trade administration. *Information Systems Journal*. 30(1):70-95. <https://doi.org/10.1111/isj.12245>
- Avison, D., Baskerville, R. & Myers, M. 2001. Controlling action research projects. *Information Technology & People*. 14(1):28-45.
- Ayhan, B. & Üstüner, Y. 2015. Governance in public procurement: The reform of Turkey's public procurement system. *International Review of Administrative Sciences*. 81(3):640-662. <https://doi.org/10.1177/0020852314548153>
- Azmi, K. S. A., & Rahman, A. A. L. A. 2015. E-Procurement: A tool to mitigate public procurement fraud in Malaysia?. *Proceedings of European Conference on Digital Government*. Academic Conferences International Limited. 361.
- Baek, C. Y. 2015. Building a successful e-procurement system in the United States: Lessons from the South Korean System. *Public Contract Law Journal*. 44(4):755-776.
- Bannister, F. & Conolly, R. 2012. Defining e-governance. *e-Service Journal*. 8(2):3-25.
- Bansler, J. P. & Havn, E. 2010. Pilot implementation of health information systems: Issues and challenges. *International Journal of Medical Informatics*. 79(9):637-648. <https://doi.org/10.1016/j.ijmedinf.2010.05.004>

- Banville, C. 1991. A study of legitimacy as a social dimension of organizational information systems. In *Information systems research: Contemporary approaches and emergent traditions*, Nissen, H.-E., Klein, H. K. Hirschheim, R. (eds.). Amsterdam: North-Holland, 107-129.
- Barahona, J.C., Elizondo, A. & Santos, M. 2015. The dilemma of public e-procurement in Costa Rica: Case on the duality of technological platforms and implementation models. *J. Inf. Technol. Teach. Cases*. 5(2):57-64.
- Barahona, J.C. & Elizondo, A.M. 2012. The disruptive innovation theory applied to national implementations of e-procurement. *EJEG*. 10(2):107-119. Available at: <https://academic-publishing.org/index.php/ejeg/issue/view/69>
- Barahona, J.C. & Elizondo, A.M. 2014. Introducing a disruptive service innovation: A national dilemma in e-procurement. *Management Decision*. 52(9):1782-1800. <https://doi.org/10.1108/md-09-2013-0497>
- Barca, C. & Cordella, A. 2004. Seconds out, round two: Contextualising e-government projects within their institutional Milieu - a London local authority case study. *Scand. J. Inf. Syst.* 18(2):5.
- Barley, S. R. 1986. Technology as an occasion for structuring: Evidence from observation of CT scanners and the social order of radiology departments. *Administrative Science Quarterly*. 31(1):78-108.
- Barthwal, C.P. 2003. E-governance for good governance. *The Indian Journal of Political Science*. 64(3/4):285-308.
- Bauman, Z., Beck, U., Beck-Gernsheim, E. & Ors (2011). Qualitative Interviewing: Asking, Listening and Interpreting. In: *Qualitative Research in Action*. Chapter  
DOI: <https://doi.org/10.4135/9781849209656>
- Beath, C.M. 1991. Supporting the information technology champion. *MIS Quarterly*. 5(15):355-372.
- Benbasat, I., Goldstein, D. K. & Mead, M. 1987. The case research strategy in studies of information systems. *MIS Quarterly*. 369-386.
- Benbasat, I. & Barki, H. 2007. Quo vadis TAM?. *Journal of the Association for Information Systems*. 8(4):7. <https://doi.org/10.17705/1jais.00126>.
- Berente, N., Alves de Lima Salge, C., Mallampalli, V.K.P. & Park, K., 2022. Rethinking Project Escalation: An Institutional Perspective on the Persistence of Failing Large-Scale Information System Projects, *Journal of Management Information Systems*, 39:3, 640-672, DOI: 10.1080/07421222.2022.2096545
- Berger, P. L. & Luckmann, T. 1966. *The social construction of reality: A treatise in the sociology of knowledge*. Penguin Books.
- Bernardi, R. 2017. Health information systems and accountability in Kenya: A structuration theory perspective. *Journal of the Association for Information Systems*. 18(12):1. <https://doi.org/10.17705/1jais.00475>
- Bernardi, R. (2018). "Health Information Systems and Accountability in Kenya: A Structuration Theory Perspective." *Journal of the Association for Information Systems*. 18(12). pp. 931–958. Available at: <https://doi.org/10.17705/1jais.00475>.

- Bertino, E. 2016. Data security and privacy: Concepts, approaches, and research directions. *Proceedings of IEEE 40th Annual Computer Software and Applications Conference (COMPSAC)*. Atlanta, GA, USA, 2016. 400-407. <https://doi.org/10.1109/COMPSAC.2016.89>
- Bhat, J. M. 2013. Legitimation of E-government initiatives: A study of India's identity project.. *Proceedings of Grand Successes and Failures in IT Public and Private Sectors: IFIP WG 8.6 International Working Conference on Transfer and Diffusion of IT, TDIT 2013*. Bangalore, India. June 27-29, 2013. Springer Berlin Heidelberg. 343-358.
- Bhattacharjee, A., Davis, C.J., Connolly, & Hikmet, N. 2018. User response to mandatory IT use: A coping theory perspective. *European Journal of Information Systems*. 27(4):395-414, <https://doi.org/10.1057/s41303-017-0047-0>
- Bhattacharjee, A. 2001. Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*. 25(3):351-370.
- Bhattacharjee, A. & Hikmet, N. 2007. Physicians' resistance toward healthcare information technology: A theoretical model and empirical test. *European Journal of Information Systems*. 16(6):725-737. <https://doi.org/10.1057/palgrave.ejis.3000717>
- Bhaukaurally, N., Jaunky, V.C. & Vani, R. 2017. Adoption of e-procurement technology-assured electronic bid process (AEBP): A critical review on Mauritius public sector. *International Journal of Management and Applied Science (IJMAS)*. 3(11):26-31.
- Bhaukaurally, N. & Vani, R. 2017. The challenges and benefits of adopting e-procurement - reference to Mauritian economy. *International Journal of Management and Applied Science (IJMAS)*. 3(5):92-96.
- Blaikie, N. 2009. Designing social research: The logic of anticipation. 2nd ed. Polity Press.
- Boell, S. K. & Cecez-Kecmanovic, D. 2014. A hermeneutic approach for conducting literature reviews and literature searches. *Communications of the Association for information Systems*. 34(1):12. <https://doi.org/10.17705/1CAIS.03412>
- Boonstra, A. & de Vries, J.D. 2008. Managing stakeholders around inter-organizational systems: A diagnostic approach. *J. Strat. Inf. Syst.* 17(3):190-201.
- Bostrom, R.P. & Heinen, J.S. 1977. MIS problems and failures: A socio-technical perspective. Part I: The causes. *MIS Quarterly*. 1(3):17-32. <https://doi.org/10.2307/248710>
- Bossen, C., Jensen, L.G. and Udsen, F.W.(2013). Evaluation of a comprehensive EHR based on the DeLone and McLean model for IS success: approach, results, and success factors. *International journal of medical informatics*, 82(10), pp.940-953.
- Boyd, J. (2000). Actional Legitimation: No Crisis Necessary. *Journal of Public Relations Research*, 12(4), pp.341–353.
- Brandon-Jones, A. & Kauppi, K. 2018. Examining the antecedents of the technology acceptance model within e-procurement. *International Journal of Operations Production Management*. 38(1):22-42.
- Braun, V. & Clarke, V. 2019. Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*. 11(4):589-597. <https://doi.org/10.1080/2159676X.2019.1628806>
- Braun, V. & Clarke, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 3(2):77-101.

- Brewer, G., Neubauer, B. & Geiselhart, K. 2006. Designing and implementing e-government systems: Critical implications for public administration and democracy. *Administration & Society*. 38(4):472-499.
- Bromberg, D. & Manoharan, A. 2015. E-procurement implementation in the United States: Understanding progress in local government. *Public Administration Quarterly*. 39(3):360-392.
- Brooks, L. 1997. Structuration theory and new technology: Analysing organizationally situated computer-added design (CAD). *Information Systems Journal*. 7(2):133-151. <https://doi.org/10.1046/j.1365-2575.1997.00011.x>
- Brown, A. D. 1995. Managing understandings: Politics, symbolism, niche marketing and the quest for legitimacy in IT implementation. *Organization Studies*. 16(6):951-969.
- Brown, A. D. 1998. Narrative, politics and legitimacy in an IT implementation. *Journal of Management Studies*. 35(1):35-58.
- Brown, S. A, Massey, A. P., Montoya-Weiss, M. M. & Burkman, J. R. 2002. Do I really have to? User acceptance of mandated technology. *European Journal of information Systems*. 11:283-295.
- Bryman, A., & Bell, E. (2015). *Business Research Methods* (4th ed.). Oxford: Oxford University Press.
- Burke, W. W. 2010. *Organization change: Theory and practice*. 3rd ed. Sage Publication.
- Bussen, W. & Myers, M. D. 1997. Executive information system failure: A New Zealand case study. *Journal of Information Technology*. 12(2):145-153.
- Burrell, G. and Morgan, G. (1983). Sociological Paradigms and Organizational Analysis. *Administrative Science Quarterly*, 28(1), p.153.
- Butler, T. (2003). An institutional perspective on developing and implementing intranet- and internet-based information systems. *Inf. systems J.*13 (3).
- Byrne, D.(2022). A worked example of Braun and Clarke’s approach to reflexive thematic analysis. *Qual Quant*.56(1391–1412). <https://doi.org/10.1007/s11135-021-01182-y>
- Calista, D.J. & Melitski, J. 2007. E-government and e-governance: Converging constructs of public sector information and communications technologies. *Public Administration Quarterly*. 31(1/2):87-120.
- Campbell, J. 2017. Public procurement policy in South Korea: Approaches to sustainable development and anti-corruption. *The experience of democracy and bureaucracy in South Korea* (159-179). Emerald Publishing Limited. <https://doi.org/10.1108/S2053-769720170000028007>.
- Can public procurement process be freed of corruption? 2020. *The Daily Star*. Sept 27. Available: <https://www.thedailystar.net/editorial/news/can-public-procurement-process-be-freed-corruption-1963205> [2 Dec., 2022].
- Cardoso, A. and Ramos, I., 2012, June. Quality Criteria for Interpretive Research in Information Systems: A Reflection on Klein and Myers’ set of Principles. In *ECRM2012-Proceedings of the 11th European Conference on Research Methods: ECRM 2012* (p. 87). Academic Conferences Limited.
- Cavaye, A. L. 1996. Case study research: A multi-faceted research approach for IS. *Information Systems Journal*. 6(3):227-242.
- CEB, 2020. *Powering through the pandemic - Annual Report 2019-2020*. <https://ceb.mu/publications> [31 March, 2021].

- CEB, 2022. About us. Available at: <https://ceb.mu/company-profile/about-us#:~:text=The%20CEB%20produces%20around%2040,purchased%20from%20Independent%20Power%20Producers>.
- CWA, 2013. Annual report. Online. available at: <https://cwa.govmu.org/cwa/wp-content/uploads/2022/10/Annual-Report-2013.pdf>
- Chan, C. M., Pan S. L. & Tan, C-W. 2003. Managing stakeholder relationships in an e-government project. *AMCIS 2003 Proceedings*. 98. Available at: <http://aisel.aisnet.org/amcis2003/98>
- Chan, C. M. & Pan, S. L. 2008. User engagement in e-government systems implementation: A comparative case study of two Singaporean e-government initiatives. *Journal of Strategic Information Systems*. 17(2):124-139. <https://doi.org/doi:10.1016/j.jsis.2007.12.003>
- Chebili, B.W., La Cascia, H., Collineau, F., Salomon, A., Calvet, B. & Moreau, Y. 2021. *E-Procurement Implementation Type Report*. Washington, DC: World Bank. Available at: <https://documents1.worldbank.org/curated/en/822411643296037962/pdf/Electronic-Government-Procurement-Implementation-Types-Options-for-Africa.pdf> [15 Dec., 2023].
- Chen, Y., Bretschneider, S., Stritch, J. M., Darnall, N. & Hsueh, L. 2022. E-procurement system adoption in local governments: The role of procurement complexity and organizational structure. *Public Management Review*. 24(6):903-925. <https://doi.org/10.1080/14719037.2021.1874497>
- Chen, W. & Hirschheim, R., 2004. A paradigmatic and methodological examination of information systems research from 1991 to 2001. *Information Systems Journal*, 14(3):197-235.
- Chin, W. W. & Lee, M. K. O. 2000. A proposed model and measurement instrument for the formation of IS satisfaction: The case of end-user computing satisfaction. *Proceedings of the 21st International Conference on Information Systems*. Brisbane, Australia. 553-563.
- Choi, T. & Chandler, S. M. 2020. Knowledge vacuum: An organizational learning dynamic of how e-government innovations fail. *Government Information Quarterly*. 37(1):101416. <https://doi.org/10.1016/j.giq.2019.101416>
- [Choi, H., Park, M.J., Rho, J.J. and Zo, H.\(2016\). Rethinking the assessment of e-government implementation in developing countries from the perspective of the design–reality gap: Applications in the Indonesian e-procurement system. Telecommunications Policy, 40\(7\), pp.644-660.](#)
- Chomchaiya S, Esichaikul S. Consolidated performance measurement framework for government E-procurement focusing on internal stakeholders. *Inf. Technol. People*. 2016;29(2):354–380. doi: 10.1108/ITP-12-2013-0210.
- Choudrie, J., Zamani, D.E., Umeoji, E. & Emmanuel, A. 2017. Implementing e-government in Lagos State: Understanding the impact of cultural perceptions and working practices. *Government Information Quarterly*. 34(4):646-657.
- Concha, G. & Anrique, R. 2012, October. Impacts of the public procurement reform in Chile on the municipal level. *Proceedings of the 6th International Conference on Theory and Practice of Electronic Governance*. 440-449.
- Concha, G., Astudillo, H., Porrúa, M. & Pimenta, C. 2012. E-Government procurement observatory, maturity model and early measurements. *Government Information Quarterly*. 29(1): S43-S50.

- Cooper, R.B. & Zmud, R.W. 1990. Information technology implementation research: A technological diffusion approach. *Management Science*. 36(2):123-139. <https://doi.org/10.1287/mnsc.36.2.123>
- Cordella, A. 2007. E-government: towards the e-bureaucratic form?. *J Inf Technol*. 22:265-274. <https://doi.org/10.1057/palgrave.jit.2000105>
- Corruption Watch. 2020. *In South Africa, COVID-19 has exposed greed and spurred long-needed action against corruption*. Transparency.org. September 04. Available: [www.transparency.org/en/blog/in-south-africa-covid-19-has-exposed-greed-and-spurred-long-needed-action-against-corruption](http://www.transparency.org/en/blog/in-south-africa-covid-19-has-exposed-greed-and-spurred-long-needed-action-against-corruption) [31 Dec., 2023]
- Costa, A.A., Arantes, A. & Tavares, L.V. 2018. Evidence of the impacts of public E-procurement: The Portuguese experience. *J. Purch. Supply Manag.* 19(4):238-246.
- Coulthard, D. & Castleman, T. 2001. Electronic procurement in government: More complicated than just good business. *ECIS 2001 Proceedings*, 34.
- Cresswell, K. & Sheikh, A. 2013. Organizational issues in the implementation and adoption of health information technology innovations: An interpretative review. *International Journal of Medical Informatics*, 82(5):e73-e86. <https://doi.org/10.1016/j.ijmedinf.2012.10.007>
- Croom, S. R. & Brandon-Jones, A. 2005. Key issues in e-procurement: Procurement implementation and operation in the public sector. *Journal of Public Procurement*. 5(3):367-387.
- Croom, S. & Brandon-Jones, A. 2007. Impact of e-procurement: Experiences from implementation in the UK public sector. *J. Purch. Supply Manag.* 13(4), 294-303.
- Dada, D. 2006. The failure of E-government in developing countries: A literature review. *EJISDC*, 26(1):1-10.
- Dale, M. & Scheepers, H. 2020. Enterprise architecture implementation as interpersonal connection: Building support and commitment. *Information Systems Journal*. 30(1):150-184. <https://doi.org/10.1111/isj.12255>
- Dameri, R. P., Benevolo, C., Rossignoli, C., Ricciardi, F. & De Marco, M. 2012. Centralization vs. decentralization of purchasing in the public sector: The role of e-procurement in the Italian case. *Contemporary Research on E-business Technology and Strategy: International Conference, iCETS 2012*. Tianjin, China. August 29-31, 2012. Revised Selected Papers, 457-470. Springer Berlin Heidelberg. [https://doi.org/10.1007/978-3-642-34447-3\\_41](https://doi.org/10.1007/978-3-642-34447-3_41)
- Davis, F. D. 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*. 13(4):319-340.
- Davis, G. B., Lee, A. S., Nickles, K. R., Chatterjee S., Hartung, R. & Wu, Y. 1992. Diagnosis of an information system failure: A framework and interpretive process. *Information & Management*, 23(5):293-318.
- Davis, K. 1968. Attitudes toward the legitimacy of management efforts to influence employees. *Academy of Management Journal*. 11(2):153-162.
- de Villiers, C. & Molinari, M. 2022. How to communicate and use accounting to ensure buy-in from stakeholders: Lessons for organizations from governments' COVID-19 strategies. *Accounting, Auditing & Accountability Journal*. 35(1):20-34. <https://doi.org/10.1108/aaaj-08-2020-4791>
- De', R. 2005, August. E-government systems in developing countries: Stakeholders and conflict. *International Conference on Electronic Government*. Berlin, Heidelberg. Springer. 26-37.

- De', R. & Sarkar, S. 2010. Rituals in e-government implementation: An analysis of failure. Wimmer, M.A., Chappellet, J.L., Janssen, M., Scholl, H.J. (eds) *Electronic Government. EGOV 2010. Lecture Notes in Computer Science*, vol 6228. Springer, Berlin, Heidelberg. [https://doi.org/10.1007/978-3-642-14799-9\\_20](https://doi.org/10.1007/978-3-642-14799-9_20)
- DeLone, W. H. & McLean, E. R. 2003. The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems*. 19(4):9-30.
- Dembla, P., Flack, C.& Stacie,P.(2015). "Extending the DeLone and McLean IS Success Model to Cloud Computing" (2015). AMCIS 2015 Proceedings. 6.
- Depo, B. 2021. E-Procurement lessons from Georgia, Ukraine, and Moldova. [https://www.jstor.org/stable/resrep30233#metadata\\_info\\_tab\\_contents](https://www.jstor.org/stable/resrep30233#metadata_info_tab_contents) [5 Dec., 2022].
- DeSanctis, G. & Poole, M. S. 1994. Capturing the complexity in advanced technology use: Adaptive structuration theory. *Organization Science*. 5(2):121-147.
- Dezdar, S. & Ainin, S. 2011. Examining ERP implementation success from a project environment perspective. *Business Process Management Journal*. 17(6): 919-939. <https://doi.org/10.1108/14637151111182693>
- DiMaggio, P. J. & Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*. 48:147-160.
- Di Giulio, M., & Vecchi, G. (2023). Implementing digitalization in the public sector. Technologies, agency, and governance. *Public Policy and Administration*, 38(2), 133-158.
- Dobson, P., Gengatharen, D., Fulford, R., Llandis Barratt-Pugh, Bahn, S. and Larsen, A.-C. (2012). Eureka moments in research: Exploring abductive processes using four case examples. ACIS 2012. Proceedings of the 23rd Australasian Conference on Information Systems 2012. pp.1–9.
- Donkor, F., Sekyere, I. & Oduro, F.A. 2022. Transformational and transactional leadership styles and employee performance in public sector organizations in Africa: A comprehensive analysis in Ghana. *Journal of African Business*. 23(4):945-963. <https://doi.org/10.1080/15228916.2021.1969191>
- Dowling, J. & Pfeffer, J. 1975. Organizational legitimacy: Social values and organizational behavior. *Pacific Sociological Review*. 18(1):122-136.
- Dwivedi, Y. K., Wastell, D., Laumer, S., Henriksen, H. Z., Myers, M. D., Bunker, D., ... & Srivastava, S. C. 2015. Research on information systems failures and successes: Status update and future directions. *Information Systems Frontiers*. 17(1), 143-157. <https://doi.org/10.1007/s10796-014-9500-y>
- Dzinamarira, T., Nachipo, B., Phiri, B., Musuka, G. 2021. COVID-19 vaccine roll-out in South Africa and Zimbabwe: Urgent need to address community preparedness, fears and hesitancy. *Vaccines*. 9(3):250. <https://doi.org/10.3390/vaccines9030250>
- EDB, (2020). Why Mauritius. Online. Available at: <https://edbmauritius.org/why-invest-in-mauritius>. Accessed on [31<sup>st</sup> March 2020]
- Elbanna, A. & Newman, M. 2022. The bright side and the dark side of top management support in digital transformation -A hermeneutical reading. *Technological Forecasting and Social Change*. 175. <https://doi.org/121411.10.1016/j.techfore.2021.121411>

- Elbanna, A. 2010. From intention to use to actual rejection: The journey of an e-procurement system. *Journal of Enterprise Information Management*. 23(1):81-99. <https://doi.org/10.1108/17410391011008914>
- Elsbach, K. D., Sutton, R. I. 1992. Acquiring organizational legitimacy through illegitimate actions: A marriage of institutional and impression management theories. *Academy of Management Journal*. 35(4):699-738. <https://doi.org/10.5465/256313>
- Emery, T., Mélon, L.& Spruk, R. 2023. Does e-procurement matter for economic growth? Subnational evidence from Australia. *The Quarterly Review of Economics and Finance*. 89:318-334. <https://doi.org/10.1016/j.qref.2022.09.005>
- Engström, A., Wallstrom, Å., Salehi-Sangari, E. 2009. Implementation of public e-procurement in Swedish government entities. *2009 International Multiconference on Computer Science and Information Technology*. IEEE. 315-319.
- e-PS Presentation (2020). E-Procurement System (e-PS). Available at: <https://appn-racop.org/wp-content/uploads/2021/06/Gawesh-JAWAHEER-e-PS-PRESENTATION-GJ.pdf>.
- e-Procurement system of Government of Mauritius (2015c). Government e-Procurement system-project overview. <https://eproc.publicprocurement.govmu.org/files/masterfiles/Project%20Overview.pdf>. Accessed on 1st December 2022.
- e-Procurement system of Government of Mauritius (2022). Portal Statistics 2022. <https://eproc.publicprocurement.govmu.org/login#>. Accessed on 12th June 2023.
- e-Procurement system of Government of Mauritius (2021). Portal Statistics 2021. <https://eproc.publicprocurement.govmu.org/login#>. Accessed on 13th February 2021.
- e-Procurement system of Government of Mauritius (2020). Portal Statistics 2020. <https://eproc.publicprocurement.govmu.org/login#>. Accessed on 13th November 2020.
- e-Procurement system of Government of Mauritius (2015b). How to?- Videos. <https://www.youtube.com/channel/UCvRL6pkqOeJMi78nMXEISwg>. Accessed on 13th January 2023.
- e-Procurement system of Government of Mauritius (2015a). Digital Signature Certificates. [https://eproc.publicprocurement.govmu.org/files/masterfiles/Digital\\_Certificates-v2.pdf](https://eproc.publicprocurement.govmu.org/files/masterfiles/Digital_Certificates-v2.pdf). Accessed on 13th January 2022.
- e-procurement system of Government of Mauritius helpdesk, (2020). <https://eproc.publicprocurement.govmu.org/files/Help%20Desk.pdf>. Accessed on 12<sup>th</sup> December 2022.
- e-procurement system of Government of Mauritius -"How to?", (2020). "How to" Menu of the E-procurement portal. Available at: <https://eproc.publicprocurement.govmu.org/login#>
- e-Procurement system of Government of Mauritius – DSC user Manual (n.d.). User Manual for using Digital Signature Certificate. <https://eproc.publicprocurement.govmu.org/files/masterfiles/USER%20MANUAL%20FOR%200-%20USING%20DIGITAL%20CERTIFICATE%20WITH%20e-PS.pdf>. Accessed on 31 March 2021.
- e-Procurement system of Government of Mauritius -Upload document (n.d.). User Manual for uploading document in briefcase. <https://eproc.publicprocurement.govmu.org/files/masterfiles/USER%20MANUAL%20FOR%20%20UPLOADING%20DOCUMENT%20IN%20BRIEFCASE.pdf>. Accessed on 21 January 2021.

- e-Procurement system of Government of Mauritius (n.d). How to Prepare and secure your bid.  
<https://eproc.publicprocurement.govmu.org/files/masterfiles/HOW%20TO%20PREPARE%20AND%20SECURE%20YOUR%20BID.pdf>. Accessed on 21 January 2021.
- e-Procurement system of Government of Mauritius - FAQ (n.d). Frequently Answered Questions.  
<https://eproc.publicprocurement.govmu.org/files/masterfiles/FAQ.pdf>. Accessed on 21 January 2021.
- e-Procurement system of Government of Mauritius –FAQ (2021). FAQ.  
<https://eproc.publicprocurement.govmu.org/files/masterfiles/FAQ.pdf>
- e-Procurement system of Government of Mauritius – Query to Public bodies (n.d). How to send queries to public bodies.  
<https://eproc.publicprocurement.govmu.org/files/masterfiles/HOW%20TO%20SEND%20QUERY%20TO%20PUBLIC%20BODY.pdf>. Accessed on 21 January 2021.
- e-Procurement system of Government of Mauritius - Encryption/Decryption (n.d.). User Manual for Supplier for operations on the e-Procurement System of Government of Mauritius for Bid Data Decryption and Reencryption.  
<https://eproc.publicprocurement.govmu.org/files/masterfiles/HOW%20TO%20RE-ENCRYPT%20AND%20SUBMIT%20BID.pdf>. Accessed on 31st March 2021.
- e-Procurement system of Government of Mauritius - Comparative Statement (n.d.). User Manual for Supplier for operations on the e-Procurement System of Government of Mauritius for Viewing Bid Opening Report and Comparative Statement.  
<https://eproc.publicprocurement.govmu.org/files/masterfiles/HOW%20TO%20VIEW%20DETAILS%20AFTER%20OPENING%20OF%20BIDS.pdf>. Accessed on 31st August 2021.
- Ewusi-Mensah, K. 1997. Critical issues in abandoned information systems development projects. *Communications of the ACM*. 40(9):74-80.
- Fedorowicz, J., Gelinias, U., Gogan, J. & Williams, C. 2004. E-government, e-procurement, and e-payments: Data sharing issues associated with an appreciating database. In: *AMCIS 2004 Proceedings*, vol. 137. AMCIS, New York.
- Fernandez, S. & Rainey, H.G. (2006), Managing Successful Organizational Change in the Public Sector. *Public Administration Review*. 66: 168-176. <https://doi.org/10.1111/j.1540-6210.2006.00570.x>
- Ferreira, I. Cunha, S., Amaral, L.A. & Camões, P. (2014). ICT for governance in combating corruption: the case of public e-procurement in Portugal. In *Proceedings of the 8th International Conference on Theory and Practice of Electronic Governance (ICEGOV '14)*. Association for Computing Machinery, pp 109–112. <https://doi.org/10.1145/2691195.2691265>
- Flynn, D., Du, Y. 2012. A case study of the legitimation process undertaken to gain support for an information system in a Chinese university. *European Journal of Information Systems*. 21(3):212-228. <https://doi.org/10.1057/ejis.2011.27>
- Flynn, D., Hussain, Z. 2004. Seeking legitimation for an information system: A preliminary process model. *ECIS 2004 Proceedings*, 27.
- Flynn, D., Pan, G., Keil, M., Mähring, M. 2009. De-escalating IT projects: The DMM model. *Communications of the ACM*. 52(10):131-134.
- Flynn, D. & Puarungroj, W. 2006. The dynamics of the legitimation process in an information systems project: An interpretive analysis. *Proceedings of 14th European Conference on Information Systems*. 12-14.

- Finney, S., 2011. Stakeholder perspective on internal marketing communication: An ERP implementation case study. *Business Process Management Journal*, 17(2), pp.311-331.
- Foster, S., Hawking, P. & Stein, A. 2004. Change management: The forgotten critical success factor in enterprise wide system implementations. *ACIS 2004 Proceedings*. 31. Available at: <https://aisel.aisnet.org/acis2004/31>
- Furuholt, B. and Ørvik, T. U. (2006) 'Implementation of Information Technology in Africa: Understanding and Explaining the Results of Ten Years of Implementation Effort in a Tanzanian Organization', *Information Technology for Development*, 12(1), pp. 45-62.
- Gasco, M.C., Cucciniello, M., Nasi, G. & Yuan, Q. 2018. Determinants and barriers of e-procurement: A European comparison of public sector experiences. *Proceedings of the 51st Hawaii International Conference on System Sciences*.
- Gauld, R. 2007. Public sector information system project failures: Lessons from a New Zealand hospital organization. *Government Information Quarterly*. 24(1):102-114. <https://doi.org/10.1016/j.giq.2006.02.010>
- Gauld, R. & Goldfinch, S. 2006. Dangerous enthusiasms: E-government, computer failure and information systems development. Univ of Otago Press.
- Gefen, D. and Keil, M. (1996). Developer responsiveness and perceived usefulness. *Academy of Management Proceedings*, 1996(1). Pp 313-317. Available at: <https://doi.org/10.5465/ambpp.1996.4980832>.
- Giddens, A. 1984. *The constitution of society: Outline of the theory of structuration*, Polity Press.
- Gill, I. 2022. *The Hidden \$1 Trillion: Halting Waste in Public Procurement*. [blogs.worldbank.org](https://blogs.worldbank.org/voices/hidden-1-trillion-halting-waste-public-procurement). Available at: <https://blogs.worldbank.org/voices/hidden-1-trillion-halting-waste-public-procurement> [1 Dec., 2022].
- Ginzberg, M.J. 1981. Early diagnosis of MIS implementation failure: Promising results and unanswered questions. *Management Science*. 27(4):459-478. <https://doi.org/10.1287/mnsc.27.4.459>
- Glyptis, L., Christofi, M., Vrontis, D., Del Giudice, M., Dimitriou, S. & Michael, P., 2020. E-Government implementation challenges in small countries: The project manager's perspective. *Technological Forecasting and Social Change*. 152: 119880.
- Goldfinch, S. 2007. Pessimism, computer failure, and information systems development in the public sector. *Public Administration Review*. 67(5):917-929. <https://doi.org/10.1111/j.1540-6210.2007.00778.x>
- Goldkuhl, G., 2016. E-government design research: Towards the policy-ingrained IT artifact. *Government Information Quarterly*, 33(3), pp.444-452.
- Goldkuhl, G. (2012). Pragmatism vs interpretivism in qualitative information systems research. *European Journal of Information Systems*, 21(2), 135–146. <https://doi.org/10.1057/ejis.2011.54>
- Gosling, J., Jones, S., Sutherland, I., Joost Dijkstra and Sage (2013). *Key concepts in leadership*. London: Sage Publications.
- Government of Mauritius Portal. 2020. Republic of Mauritius. [govmu.org](http://govmu.org). Available: <https://govmu.org/EN/Pages/exploremauritius.aspx> [1 Dec., 2022].
- Graycar, A. 2022. Corrupt procurement: Rethinking the roles of principals and agents. *Policy Design and Practice*. 5(3):276-293. <https://doi.org/10.1080/25741292.2022.2113461>

- Gregor, S. 2006. The nature of theory in information systems. *MIS Quarterly*. 30(3):611-642.
- Guha, J. & Chakrabarti, B. 2014. Making e-government work: Adopting the network approach. *Government Information Quarterly*. 31(2):327-336. <https://doi.org/10.1016/j.giq.2013.11.008>
- Gunawong, P. & Gao, P. 2017. Understanding e-government failure in the developing country context: A process-oriented study. *Information Technology for Development*. 23(1):153-178. <https://doi.org/10.1080/02681102.2016.1269713>
- Gupta, K.P., Bhaskar, P. & Singh, S.(2017). Prioritization of factors influencing employee adoption of e-government using the analytic hierarchy process. *Journal of Systems and Information Technology*, 19(1/2), pp.116-137.
- Günther, W. A., Mehrizi, M. H. R., Huysman, M. & Feldberg, F. 2017. Debating big data: A literature review on realizing value from big data. *The Journal of Strategic Information Systems*. 26(3):191-209.
- Gurakar, E. C. & Tas, B. K. O. 2016. Does public e-procurement deliver what it promises? Empirical evidence from Turkey. *Emerging Markets Finance and Trade*. 52(11):2669-2684.
- Haim Faridian, P. 2015. Innovation in public management: Is public eprocurement a wave of the future? A theoretical and exploratory analysis. *Int. J. Public Adm.* 38(9):654-662.
- Hannan, M. T. & Freeman, J. 1986. Where do organizational forms come from?. In *Sociological forum*. 1(1):50-72. Dordrecht: Kluwer Academic Publishers.
- Hashim, R., Mazuki, M.A.: Electronic procurement (E-procurement) implementation in municipalities: lessons learned. In: *E-procurement Management for Successful Electronic Government System*, pp. 220–238. IGI-Global
- Hardcastle, M. A. R., Usher, K. J. & Holmes, C. A. 2005. An overview of structuration theory and its usefulness for nursing research. *Nursing Philosophy*. 6(4):223-234. <https://doi.org/10.1111/j.1466-769X.2005.00230.x>
- Heeks, R. 2002. Information systems and developing countries: Failure, success, and local improvisations. *The Information Society*. 18(2). 101-112. <http://dx.doi.org/10.1080/01972240290075039>
- Heeks, R. 2003. Most e-government-for-development projects fail: How can risks be reduced? *iGovernment Working Paper Series*, Paper no. 14. Available at SSRN: <http://dx.doi.org/10.2139/ssrn.3540052>
- Hekkala R, Stein M-K, Sarker S (2022). Power and conflict in inter-organisational information systems development. *Inf Syst J.* (32). pp 440–468. <https://doi.org/10.1111/isj.12335>
- Henny Portman's Blog. 2021. *Review Standish Group - CHAOS 2020: Beyond Infinity*. Available: <https://hennyportman.wordpress.com/2021/01/06/review-standish-group-chaos-2020-beyond-infinity/> [31 Dec., 2023]
- Henriksen, H. Z. & Mahnke, V. 2005. E-procurement adoption in the Danish public sector: The influence of economic and political rationality. *Scandinavian Journal of Information Systems*. 17(2):85-106.
- Hertzum, M., Manikas, M.I. & á Torkilsheygg, i A. 2019. Grappling with the future: The messiness of pilot implementation in information systems design. *Health Informatics Journal*. 25(2):372-388. <https://doi.org/10.1177/1460458217712058>

- Holgeid, K.K. & Stray, V. (2018). "A Review of Factors Promoting IS Project Escalation" (2018). International Research Workshop on IT Project Management 2018. 7. Available at: <https://aisel.aisnet.org/irwitpm2018/7>
- Hong, S., Kim, S.H. and Kwon, M., 2022. Determinants of digital innovation in the public sector. *Government Information Quarterly*, 39(4), p.101723.
- Hooda, A., Gupta, P., Jeyaraj, A., Giannakis, M. & Dwivedi, Y.K. 2022. The effects of trust on behavioral intention and use behavior within e-government contexts. *International Journal of Information Management*. 67:102553. ISSN 0268-4012.
- Hughes, D. L., Rana, N. P. & Simintiras, A. C. 2017. The changing landscape of IS project failure: An examination of the key factors. *Journal of Enterprise Information Management*. 30(1):142-165.
- Liang, H. & Xue, Y. 2021. Save Face or Save Life: Physicians' Dilemma in Using Clinical Decision Support Systems. *Information Systems Research* 33(2):737-758.  
<https://doi.org/10.1287/isre.2021.1082>
- Hussain, Z. I. & Cornelius, N. 2009. The use of domination and legitimation in information systems implementation. *Information Systems Journal*. 19(2):197-224.
- Hussain, Z., Taylor, A. & Flynn, D. 2004. A case study of the process of achieving legitimation in information systems development. *Journal of Information Science*. 30(5):408-417.
- Hughes, J. and Jones, S., 2003. Reflections on the use of grounded theory in interpretive information systems research. ECIS 2003 proceedings, p.62.
- Hwang, Y., Al-Arabi, M. and Shin, D.H., 2016. Understanding technology acceptance in a mandatory environment: A literature review. *Information Development*, 32(4), pp.1266-1283.
- Ilhan, N. & Rahim, M. M. 2013. Understanding e-procurement systems benefits: A theoretical model with initial findings from an Australian Local Council. *Proceedings of the 24th Australasian Conference on Information Systems (ACIS2013)*. 4-6.
- Ilie, V. & Turel, O. 2020. Manipulating user resistance to large-scale information systems through influence tactics. *Information & Management*. 57(3):103178. <https://doi.org/10.1016/j.im.2019.103178>.
- Introna, D. 1997. *Management, information and power: A narrative of the involved manager*. Macmillan.
- Inuwa, I. & Ononiwu, C. G. 2020. Traditional and information technology anti-corruption strategies for curbing the public sector corruption in developing economies of Sub-Saharan Africa: A systematic literature review. *The African Journal of Information Systems*. 12(2):5. Available at: <https://digitalcommons.kennesaw.edu/ajis/vol12/iss2/5>
- Issa, T., Kommers, P. & Isaias P.T. 2015. Security and privacy of online technologies. *Pacific Asia Journal of the Association for Information Systems*. 7(4). <https://doi.org/10.17705/1pais.07400>
- Iyamu, T. (Ed.). 2015. *Strategic information technology governance and organizational politics in modern business*. IGI Global.
- Jafari Nia, S., Abedi Jafari, H., Vakili, Y. & Ranjbar Kabutarkhani, M. 2023. Systematic review of conflict of interest studies in public administration. *Public Integrity*. 25(5):507-522. <https://doi.org/10.1080/10999922.2022.2068901>

- Jaspersen, J.S., Carter, P.E. & Zmud, R.W. 2005. A comprehensive conceptualization of post-adoptive behaviours associated with information technology enabled work systems. *MIS Quarterly*. 29(3): 525-557.
- Jensen, T. B. & Aanestad, M. 2007. Hospitality and hostility in hospitals: A case study of an EPR adoption among surgeons. *European Journal of Information Systems*. 16:672-680.
- Jeong, I. & Shin, S. J. 2019. High-performance work practices and organizational creativity during organizational change: A collective learning perspective. *Journal of Management*. 45(3):909-925. <https://doi.org/10.1177/0149206316685156>
- Jiao, H. & Zhao, G. 2013. When will employees embrace managers' technological innovations? The mediating effects of employees' perceptions of fairness on their willingness to accept change and its legitimacy. *Journal of Product Innovation Management*. 31(4):780-798. <https://doi.org/10.1111/jpim.12123>
- Joia, L. A. 2007. Sources of resistance to G2G endeavors: Evidence from a case study in the Brazilian context. *Information Technology for Development*. 13(3):233-251.
- Jones, M. R. & Karsten, H. 2008. Giddens's structuration theory and information systems research. *MIS Quarterly*. 32:127-157. <https://doi.org/10.2307/25148831>
- Kabanda S.& Brown, I. (2015). E-commerce enablers and barriers in Tanzanian small and medium enterprises. *EJISDC*. 2015;67(7):1024.
- Kabanda, S. & Brown, I. (2017). A Structuration Analysis of Small and Medium Enterprise (SME) Adoption of E-commerce: The Case of Tanzania. *Telematics and Informatics*. 34. 10.1016/j.tele.2017.01.002.
- Kaganer, E. A., Pawlowski, S. D. & Wiley-Patton, S. 2010. Building legitimacy for IT innovations: The case of computerized physician order entry systems. *Journal of the Association for Information Systems*, 11(1):2.
- Kaliannan, M., Raman, M., Dorasamy, M.(2009): E-procurement adoption in the Malaysian public sector: organizational perspectives. In: 13th Enterprise Distributed Object Computing Conference Workshops, Auckland, pp. 189–194.
- Kaplan, B., Maxwell, J.A. (2005). Qualitative Research Methods for Evaluating Computer Information Systems. In: Anderson, J.G., Aydin, C.E. (eds) *Evaluating the Organizational Impact of Healthcare Information Systems*. Health Informatics. Springer, New York, NY. [https://doi.org/10.1007/0-387-30329-4\\_2](https://doi.org/10.1007/0-387-30329-4_2)
- Karahanna, E., Straub, D.W. & Chervany, N.L. 1999. Information technology adoption across time: A cross-sectional comparison of pre-adoption and post-adoption beliefs. *MIS Quarterly*, 23(2):183-213. <https://doi.org/10.2307/249751>
- Kaufmann,W., Taggart,G. & Bozeman,B. (2019). Administrative Delay, Red Tape, and Organizational Performance, *Public Performance & Management Review*. 42(3). 529-553.DOI: 10.1080/15309576.2018.1474770
- Keable, M., Landry, M. & Banville, C. 1998. The legitimacy gap between IS professionals and users. *Communications of the ACM*. 41(5e):146-156.
- Keen, P. G. 1981. Information systems and organizational change. *Communications of the ACM*. 24(1):24-33.

- Kennedy, B. L. & Thornberg, R. 2018. Deduction, induction, and abduction. *The SAGE handbook of qualitative data collection*, 49-64. <https://dx.doi.org/10.4135/9781526416070>
- Kim, S. 2002. Participative management and job satisfaction: Lessons for management leadership. *Public Administration Review*. 62(2):231-241. <https://doi.org/10.1111/0033-3352.00173>
- Klein, H. K. & Hirschheim, R. A. 1989. Legitimation in information systems development: A social change perspective. *Office Technology and People*. 5(1):29-46.
- Klein, H. K. & Myers, M. D. 1999. A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly*. 23(1):67-93.
- Kohansal, M. A. & Haki, K. 2021. How enterprise architecture loses momentum: A case of delegitimization. *Proceedings of the Forty-Second International Conference on Information Systems (ICIS 2021)*. Available at: [https://aisel.aisnet.org/icis2021/is\\_implement/is\\_implement/16](https://aisel.aisnet.org/icis2021/is_implement/is_implement/16)
- Kohli, R. & Kettinger, W. J. 2004. Informing the clan: Controlling physicians' costs and outcomes. *MIS Quarterly*. 48(3):363-394.
- Krishna, S. & Walsham, G. 2005. Implementing public information systems in developing countries: Learning from a success story. *Information Technology for Development*. 11(2):123-140. <https://doi.org/10.1002/itdj.20007>
- Krogstie, J. 2008, September. Introduction of a public sector e-procurement solution: Lessons learned from disappointing adoption. In: Avison D, Kasper GM, Pernici B, Ramos I, Roode D, eds. *Advances in Information Systems Research, Education and Practice: IFIP World Computer Congress, TC 8*. Boston, MA: Springer US.; Boston, MA: Springer; 2008. 203-214.
- Kuhlmann, S., & Heuberger, M. (2021). Digital transformation going local: implementation, impacts and constraints from a German perspective. *Public Money & Management*, 43(2), 147–155. <https://doi.org/10.1080/09540962.2021.1939584>
- Lambooj, M. S. & Koster, F. 2015. How organizational escalation prevention potential affects success of implementation of innovations: Electronic medical records in hospitals. *Implementation Science*. 11(1):1-10. <https://doi.org/10.1186/s13012-016-0435-1>
- Lamb, R. & Kling, Rob. (2003). Reconceptualizing Users as Social Actors in Information Systems Research.. *MIS Quarterly*. 27. 197-235.
- Land, F. & Hirschheim, R. 1983. Participative systems design: Rationale, tools and techniques. *Journal of Applied Systems Analysis*. 10(10):15-18.
- Landry, M., Banville, C. & Oral, M. 1996. Model legitimisation in operational research. *European Journal of Operational Research*. 92(3):443-57.
- Lapointe, L. & Rivard, S. 2005. A multilevel model of resistance to information technology implementation. *MIS Quarterly*. 29(3):461-491.
- Lapuente V. & Van de Walle S. 2020. The effects of new public management on the quality of public services. *Governance*. 33(3): 461-475. <https://doi.org/10.1111/gove.12502>
- Leipold, K., Klemow, J., Holloway, F. & Vaidya, K. 2009. The World Bank eprocurement for the selection of consultants: Challenges and lessons learnt. In Thai, K.V. (ed.) *International Handbook of Public Procurement*. Routledge. Chapter 25.

- Lim, G. G., Kim, R. B. & Lee, H. B. 2008, August. Public e-procurement: The Korean on-line e-procurement system (KONEPS). *Proceedings of 3rd International Public Procurement Conference* 743-759.
- Lins S., Kromat, T., Löbbers, J., J., Benlian, A. & Sunyaev, A. 2020. Why don't you join in? A typology of information system certification adopters. *Decision Sciences*. 53(3):452-485. <https://doi.org/10.1111/dec.12488>
- Liu, F., & Myers, M. (2011). An Analysis of the AIS basket of Top Journals. *Journal of Systems and Information Technology*, 13(1), 5–24.
- Luk, S. C. Y. 2009. The impact of leadership and stakeholders on the success/failure of e-government service: Using the case study of e-stamping service in Hong Kong. *Government Information Quarterly*. 26(4):594-604. <https://doi.org/10.1016/j.giq.2009.02.009>
- Luna-Reyes, L.F., Zhang, J., Ramón Gil-García, J. & Cresswell, A.M. 2005. Information systems development as emergent socio-technical change: A practice approach. *European Journal of Information Systems*. 14(1):93-105. <https://doi.org/10.1057/palgrave.ejis.3000524>
- Lyytinen, K. & Hirschheim, R. 1987. Information systems failures: A survey and classification of the empirical literature. *Oxford Surveys in Information Technology*. 4:257-309.
- Lyytinen, K. & Rose, G. 2003. The disruptive nature of information technology innovations: The case of internet computing in systems development organizations. *MIS Quarterly*, 27(4):557-596.
- MacManus, S.A. 2003. Understanding the incremental nature of e-procurement implementation at the state and local levels. *J. Public Procure*. 2(1):5-28.
- Maghrabi, R.O. Palvia, P. 2012. Understanding information technology (IT) induced changes in culture. *Proceedings of 18th Americas Conference on Information Systems 2012, AMCIS 2012*. 1897-1903.
- Mahmood, S. A. I. 2013. Public procurement system and e-government implementation in Bangladesh: The role of public administration. *Journal of Public Administration and Policy Research*. 5(5):117-123.
- Mantzaris, E.A. 2014. Public procurement, tendering and corruption: Realities, challenges and tangible solutions. *African Journal of Public Affairs*. 7(2).
- Marabelli, M. & Newell, S. 2010. The post implementation phase of a large-scale integrative IT project. In *Enterprise Information Systems and Implementing IT Infrastructures: Challenges and Issues*. IGI Global. 180-194. <https://doi.org/10.4018/978-1-61520-625-4.ch013>
- Marakas, G.M. & Hornik, S. 1996. Passive resistance misuse: Overt support and covert recalcitrance in IS Implementation. *European Journal of Information Systems*, 5, 208-219.
- Marchessault. 2015. *Pushing the frontier of e-government procurement*. World Bank Blogs. May 11. Available: <http://blogs.worldbank.org/governance/pushing-frontier-e-government-procurement-africa-open-contracting-standard> [31 Dec., 2023]
- Markus, M. L. 1983. Power, politics, and MIS implementation. *Communications of the ACM*. 26(6):430-444.
- Masuda, Y., Shepard, D.S. & Yamamoto, S. (2019). "Adaptive Governance on Electronic Health Record in a Digital IT era". AMCIS 2019 Proceedings. 10. Available at: [https://aisel.aisnet.org/amcis2019/digital\\_government/digital\\_government/10](https://aisel.aisnet.org/amcis2019/digital_government/digital_government/10)

- Mathiba, G. 2020. Corruption, public sector procurement and COVID-19 in South Africa: Negotiating the new normal. *Journal of Public Administration*. 55(4):642-661. <https://hdl.handle.net/10520/ejc-jpad-v55-n4-a5>
- Mattke, J., Maier, C., Weitzel, T., Gerow, J. E., & Thatcher, J. B. (2022). Qualitative Comparative Analysis (QCA) In Information Systems Research: Status Quo, Guidelines, and Future Directions. *Communications of the Association for Information Systems*, 50, pp-pp. <https://doi.org/10.17705/1CAIS.05008>
- Maurer, J. G. 1971. *Readings in organizational theory: Open system approaches*. Random House.
- Mauritius Business Network (2022). Why Mauritius? Available at: <https://mauritiusbusinessnetwork.com/view-blog.php?id=126>.
- Maynard, S., Onibere, M. & Atif, A. 2018. Defining the strategic role of the chief information security officer. *Pacific Asia Journal of the Association for Information Systems*. 10(3). <https://doi.org/10.17705/1pais.10303>
- McCarthy, S., O'Raghallaigh, P., Fitzgerald, C. & Adam, F., (2021). Shared and fragmented understandings in interorganizational IT project teams: An interpretive case study. *International Journal of Project Management*, 39(7), pp.762-773.
- MCCI. 2020, Sept 11. *Presentation of e-procurement system*. The Mauritius Chamber of Commerce and Industry. Available: <https://www.mcci.org/en/media-news-events/business-updates/presentation-of-the-e-procurement-system/> [31 March, 2021]
- McCue, C. & Roman, A. V. (2012). E-procurement: Myth or reality. *Journal of Public Procurement*. 12(2):221-248.
- McGrath, K. 2000. The LASCAD project: A failed implementation or a way of understanding the present? *Journal of Intelligent Systems*. 10(5-6):509-538. <https://doi.org/10.1515/JISYS.2000.10.5-6.509>
- Mcgrath, G., Dampney, C. N. G. & Moore, E. (1998). A structured approach to conflict prediction in Information systems strategy implementation. *International Journal of Intelligent systems in accounting, finance & mgt.* (7). pp 107-124
- McLaughlin, K., Osborne, S. P. & Ferlie, E. (Eds.). 2002. *New public management: Current trends and future prospects*. Psychology Press.
- Meissonier, R., Lapointe, L. & Houzé, E. 2015. Légitimer l'implémentation d'un ERP: une comparaison Canada-Thaïlande. *Journal of Decision Systems*. 24(3):318-338. <https://doi.org/10.1080/12460125.2015.1046719>
- Melin, U., Sarkar, P. K. & Young, L. W., 2020. To couple or not to couple: A case study of institutional legitimacy relating to SaaS applications in two universities. *Information Technology & People*, 33(4), pp.1149-1173.
- Meyer, J. W. & Rowan, B. 1977. Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*. 83(2):340-363.
- Mila-Gasco, Gil-Garcia, Luna-Reyes. 2022. Unpacking the role of technology, leadership, governance and collaborative capacities in inter-agency collaborations. *Government Information Quarterly*. 39(3): 101710. ISSN 0740-624X. <https://doi.org/10.1016/j.giq.2022.101710>
- Mills, A., Durepos, G. & Webe, E. (2010). *Encyclopedia of Case study research*. Sage Publications Inc. DOI: <https://doi.org/10.4135/9781412957397>. ISBN:9781412957397

- Minnameier, G. (2004). Peirce-Suit of Truth – Why Inference to the Best Explanation and Abduction Ought Not to be Confused. *Erkenntnis*, 60(1), pp.75–105. doi:<https://doi.org/10.1023/b:erke.0000005162.52052.7f>.
- Mintzberg, H., 1980. Structure in 5's: A synthesis of the research on organization design. *Management Science*, 26(3):322-341. Available at SSRN: <https://ssrn.com/abstract=1496182>
- Mitra, A. 2012. One size fits all: Case study of enterprise systems implementation in Nestlé. *ECIS 2012 Proceedings*. 229. Available at: <https://aisel.aisnet.org/ecis2012/229>
- Moe, C. E. 2014. Research on public procurement of information systems: The need for a process approach. *Communications of the Association for Information Systems*. 34(1):78. <https://doi.org/10.17705/1CAIS.03478>
- Mohungoo, I., Brown, I. & Kabanda, S. 2020. A systematic review of implementation challenges in public E-Procurement. *Proceedings of Responsible Design, Implementation and Use of Information and Communication Technology: 19th IFIP WG 6.11 Conference on e-Business, e-Services, and e-Society, I3E 2020*. Skukuza, South Africa, April 6-8, 2020, Proceedings, Part II 19. Springer International Publishing. 46-58. [https://doi.org/10.1007/978-3-030-45002-1\\_5](https://doi.org/10.1007/978-3-030-45002-1_5)
- MPSAIR e-Newsletter 2020a. Public sector transformation [Newsletter]. <https://civilservice.govmu.org/Documents/News/Final%20MPSAIR%20Newsletter%2015%2012%2020%20%28002%29.pdf>
- MPSAIR circular 2020c. Management information system for transformation implementation committees: Key performance indicators. <https://civilservice.govmu.org/Documents/circulars%202020/Circular%2042%20of%202020%20-%20psbts/circular%20KPI%2010.07.20.pdf>
- MPSAIR circular 2002b. Rotation of staff. <https://civilservice.govmu.org/documents/past%20circulars%20library/2002/CL18.pdf>
- Myers, M. D. 1994. A disaster for everyone to see: An interpretive analysis of a failed IS project. *Accounting, Management and Information Technologies*. 4(4):185-201.
- Myers, M. D. 1997. Qualitative research in information systems. *MIS Quarterly*. 21(2):241-242.
- Myers, M., & Avison, D. 2002. An introduction to qualitative research in information systems. *Qualitative research in information systems: A reader*. London, UK: Sage Publications
- Myers, M.D. & Newman, M. 2007. The qualitative interview in IS research: Examining the craft. *Information and Organization*, 17(1):2-26.
- Myers, M. D. & Young, L. W. 1997. Hidden agendas, power and managerial assumptions in information systems development: An ethnographic study. *Information Technology & People*. 10(3):224-240.
- Nadan, R.K. 1997. *The dialectic of management control: The case of the Fiji development bank*. PhD Thesis, The University of Bristol, United Kingdom.
- Nagitta, P.O., Mugurusi, G., Obicci, P.A. and Awuor, E., 2022. Human-centered artificial intelligence for the public sector: The gate keeping role of the public procurement professional. *Procedia Computer Science*, 200, pp.1084-1092.
- Nah, F.F.H., Zuckweiler, K.M. & Lee-Shang Lau, J., 2003. ERP implementation: Chief information officers' perceptions of critical success factors. *International Journal of Human-computer Interaction*. 16(1):5-22.

- NAO. 2016. *Report of the director of audit on the accounts of the government for the financial year 2016-17*. National Audit Office, Government of Mauritius. [https://nao.govmu.org/Documents/Reports/2016/Audit\\_Report\\_2016\\_17.pdf](https://nao.govmu.org/Documents/Reports/2016/Audit_Report_2016_17.pdf)
- NAO. 2018. *Report of the director of audit on the accounts of the government for the financial year 2017-18*. National Audit Office, Government of Mauritius. [https://nao.govmu.org/Documents/Reports/Audit\\_Rep\\_2017\\_18\\_Mtius.pdf](https://nao.govmu.org/Documents/Reports/Audit_Rep_2017_18_Mtius.pdf)
- NAO. 2019. *Report of the director of audit on the accounts of the government for the financial year 2018-19*. National Audit Office, Government of Mauritius. <https://nao.govmu.org/Documents/Reports/Audit%20Report%202018-19%20-%20Mauritius.pdf>
- NAO. 2020. *Report of the director of audit on the accounts of the government for the financial year 2019-20*. National Audit Office, Government of Mauritius. [https://nao.govmu.org/Documents/Reports/2019-20/AR\\_2019\\_20\\_Mauritius.pdf](https://nao.govmu.org/Documents/Reports/2019-20/AR_2019_20_Mauritius.pdf)
- NAO. 2021. *Report of the director of audit on the accounts of the government for the financial year 2020-21*. National Audit Office, Government of Mauritius. <https://nao.govmu.org/Documents/Reports/2022/AuditReportMauritius2020-21.pdf>
- NAO. 2022. *Report of the director of audit on the accounts of the government for the financial year 2021-22*. National Audit Office, Government of Mauritius. <https://nao.govmu.org/Documents/Reports/2023/AuditReportMauritius2021-22.pdf>
- National Audit Office (2022). Who we are? Available at: <https://nao.govmu.org/Pages/Who-Are-We.aspx>.
- Ndou, V. 2004. E-government for developing countries: Opportunities and challenges. *EJISDC*. 18(1):1-24. <https://doi.org/10.1002/j.1681-4835.2004.tb00117.x>
- Neupane, A., Soar, J. & Vaidya, K. 2012. Evaluating the anti-corruption capabilities of public e-procurement in a developing country. *EJISDC*. 55(1):1-17.
- Neupane, A., Soar, J. & Vaidya, K. 2014. An empirical evaluation of the potential of public e-procurement to reduce corruption. *Australasian Journal of Information Systems*. 18(2). <https://doi.org/10.3127/ajis.v18i2.780>
- Ngwenyama, O. & Nielsen, P. A. 2014. Using organizational influence processes to overcome IS implementation barriers: Lessons from a longitudinal case study of SPI implementation. *European Journal of Information Systems*. 23(2):205-222.
- Nguyen, T.T., Nguyen, L.A., Kend, M., Pham, V.A.T. (2023). The Challenges Facing Vietnamese Accountants and Auditors with the Adoption of Emerging Technologies. In: Rana, T., Svanberg, J., Öhman, P., Lowe, A. (eds) *Handbook of Big Data and Analytics in Accounting and Auditing*. Springer, Singapore. [https://doi.org/10.1007/978-981-19-4460-4\\_3](https://doi.org/10.1007/978-981-19-4460-4_3)
- Nkohkwo, Q. N. A. & Islam, M. S. 2013. Challenges to the successful implementation of e-government initiatives in Sub-Saharan Africa: A literature review. *Electronic Journal of E-government*. 11(1):252-266.
- Nusantara, P., Nazief, B., Sandhyaduhita, P. & Fathony, H., 2018, August. E-archives implementation readiness: A case of the national archives of the Republic of Indonesia. *Proceedings of 2018 4th International Conference on Science and Technology (ICST)*. IEEE. 1-5. <https://doi.org/10.1109/ICSTC.2018.8528715>

- Ochara, N.M. 2013. Linking reasoning to theoretical argument in information systems research. *Proceedings of the Nineteenth Americas Conference on Information Systems*. Chicago, Illinois. August 15-17, 2013.
- OECD. 2009. *OECD principles for integrity in public procurement*. Organisation For Economic Co-Operation and Development. <https://www.oecd.org/gov/ethics/48994520.pdf>
- OECD. 2015. *Public procurement recommendation*. Organisation For Economic Co-Operation and Development. <https://www.oecd.org/gov/public-procurement/recommendation/>
- OECD. 2016. *Preventing corruption in public procurement*. Organisation For Economic Co-Operation and Development. <https://www.oecd.org/gov/ethics/Corruption-Public-Procurement-Brochure.pdf>
- OECD. 2019. *Procurement as a critical function in government*. OECD iLibrary. <https://www.oecd-ilibrary.org/sites/0d83e1f9-en/index.html?itemId=/content/component/0d83e1f9-en>
- Ogden, D. & Rose, R.A. 2005. Using Giddens's structuration theory to examine the waning participation of African Americans in baseball. *Journal of Black Studies*. 35(4):225-245.
- Ojha, S. & Pandey, I.M. 2014. E-procurement project in Karnataka: a case of public private partnership. *Vikalpa*. 39(4):101-112.
- Okoli, C. 2015. A guide to conducting a standalone systematic literature review. *Communications of the Association for Information Systems*. 37.
- Orlikowski, W. J. 1992. The duality of technology: Rethinking the concept of technology in organizations. *Organization Science*. 3(3):398-427.
- Orlikowski, W. J. 2000. Using technology and constituting structures: A practice lens for studying technology in organizations. *Organization Science*. 11(4):404-428.
- Orlikowski, W. J. & Baroudi, J. J. 1991. Studying information technology in organizations: Research approaches and assumptions. *Information Systems Research*. 2(1):1-28.
- Orlikowski, W.J. & Gash, D.C. 1994. Technological frames: Making sense of information technology in organizations. *ACM Transactions on Information Systems (TOIS)*. 12(2):174-207.
- Orlikowski, W.J, Hofman, J.D. 1997. An improvisational model for change management-case groupware technologies. *Sloan Management Review*. 38(2):11-22.
- Orlikowski, W. J. & Robey, D. 1991. Information technology and the structuring of organizations. *Information Systems Research*. 2(2):143-169.
- Orrego, C., Osorio, C. & Mardones, R. 2001. Technological innovation in public sector reform: Chile's public procurement e-system. *PREM Notes*. 50. <https://openknowledge.worldbank.org/handle/10986/11403>
- Orton, J.D. & Weick, K. 1990. Loosely coupled systems: A Reconceptualization. *Academy of Management Review*. 15(2):203-223. <https://doi.org/10.2307/258154>
- Ortuzar, G. B., Sevillano, E. M., Castro, C. L. & Uribe, C. 2017. Challenges in Chilean e-procurement system: A critical review. *Digital Governance and E-Government Principles Applied to Public Procurement*. 170-202.
- Özdemir, L. 2019. The inevitability of digital transfer: How prepared are UK public bodies for the transfer of born-digital records to the archives?. *Records Management Journal*. 29(1/2):224-239.

- Pan, G., Pan, S. L., Newman, M. & Flynn, D. 2006. Escalation and de-escalation of commitment: A commitment transformation analysis of an e-government project. *Information Systems Journal*. 16(1):3-21.
- Pan, G., Pan, S. & Flynn, D. 2004. De-escalation of commitment to information systems projects: A process perspective. *Journal of Strategic Information Systems*. 13(3):247-270. SSRN: <https://ssrn.com/abstract=2254486>
- Panayiotou, N.A. & Stavrou, V.P. 2021. Government to business e-services - A systematic literature review. *Government Information Quarterly*. 38(2):101576. <https://doi.org/10.1016/j.giq.2021.101576>.
- Panda, P. & Sahu, G. P. 2012. E-Procurement Implementation: Critical Analysis of Success Factors' Impact on Project Outcome. Available at: <https://ssrn.com/abstract=2019575> or <http://dx.doi.org/10.2139/ssrn.2019575>
- Panda, G., Padhi, A.& Dash, M. K. (2024). Change Management in the Adoption of Disruptive Innovation: A Critical Review of Technologies and Disruptive Business Strategies. eISBN: 978-1-83797-456-6
- Pandey, V. & Gupta, S. 2017. Understanding G2G e-government project impasse: A stakeholder theory perspective. *Information Development*. 33(4):361-374.
- Patokorpi, E. and Ahvenainen, M. (2009). Developing an abduction-based method for futures research. *Futures*, [online] 41(3), pp.126–139. doi:<https://doi.org/10.1016/j.futures.2008.09.019>.
- Patton, M. 2002. *Qualitative research and evaluation methods*, 3rd edition. Sage Publications.
- Pawlowski, S. D., Kaganer, E. A. & Wiley-Patton, S. 2006. Building legitimacy for IT innovations: Organizing visions and discursive strategies of legitimacy. In *Academy of Management Proceedings*. 2006(1):C1-C6). Briarcliff Manor, NY 10510: Academy of Management.
- Pay Research Bureau (2021). Procurement and Supply Cadre. Available at: [https://prb2021.govmu.org/document/vol2/civilservice/cs\\_p\\_s.pdf](https://prb2021.govmu.org/document/vol2/civilservice/cs_p_s.pdf)
- Petkova, O. & Petkov, D. 2014. A case study on achieving legitimacy in information systems action research projects. In *Proceedings of the Conference for Information Systems Applied Research*. ISSN 2167:508.
- Pfeffer, J. 1981. Management as symbolic action: The creation and maintenance of organizational paradigms, In *Research in Organizational Behavior*, Cummins, L. L. and Staw, B. M. (eds.), 3:1-52.
- Pfeffer, J. & Salancik, G. R. 1978. *The external control of organizations: A resource dependence perspective*. Harper Row.
- Peterson, S.B. (1998). Saints, demons, wizards and systems: why information technology reforms fail or underperform in public bureaucracies in Africa. *Public Administration and Development: The International Journal of Management Research and Practice*, 18(1), pp.37-60.
- Pimpa, N., 2012. Amazing Thailand: Organizational culture in the Thai public sector. *International Business Research*, 5(11), p.35.
- Pinto. J.K. & Millet,I. 2010. "Successful Information System Implementation: The Human Side," 2th Edition, Project Management Institute, Inc., 1999.

- Poulodi, N., Currie, W. & Whitley, E. A. 2016. Entangled stakeholder roles and perceptions in health information systems: A longitudinal study of the UK NHS N3 network. *Journal of the Association for Information Systems*. 17(2):107-161.
- Pozzebon, M.(2000)."Combining a Structuration Approach with a Behavioral-Based Model to Investigate ERP Usage" (2000). AMCIS 2000 Proceedings. 124. Available at: <https://aisel.aisnet.org/amcis2000/124>
- Procurement Policy Office (2022). Home page. Available at: <https://ppo.govmu.org/SitePages/Index.aspx>.
- PPO Annual Report. 2014. *Procurement policy office annual report 2014*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Annual%20Reports/PPO%20annual%20report%202014.pdf>
- PPO Annual Report. 2016. *Procurement policy office annual report 2015/2016*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Annual%20Reports/PPO%20Annual%20Report%20January%202015%20to%20June%202016.pdf>
- PPO Annual Report. 2018. *Procurement policy office annual report 2017/2018*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Annual%20Reports/Annual%20Report%202017-2018.pdf>
- PPO Annual Report. 2020. *Procurement policy office annual report 2019/2020*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Annual%20Reports/Annual%20Report%202019-2020.pdf>
- PPO Annual Report. 2013. *Procurement policy office annual report 2013*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Annual%20Reports/PPO%20Annual%20Report%202013.pdf>
- PPO Annual Report. 2021b. *Procurement policy office annual report 2020/2021*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Annual%20Reports/AR2020-21.pdf>
- PPO Cancellation of bidding process. 2016. *Cancellation of bidding process regulations 2016*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Regulations/Regulation%20for%20Cancellation%20of%20Bidding%20Process.pdf>
- PPO Circular. 2020. *Circular No. 2 - Extension of deadline for Submission of Bids*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Circulars/Circular%202020/Circular%20No%202%20of%202020.pdf>
- PPO Circular. 2022. *Application for training on e-procurement system*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Circulars/Circular%202022/circular8.pdf>
- PPO Directives. 2010. *Directive 2 - Implementation of e-procurement - Launching of public procurement website*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Directives/Directive2.doc>
- PPO Directives. 2012a. *Directive 5 - Implementation of budgetary measures to promote SMEs participation in Public Procurement*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Directives/DirectiveNo5SMEs.doc>

PPO Directives. 2012b. *Directive 7 - Submission of bids*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Directives/DirectiveNo7.doc>

PPO Directives. 2013. *Directive No. 13 - KPIs for procurement lead time*. Procurement Policy Office, Republic of Mauritius. [https://ppo.govmu.org/Documents/Directives/ Directive%20No13%20-%20KPIs%20for%20Procurement%20Lead%20Time13.doc.](https://ppo.govmu.org/Documents/Directives/Directive%20No13%20-%20KPIs%20for%20Procurement%20Lead%20Time13.doc.)].

PPO Directives. 2015. *Directive 23 - Register of bids received*. Procurement Policy Office, Republic of Mauritius. [https://ppo.govmu.org/Documents/Directives/ Directive%2023%20of%202015.pdf](https://ppo.govmu.org/Documents/Directives/Directive%2023%20of%202015.pdf)

PPO Directives. 2017. *Directive 34 - Maximum time limit for issuing invitation for bids following prequalification of bidders*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Directives/Directive%20%20No%20%2034%20of%202017.pdf>

PPO Directives. 2018. *Directive 36 - Sensitizing bidders to the government e-procurement system*. Procurement Policy Office, Republic of Mauritius. [https://ppo.govmu.org/Documents/Directives/ Directive%20%20No%2036%20of%202018.pdf](https://ppo.govmu.org/Documents/Directives/Directive%20%20No%2036%20of%202018.pdf)

PPO Directives. 2020a. *Directive No 47. Mandatory use of the e-procurement system*. Procurement Policy Office, Republic of Mauritius. [https://ppo.govmu.org/Documents/Directives/ Directives%202020/ Directive%20No%2047.pdf](https://ppo.govmu.org/Documents/Directives/Directives%202020/ Directive%20No%2047.pdf)

PPO Directives. 2020b. *Emergency Procurement to combat COVID-19*. Procurement Policy Office, Republic of Mauritius. [https://ppo.govmu.org/Documents/Directives/ Directive%2044%20for%20COVID-19.pdf](https://ppo.govmu.org/Documents/Directives/Directive%2044%20for%20COVID-19.pdf)

PPO Directives. 2021. *Directive 58 - Applicable Margins of Preference to Goods Contracts*. Procurement Policy Office, Republic of Mauritius. [https://ppo.govmu.org/ Documents/Directives/ Directives%202021/ Directive%2058.pdf](https://ppo.govmu.org/Documents/Directives/Directives%202021/ Directive%2058.pdf)

PPO Electronic Bidding. 2016. *Public procurement (electronic bidding system) Regulations 2015*. Procurement Policy Office, Republic of Mauritius. [https://ppo.govmu.org/Documents/Regulations/ Public%20Procurement%20%28Electronic%20Bidding%20System%29%20Nov%202016.pdf](https://ppo.govmu.org/Documents/Regulations/Public%20Procurement%20%28Electronic%20Bidding%20System%29%20Nov%202016.pdf)

PPO e-PS portals. 2021. *List of all active e-PS portals*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Pages/eProcurement/List-of-Portals.aspx>

PPO Functions of policy office. 2020. *Functions of policy office*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Pages/About%20Us/Functions-of-Policy-Office.aspx>

PPO Procurement Guidelines. 2017. *Procurement structure in public bodies*. Procurement Policy Office, Republic of Mauritius. [https://ppo.govmu.org/Documents/ Procurement %20Guidelines/ Procurement%20Structure%20in%20Public%20Bodies.pdf](https://ppo.govmu.org/Documents/Procurement%20Guidelines/Procurement%20Structure%20in%20Public%20Bodies.pdf)

PPO Procurement policy office functional structure. n.d. *Procurement policy office functional structure*. Procurement Policy Office, Republic of Mauritius. [https://ppo.govmu.org/Documents/ Organisational%20Structure.pdf](https://ppo.govmu.org/Documents/Organisational%20Structure.pdf)

PPO Regulations. 2022. *Public procurement (Regulations 2008)*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Documents/Regulations/Public%20Procurement%20%28Regulations%202008%29%2028.12.23%20%281%29.pdf>

- PPO SBD e-PS. 2020. *Standard bidding documents for e-procurement system*. Procurement Policy Office, Republic of Mauritius. <https://ppo.govmu.org/Pages/SBD-ePs.aspx>
- Prins, J., Van Belle, J. P. & Turpin, M. 2022. Using information and distributed ledger technologies to combat public procurement corruption: A South African perspective. *Annals of Computer Science and Information Systems*. 32:223-230. <https://doi.org/10.15439/2022F41>
- Public Procurement Portal. 2022. *Public procurement portal procurement notices*. Procurement Policy Office, Republic of Mauritius. [https://publicprocurement.govmu.org/publicprocurement/?page\\_id=720](https://publicprocurement.govmu.org/publicprocurement/?page_id=720).
- Public Procurement Portal. 2021. *Public procurement portal procurement notices*. Procurement Policy Office, Republic of Mauritius. [https://publicprocurement.govmu.org/publicprocurement/?page\\_id=720](https://publicprocurement.govmu.org/publicprocurement/?page_id=720).
- Raghavan, V. & Chinta, R. 2023. Influence of leadership style on information systems project outcomes. *Journal of Computer Information Systems*. 63(4)1016-1029. <https://doi.org/10.1080/08874417.2022.2121781>
- Rajala, T. & Aaltonen, H. 2020. Reasons for the failure of information technology projects in the public sector. In H. Sullivan, H. Dickinson, H. Henderson (Eds). *The Palgrave handbook of the public servant* (1075-1093). Palgrave Macmillan. [https://doi.org/10.1007/978-3-030-03008-7\\_78-1](https://doi.org/10.1007/978-3-030-03008-7_78-1)
- Rakhel, T. M. & Putera, P. B. 2021. Corruption in public procurement: A bibliometric analysis. *COLLNET Journal of Scientometrics and Information Management*. 15(2):397-412. <https://doi.org/10.1080/09737766.2021.1989990>
- Ramotar, M. & Baptista, J. 2013. Legitimizing user participation in mature organisations - exploring social media adoption in a financial services organization. *Proceedings of Thirty Fourth International Conference on Information Systems*. Milan 2013. 1-20.
- Reddick, C.G. (2004). A two-stage model of e-government growth: Theories and empirical evidence for U.S. cities. *Government Information Quarterly*, 21(1), pp.51-64. [doi:https://doi.org/10.1016/j.giq.2003.11.004](https://doi.org/10.1016/j.giq.2003.11.004).
- Renken, J. & Heeks, R. 2013. Conceptualising ICT4D project champions. *Proceedings of the Sixth International Conference on Information and Communications Technologies and Development ICTD '13*. 2:128-131. <https://doi.org/10.1145/2517899.2517928>
- Renken, J., & Heeks, R. (2019). Champions of IS Innovations. *Communications of the Association for Information Systems*, 44, pp-pp. <https://doi.org/10.17705/1CAIS.04438>
- Ricard, L. M., Klijn, E. H., Lewis, J. M. & Ysa, T. 2017. Assessing public leadership styles for innovation: A comparison of Copenhagen, Rotterdam and Barcelona. *Public Management Review*. 19(2):134-156. <https://doi.org/10.1080/14719037.2016.1148192>
- Richet, J.L., Ngwenyama, O. & Rowe, F. 2016. Key stakeholders' dissent and their influences in the reframing of strategic intent in IS-enabled organizational transformation. In *ICIS 2016 Proceedings*. 9. Available at [https://aisel.aisnet.org/icis2016/Managing IS/Presentations/9](https://aisel.aisnet.org/icis2016/Managing%20IS/Presentations/9)
- Robey, D. and Newman, M. (1996). Sequential patterns in information systems development: an application of a social process model, *ACM Transactions on Information Systems*. 14(1).pp 30-63.

- Rodon, J., Sese, F. & Christiaanse, E. 2011. Exploring users' appropriation and post-implementation managerial intervention in the context of industry IOIS. *Information Systems Journal*. 21(3):223-248. <https://doi.org/10.1111/j.1365-2575.2009.00339.x>
- Rooyen, E. 2000. A comprehensive change management framework for information technology driven change in organizations. *ECIS 2000 Proceedings*. 78. Available at <https://aisel.aisnet.org/ecis2000/78>
- Ruef, M. & Scott, W. R. 1998. A multidimensional model of organizational legitimacy: Hospital survival in changing institutional environments. *Administrative Science Quarterly*. 43(4): 877-904.
- Sahay, S. & Walsham, G. 1997. Social structure and managerial agency in India. *Organization Studies*. 18(3):415-444. <https://doi.org/10.1177/017084069701800304>
- Sánchez-Rodríguez, C., Martínez-Lorente, A. R. & Hemsworth, D. 2020. E-procurement in small and medium sized enterprises: Facilitators, obstacles and effect on performance. *Benchmarking: An International Journal*. 27(2):839-866. <https://doi.org/10.1108/bij-12-2018-0413>
- Santa, R., MacDonald, J.B. & Ferrer, M. 2019. The role of trust in e-Government effectiveness, operational effectiveness and user satisfaction: Lessons from Saudi Arabia in e-G2B. *Government Information Quarterly*. 36(1):39-50.
- Sarker S. 1995. Understanding and managing I/S implementation in "socially constructed" organizations. *AMCIS 1995 Proceedings*. 188. Available at <http://aisel.aisnet.org/amcis1995/188>
- Saunders, M., Lewis, P. & Thornhill, A. 2009. *Research methods for business students*, 5th edition. Pearson education.
- Saxena, K.B. 2005. Towards excellence in e-governance. *International Journal of Public Sector Management*. 18(6):498-513. <https://doi.org/10.1108/09513550510616733>
- Scheepers, R., Scheepers, H. & Ngwenyama, O. K. 2006. Contextual influences on user satisfaction with mobile computing: Findings from two healthcare organizations. *European Journal of Information Systems*, 15(3):261-268.
- Schiff D. S., Schiff K. J., & Pierson P. (2022). Assessing public value failure in government adoption of artificial intelligence. *Public Administration*, 100(3), 653–673. <https://doi.org/10.1111/padm.12742>
- Schmidt, J. (2023). Mitigating risk of failure in information technology projects: Causes and mechanisms. *Project Leadership and Society*. (4). <https://doi.org/10.1016/j.plas.2023.100097>.
- Scott, W. R. 1987. The adolescence of institutional theory. *Administrative Science Quarterly*. 32:493-511.
- Seo, W. J., Lee, D. C. & Lim, G. G. 2012. A Study on the performance evaluation of G2B procurement process innovation by using MAS: Korea G2B KONEPS Case. *Journal of Intelligence and Information Systems*. 18(2):157-175. <https://doi.org/10.13088/jiis.2012.18.2.157>
- Siciliani, L., Taccardi, V., Basile, P., Di Ciano, M. and Lops, P.(2023). AI-based decision support system for public procurement. *Information Systems*, 119, p.102284.
- Silva, L., Backhouse, J. (1997). Becoming Part of the Furniture: The Institutionalization of Information Systems. In: Lee, A.S., Liebenau, J., DeGross, J.I. (eds) *Information Systems and Qualitative Research*. IFIP — The International Federation for Information Processing. Springer, Boston, MA. [https://doi.org/10.1007/978-0-387-35309-8\\_20](https://doi.org/10.1007/978-0-387-35309-8_20)

- Silva, L. & Hirschheim, R. 2007. Fighting against windmills: Strategic information systems and organizational deep structures. *MIS Quarterly*. 31(2):327-354. <https://doi.org/10.2307/25148794>
- Siriluck, R. 2012. Critical governance concerns of Thailand e-government procurement. *CONF-IRM 2012 Proceedings*. 52. Available at <http://aisel.aisnet.org/confirm2012/52>
- Sjöström, J. & Goldkuhl, G. 2010. Stakeholder-centric IS Design in an e-Government Context. In *Proceedings of eChallenges 2010*, Warsaw. Poland. October 2010. 2010:1-8.
- Somasundaram, R. 2008. Challenges in implementation of e-procurement in the Indian Government. In Ari-Veikko, A. (eds.) *Electronic Government: Concepts, Methodologies, Tools, and Applications* ( 2106-2121). IGI Global.
- Somasundaram, R. 2004. Diffusion of eprocurement in the public sector - revisiting centralization versus decentralisation, debates as a twist in the tale. *ECIS 2004 Proceedings*, Turku, Finland. 1546-1556. Available at <http://aisel.aisnet.org/ecis2004/114>
- Sorte Junior, W. F. 2022. Pursuing ways to improve the Brazilian procurement system: A comparison between the framework agreements in the United Kingdom and the Brazilian price registration system. *Journal of Public Procurement*. 22(2):128-144. <https://doi-org.ezproxy.uct.ac.za/10.1108/JOPP-04-2020-0029>
- Southon, G., Sauer, C. and Dampney, K., 1999. Lessons from a failed information systems initiative: issues for complex organisations. *International journal of medical informatics*, 55(1), pp.33-46.
- Stanley-Brown, J. & Weistroffer, H. 2019. Relevant participants' participation in systems development: When is participation irrelevant? *SAIS 2019 Proceedings*. 19. Available at <https://aisel.aisnet.org/sais2019/19>
- Statista. 2020. *Africa: E-government development index (EGDI): By country 2020*. Statista. <https://www.statista.com/statistics/1140520/egdi-e-government-development-index-african-countries/>
- Statistics Mauritius. 2021. *Economic and Social Indicators Information and Communication Technologies (ICT) Statistics -2021*. Statistics Mauritius. [https://statsmauritius.govmu.org/Documents/Statistics/ESI/2022/EI1663/ICT\\_Yr21\\_120722.pdf](https://statsmauritius.govmu.org/Documents/Statistics/ESI/2022/EI1663/ICT_Yr21_120722.pdf)
- Strong, D.M. & Volkoff, O. 2010. Understanding organization—Enterprise system fit: A path to theorizing the information technology artifact. *MIS Quarterly*. 34(4):731. <https://doi.org/10.2307/25750703>
- Suchman, M. C. 1995. Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*. 20(3):571-610.
- Sun, C.M. (2012). "The Adaptation and Routinization Processes of A Continuous Auditing System Implementation" . *AMCIS Proceedings*. 21. Available at: <http://aisel.aisnet.org/amcis2012/proceedings/AccountingInformationSystems/21>
- Swanson, E.B. & Ramiller, N.C. 1997. The organizing vision in information systems innovation. *Organization Science*. 8(5):458-474. <https://doi.org/10.1287/orsc.8.5.458>
- Tate, M., Lofgren, K, & Pirini, J. (2023). "Towards a multi-stakeholder framework for evaluating digital government success" . *AMCIS 2023 Proceedings*. 7. [https://aisel.aisnet.org/amcis2023/sig\\_egov/sig\\_egov/7](https://aisel.aisnet.org/amcis2023/sig_egov/sig_egov/7)

- The Mauritius Chamber of Commerce and Industry. 2020. *Presentation of e-procurement system*. Available: <https://www.mcci.org/en/media-news-events/business-updates/presentation-of-the-e-procurement-system/> [31 March, 2021].
- Theiss, V., Krespi, N. T. & Lavarda, C. E. F. 2013. Legitimation implications in the process of implementing an ERP system in a holding company. *Journal of Information Systems and Technology Management*. 10:287-302.
- Theiss, V., Thais K. E. C. 2013. Legitimation implications in the process of implementing an ERP systems in a holding company. *Journal of Information Systems and Technology Management*. 10:287-302.
- Thomas, G. & Fernandez, W. (2008). Success in IT projects: A matter of definition?. *International Journal of Project Management - INT J PROJ MANAG*. 26. 10.1016/j.ijproman.2008.06.003.
- Thomas, G. & Myers, K. 2015. The anatomy of the case study. Sage. <https://dx.doi.org/10.4135/9781473920156>
- Tornatzky, L. G., Fleischer, M. & Chakrabarti, A. K. 1990. The processes of technological innovation. Lexington Books.
- Tossy, T. & Brown, I. T. 2017. Collaborating partnerships: A project-based legitimizing strategy amongst East African e-learning providers. In *Information Technology Integration for Socio-Economic Development* ( 32-51). IGI Global. <https://doi.org/10.4018/978-1-5225-0539-6.ch002>
- Transparency International Bangladesh. 2020. E-GP process shrouded in political influence, collusion, and syndication: TIB calls for more. Transparency International Bangladesh. <https://www.ti-bangladesh.org/beta3/index.php/en/activities/6331-e-gp-process-shrouded-in-political-influence-collusion-and-syndication-tib-calls-for-more-accountability>
- Transparency International. 2022. CPI 2021 for Sub-Saharan Africa: Amid democratic turbulence,... Transparency International <https://www.transparency.org/en/news/cpi-2021-sub-saharan-africa-amid-democratic-turbulence-deep-seated-corruption>
- Tutu, S. O., Kissi, E., Osei-Tutu, E. & Desmond, A. 2019. Evaluating critical factors for the implementation of e-procurement in Ghana. *International Journal of Procurement Management*. 12(1):1-14.
- Vaast, E. & Walsham, G., 2005. Representations and actions: The transformation of work practices with IT use. *Information and Organization*, 15(1):65-89.
- Vaidya, K. & Campbell, J. 2016. Multidisciplinary approach to defining public e-procurement and evaluating its impact on procurement efficiency. *Information Systems Frontiers*. 18:333-348.
- Vaidya, K., Sajeev, A. & Callender, G. 2006. Critical factors that influence E-procurement implementation success in the public sector. *J. Public Procure*. 6(1/2):70-99.
- Van der Hoof, B.V.D. & Hafkamp, L. 2017. Dealing with dissonance: Misfits between an EHR system and medical work practices. *Proceedings of 38th International Conference on Information Systems: Transforming Society with Digital Innovation, ICIS 2017*. AES Electronic Library.
- Van der Voet, J., Kuipers, B. S. & Groeneveld, S. 2016. Implementing change in public organizations: The relationship between leadership and affective commitment to change in a public sector context. *Public Management Review*. 18(6):842-865. <https://doi.org/10.1080/14719037.2015.1045020>

- Van Offenbeek, M.V., Boonstra, A. & Seo, D. 2013. Towards integrating acceptance and resistance research: Evidence from a telecare case study. *European Journal of Information Systems*. 22(4):434-454. <https://doi.org/10.1057/ejis.2012.29>
- Venkatesh, V., Brown, S.A. & Bala, H. 2013. Bridging the qualitative-quantitative divide: Guidelines for conducting mixed methods research in information systems. *MIS Quarterly*. 37(1):21-54. <https://doi.org/10.25300/misq/2013/37.1.02>
- Venkatesh,V., Bala,H & Sambamurthy,V. (2016) Implementation of an Information and Communication Technology in a Developing Country: A Multi-method Longitudinal Study in a Bank in India. *Information Systems Research*. (27). Pp 558-579. Available : <https://doi.org/10.1287/isre.2016.0638>
- Venkatesh, V. & Davis, F. D. 2000. A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*. 46(2): 186-204.
- Venkatesh, V., Morris, M. G., Davis, G. B. & Davis, F. D. 2003. User acceptance of information technology: Toward a unified view. *MIS Quarterly*. 27(3):425-478.
- Venkatesh, V., Thong, J.Y.L. & Xu, X. 2012. Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS Quarterly*. 36(1):157-178. <https://www.jstor.org/stable/41410412>
- Venkatesh, V. ,Thong, J. & Xu, X. 2016. Unified Theory of Acceptance and Use of Technology: A synthesis and the road ahead. *Journal of the Association for Information Systems*. 17(5):328-376. SSRN: <https://ssrn.com/abstract=2800121>
- Vuori, T. & Huy, Q. (2015). Distributed Attention and Shared Emotions in the Innovation Process. *Administrative Science Quarterly*. 61. 10.1177/0001839215606951.
- Walsham, G. 1993. *Interpreting information systems in organizations*. John Wiley Sons, Inc.
- Walsham, G. (1995) Interpretive Case Studies in IS Research: Nature and Method. *European Journal of Information Systems*, 4, 74-81. Available at: <https://doi.org/10.1057/ejis.1995.9>
- Walsham, G. 2006. Doing interpretive research. *European Journal of Information Systems*. 15(3): 320-330. <https://doi.org/10.1057/palgrave.ejis.3000589>
- Walsham, G. & Han, C. K. 1990. Structuration theory and information systems research. *Journal of Applied Systems Analysis*. 18:77-85.
- Webb, H. W. (1997). "Information System Requirements Determination Processes Under Conditions of High Task and System Complexity: Toward a Model of User Participation" (1997). AMCIS 1997 Proceedings. 156.
- Williams S, Hardy C. Public E-procurement as socio-technical change. *Strat. Change*. 2005;14:273–281. doi: 10.1002/jsc.728.
- Williams-Elegbe, S. 2018. Systemic corruption and public procurement in developing countries: Are there any solutions?. *Journal of Public Procurement*. 18(2):131-147. <https://doi.org/10.1108/jopp-06-2018-009>
- Williams-Elegbe, S. 2014. Beyond uncitral: The challenges of procurement reform implementation in Africa. *Stellenbosch Law Review*. 25(1):209-224.

- Wilson, M. & Howcroft, D. 2002. Re-conceptualising failure: Social shaping meets IS research. *European Journal of Information Systems*. 11:236-250. <https://doi.org/10.1057/palgrave.ejis.3000437>
- Wiredu, G. O. 2012. The implementation of G2B inter-organizational information systems: A dialectical design perspective. *The African Journal of Information Systems*. 4(4):2.
- Wirtz, B., Lütje, S. & Schierz, P. G. 2009. An empirical analysis of the acceptance of e-procurement in the German public sector. *International Journal of Public Administration*. 33(1):26-42. <https://doi.org/10.1080/01900690903188768>
- World Bank. 2021. *Global Public Procurement Database*. The World Bank. <https://www.worldbank.org/en/topic/governance/brief/global-public-procurement-database>
- World Bank. 2022. *World Bank-funded project drives public procurement reforms in Bangladesh*. The World Bank. Available at: <https://www.worldbank.org/en/results/2022/08/04/world-bank-funded-project-drives-public-procurement-reform-in-bangladesh> [2 Dec., 2022].
- World Bank. 2023, September 19. *Literacy rate, adult total (% of people ages 15 and above) - Mauritius Data*. The World Bank. <https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?end=2016&locations=MU&start=1991>
- Worthley, J. A. 2000. *Managing information in healthcare: Concepts and cases*. Health Administration Press.
- Yadav, D. 2022. Criteria for good qualitative research: A comprehensive review. *The Asia-Pacific Education Researcher*. 31(6):679-689. <https://doi.org/10.1007/s40299-021-00619-0>
- Yin, R. 2004. Case study methods. In *Complementary methods for research in education*, 3rd ed. Lawrence Erlbaum Associates, Inc. 111 – 122.
- Yunus, N.A., Hartman, T., Lucassen, P., Barton, C., Russell, G., Altun, A. and Sturgiss, E., 2022. Reporting of the translation process in qualitative health research: a neglected importance. *International Journal of Qualitative Methods*. (21). p.16094069221145282.
- Zhang, X. & Bartol, K. M. 2010. Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal*. 53(1):107-128.
- Zimmerman, M. A. & Zeitz, G. J. 2002. Beyond survival: Achieving new venture growth by building legitimacy. *Academy of Management Review*. 27(3):414-431.
- Zucker, L. G. 1987. Institutional theories of organization. *Annual Review of Sociology*. 13(1):443-464.

APPENDIX B  
(Page 247)

Document Name	Codes	References	Description of document and source
Audit Report 2018-19 - Mauritius_NAO03	16	109	Directors of Audit reports: NAO (2019,2017,2018, 2020)
Audit_Report_2016_17_NAO01	12	85	
Audit_Rep_2017_18_Mtius_NAO02	12	46	
AR_2019_20_Mauritius_NAO04	8	76	
Procurement Structure in Public Bodies_PPO14	19	138	PPO Procurement Guidelines (2017).
Public Procurement (Regulations 2008)_PPO12	16	75	PPO Regulations (2022)
Directive No 47_mandatory_use_PPO20	10	11	PPO directives (2020)
Directive No 36 of 2018_PPO23	8	11	PPO directives (2018)
Public Procurement (Electronic Bidding System)_PPO13	8	10	PPO Electronic Bidding (2016)
Circular No 2 of 2020_PPO25	7	7	PPO circulars (2020)
Directive 23 of 2015_PPO21	7	7	PPO directives (2015).
Directive No13 - KPIs for Procurement Lead Time_PPO19	7	7	PPO directives (2013).
Regulation for Cancellation of Bidding Process_PPO11	6	6	PPO cancellation bidding process (2016)
DirectiveNo5SMEs_PPO16	5	5	PPO directives (2012)
Directive No 34 of 2017_PPO24	4	4	PPO directives (2017)
DirectiveNo7_PPO15	4	4	PPO (2012a)
Directive No 36 of 2018 (2)_PPO22	4	4	PPO (2018)
Directive-28_PPO17	2	2	<a href="https://ppo.govmu.org/Documents/Directives/Directive-28.pdf">https://ppo.govmu.org/Documents/Directives/Directive-28.pdf</a>
Directive2_PPO18	2	2	PPO (2010).

CircNo8of2012_PPO26 (Bid Evaluation guide)	2	2	PPO circular (2022)
Annual Report 2017-2018_PPO33	35	85	PPO Annual report (2018)
PPO Annual Report 2016-PPO28	33	94	PPO Annual report (2017) <a href="https://ppo.govmu.org/Documents/Annual%20Reports/PPO%20Annual%20Report%202016-2017.pdf">https://ppo.govmu.org/Documents/Annual%20Reports/PPO%20Annual%20Report%202016-2017.pdf</a>
Annual Report 2018-2019_PPO32	28	58	PPO Annual report (2019) <a href="https://ppo.govmu.org/Documents/Annual%20Reports/Annual%20Report%202018-2019.pdf">https://ppo.govmu.org/Documents/Annual%20Reports/Annual%20Report%202018-2019.pdf</a>
PPO annual report 2014_PPO29	26	64	PPO Annual report (2014) <a href="https://ppo.govmu.org/Documents/Annual%20Reports/PPO%20annual%20report%202014.pdf">https://ppo.govmu.org/Documents/Annual%20Reports/PPO%20annual%20report%202014.pdf</a>
PPO Annual Report January 2015 to June 2016_PPO27	23	53	PPO Annual report (2016) <a href="https://ppo.govmu.org/Documents/Annual%20Reports/PPO%20Annual%20Report%20January%202015%20to%20June%202016.pdf">https://ppo.govmu.org/Documents/Annual%20Reports/PPO%20Annual%20Report%20January%202015%20to%20June%202016.pdf</a>
Annual Report 2019-2020_PPO31	14	17	PPO Annual report (2020) <a href="https://ppo.govmu.org/Documents/Annual%20Reports/Annual%20Report%202019-2020.pdf">https://ppo.govmu.org/Documents/Annual%20Reports/Annual%20Report%202019-2020.pdf</a>
PPO Annual Report 2013_PPO30	14	31	PPO Annual report (2013) <a href="https://ppo.govmu.org/Documents/Annual%20Reports/PPO%20Annual%20Report%202013.pdf">https://ppo.govmu.org/Documents/Annual%20Reports/PPO%20Annual%20Report%202013.pdf</a>
CAPAM Final Presentation 15.10.2018_pdf_CWA02	20	54	See Annex C
e-Procurement-slide_PPO34	13	14	See Annex D
20181024_223158_CWA03	5	5	See Annex E
20211023_174149_USER_MAN ULPPO37	5	5	See annex F
20211023_174409_USRMANU AL_PPO35	4	4	See annex G
20211023_174238_USR_MNUL_PPO36	4	4	See annex H
Video_obs			<i>Video will be uploaded on cloud for access</i>
aPress Notice jetty Mahebourg_PPO53	11	13	See Annex J
IFB 2020 2021 Q14_PPO46	11	13	See annex K
Project Overview_PPO38	10	42	<a href="https://eproc.publicprocurement.govmu.org/files/masterfiles/Project%20Overview.pdf">https://eproc.publicprocurement.govmu.org/files/masterfiles/Project%20Overview.pdf</a>
extract_of_user_guide_PPO49	7	7	See annex B.4 – 14 PPO49
ceremonialaction_PPO52	6	6	See annex B.4 PPO52
IFB patterns_PPO45	5	5	See B.4 – 15 PPO45

IFBonline_PPO42	5	5	See B.4 Annex PPO42
circular KPI 10.07.20MPSAIR02	5	12	MPSAIR circular (2020c)
CL18_PPO51	4	4	MPSAIR circular (2002b)
Final MPSAIR Newsletter 15_MPSAIR01	4	4	MPSAIR e-Newsletter (2020a)
extract of PRB2016_PPO50	4	4	Prb.govmu.org
MCCIsupport_PPO41	4	4	The Mauritius Chamber of Commerce and Industry (2020)
Press Notice - Tender CPB-13- 2020 CEB_PPO40	3	3	Annex O
Procurement Notice ONB 6 of 2020-2021_PPO39	3	3	Annex M
ifb_procgp12_21_22_PPO44	3	3	Annex P
Organisational Structure_PPO55	2	2	Annex B.2 PPO55 - <a href="https://ppo.govmu.org/Documents/Organisational%20Structure.pdf">https://ppo.govmu.org/Documents/Organisational%20Structure.pdf</a>
HOW-TO-REGISTER-ON-THE- E-PROCUREMENT_PPO08	12	18	e-procurement system of Government of Mauritius Register on e-PS (n.d).
HOW TO PREPARE AND SECURE YOUR BID_PPO04	9	9	e-procurement system of Government of Mauritius (n.d.)
FAQ_PPO02	8	8	E-procurement system of Government of Mauritius - FAQ (n.d).
Guidelines for Suppliers on the use of e-Procurement PPO03	6	20	
USER MANUAL FOR - USING DSC WITH e-PS_PPO10	5	5	E-procurement system of Government of Mauritius – DSC user Manual (n.d.)
USER MANUAL FOR UPLOADING DOCUMENT _PPO09	5	5	E-procurement system of Government of Mauritius -Upload document (n.d.)
HOW TO SEND QUERY TO PUBLIC BODY_PPO06	5	5	E-procurement system of Government of Mauritius – Query to Public bodies (n.d).
HOW TO RE-ENCRYPT AND SUBMIT BID_PPO05	5	5	E-procurement system of Government of Mauritius - Encryption/Decryption (n.d.) <a href="https://eproc.publicprocurement.govmu.org/files/masterfiles/HOW%20TO%20RE-ENCRYPT%20AND%20SUBMIT%20BID.pdf">https://eproc.publicprocurement.govmu.org/files/masterfiles/HOW%20TO%20RE-ENCRYPT%20AND%20SUBMIT%20BID.pdf</a>
HOW TO VIEW DETAILS AFTER OPENING OF BIDS_PPO07	5	5	E-procurement system of Government of Mauritius - Comparative Statement (n.d.) <a href="https://eproc.publicprocurement.govmu.org/files/masterfiles/HOW%20TO%20VIEW%20DETAILS%20AFTER%20OPENING%20OF%20BIDS.pdf">https://eproc.publicprocurement.govmu.org/files/masterfiles/HOW%20TO%20VIEW%20DETAILS%20AFTER%20OPENING%20OF%20BIDS.pdf</a>

esbd_PPO01	4	4	PPO SBD e-PS (2020) <a href="https://ppo.govmu.org/Pages/SBD-ePs.aspx">https://ppo.govmu.org/Pages/SBD-ePs.aspx</a>
Electronic-Government-Procurement-Implementation-Types-Options-for-Africa.pdf	2	2	Chebili et al., (2021). <a href="https://documents1.worldbank.org/curated/en/822411643296037962/pdf/Electronic-Government-Procurement-Implementation-Types-Options-for-Africa.pdf">https://documents1.worldbank.org/curated/en/822411643296037962/pdf/Electronic-Government-Procurement-Implementation-Types-Options-for-Africa.pdf</a>

Table B.2 – List of documents for document analysis

Table B.3 – Coded extracts from the documents

Reference	Coded Extracts	Document name (from table B.2)	Source (reference)
PPO10	<p><i>“The solution is called ePS. The project type is COTS, based on the Nextenders solution (India). The contract was awarded to a consortium of Nextenders and Sify Technology. The consortium took charge of all the phases – design, development, testing, training, change management – of the project, along with the government internal resources that were allocated to the ePS implementation.”</i></p> <p><i>“2013: Awarding of the contract to Nextenders and Sify Technology. 2014: Design of the core model of the solution, beginning of the build phase, expected to last 18 months. September 2015: Deployment of the software, publication of the first tender. The solution is not yet complete, and the roadmap is not achieved. But the Mauritian government decided to deploy anyway and to keep enhancing the software while it runs”</i></p>	Electronic-Government-Procurement-Implementation-Types-Options-for-Africa.pdf	Chebili et al., (2021)
PPO11	<i>“The heads of the divisions were reassured through continuous mock implementation to convince them, and the top management was adamant. All the staff involved in the procurement process have been taken on board and vigorously trained. “</i>		PPO Annual Report 2016
PPO12	<i>“Debriefing of unsuccessful bidders The debriefing of an unsuccessful bidder shall be limited to information relating to – (a) the reasons for which his bid was unsuccessful; (b) reasons for which the bid of the successful bidder was retained.”</i>	Public Procurement (Regulations 2008) _PPO12	PPO Regulations (2022)

	<p><i>“a public body shall maintain a securely locked bid box into which bidders may deposit their bids”</i></p> <p><i>“Any bid received in the manner provided for in paragraph (3) shall be A public body shall ensure that all bids received are kept in a secure manner so as not to permit bids to be opened by accident or viewed”</i></p>		
PPO14	<p><i>“Request for Clarification</i>  <i>(11) Contacts between the Procuring Entity’s officials, including the Evaluation Committee, and bidders should be limited to official communications only. All such communication must be in writing. Procuring Entity’s officials should not entertain calls or informal communication, meetings, or other contact with any bidder. The Evaluation Committee has to handle all Requests for Clarifications through an official channel within the organization. There should be no direct dealing between the Evaluation Committee and the Bidders.”</i></p>	Procurement Structure in Public Bodies_PPO14 Procurement Policy Office Procurement Guidelines (2017)	PPO Procurement Guidelines (2017)
	<p><i>“Public officials and other persons participating in the deliberations of the Procurement Committee are duty bound to comply with the provisions of the Prevention of Corruption Act (POCA) and the PPA and the relevant extracts are referred to hereunder:”</i></p>		
	<p><i>“Confidentiality of bid evaluation Except as provided in the Act and in these regulations, any information relating to the examination, clarification, evaluation and comparison of bids shall not be disclosed to bidders or to any other person not involved officially in the examination, evaluation or comparison of bids or in the decision on which bids should be accepted.”</i></p>		
	<p><i>“Every public body shall keep record of every procurement proceeding. The record shall include documentation relating to the proceeding such as the invitation to bid, decision of award, work take-over certificate and any other information on the method of the supplier's completion of his commitment.”</i></p>		
PPO16	<p><i>“For low value procurement up to Rs 500,000 undertaken through informal quotation under section 25(2)(a) of Public Procurement Act 2006, the number of suppliers to be solicited should include at least two SMEs, as far as reasonably possible.”</i></p>	DirectiveNo5SMEs_PPO16	PPO directives (2012)
PPO19	<p><i>“The time taken for challenge and appeal procedures has been excluded. An appropriate procurement lead time, inter-alia, takes into account the bid submission period allowing sufficient</i></p>	Directive No13 - KPIs for Procurement Lead Time_PPO19	PPO directives (2013).

	<i>time for bidders to prepare and submit their bids and reasonable time for examination, evaluation, approval and award of contracts”</i>		
PPO27	<i>“Since its launch on 28 Sep 2015, apart from working with Nextenders, the e-PS software supplier, on Phase 2 and 3, the PPO has strived in managing change towards progressively bringing public bodies and suppliers online on the e-PS”</i>	PPO Annual Report January 2015 to June 2016_PPO27	PPO Annual Report (2016)
PPO28-01	<i>“Whilst a lack of transparency has often been attributed to public procurement processes, with the setting up of the e-PS, users of the system are assigned specific roles with all the procurement workflows and processes accounted for through Management Information System reports and System Audit Trails, thus improving transparency and accountability”</i>	PPO Annual Report 2016-_PPO28	PPO Annual Report (2017)
PPO28-02	<i>“In line with the vision of the Office for “A world class procurement system for Mauritius, the e-Procurement System (e-PS) is a national IT project to digitalise all public procurement processes in the Republic of Mauritius. Setup and managed by the PPO, the e-PS is a web-based platform that enables public bodies to prepare and publish their invitation for bids, receive and evaluate bids and notify bidders of awards online. Similarly, bidders use the system to prepare and securely submit their bids online using a Digital Signature Certificate (DSC) which provides encryption of the bid data and authentication of the submission, maintaining integrity and confidentiality of the bid data”</i>	PPO Annual Report 2016-_PPO28	
PPO28-03	<i>“Whenever an e-tender was published by a Public Body, the PPO contacted the Public Body’s usual suppliers and offered a free program of training consisting of three consecutive half day capacity building sessions by PPO trainers in PPO premises. Furthermore, in order not to miss any potential supplier a notice for supplier training on e-PS was publicised in the local papers for the e-tender. “</i>	PPO Annual Report 2016-_PPO28	
PPO28-03	<i>“PPO has planned to hand hold the first five public bodies for their pilot tenders going live for soft launch on the e-PS” The hand holding continues up to 5 e-tenders, by then the public</i>	PPO Annual Report 2016-_PPO28	

	<i>body gets the confidence and maturity to become independent of the PPO in carrying out operations on the e-PS with continued remote support from the e-Procurement Help Desk as required. Hand holding: This consists of the PPO, availing of its officers, called facilitators, to support the officers of the public body through the process of: a. preparation, review, approval, publishing and closing of the e-tender; b. opening and evaluation of e-bids; and c. award of the e-tender.”</i>		
PPO28-04	<i>“The e-PS also caters for bids from international bidders with PPO providing suppliers’ self-training videos on YouTube channel Procurement Policy Office and technical support through the e-Procurement Help Desk”</i>	PPO Annual Report 2016-_PPO28	
PPO28-05	<i>“In this context, the PPO has already initiated various measures with a view to improving the score of Mauritius, including scaling up the implementation of e-procurement. Countries having reached higher maturity in the implementation of e-procurement have been attributed overall higher scores as e-procurement allows better supplier and public body performance in doing business in the areas assessed.”</i>	PPO Annual Report 2016-_PPO28	
PPO29-01	<i>“For the implementation of the project, PPO has set up a Steering Committee chaired by the Director of the Office, a Project Team for Legal and Security Compliance headed by a representative of the Ministry of Technology, Communication and Innovation. There are other two teams, one for Project Implementation and one for Capacity Building and Change Management which are respectively headed by the two members of the PPO. The Project teams are working in close collaboration with an on-site supplier’s team comprising two full time resource persons. The project implementation is also supported by a Project Manager from the Central Informatics Bureau, the IT Security Unit and the Central Information Systems Division”.(PPO29)</i>	PPO annual report 2014_PPO29	PPO Annual Report (2014)
PPO29-02	<i>“The Ministry of Public Infrastructure, National Development Unit, Land Transport and Shipping would unbundle contracts given on a District wise basis to ensure that a larger number of SMEs get access to public contracts. “</i>		
PPO29-03	<i>“For scaling up this skill enhancement capability, the patronage of the private sector and partnership with the Ministry of Civil Service Affairs have been mustered.”</i>		

PPO30-01	<i>"In the context of e-government initiative, the Ministry of Finance and Economic Development signed a supply contract in December 2013 with Nextenders (India) Pvt. Ltd in consortium with Sify Technologies Ltd of India for the supply, installation, testing and commissioning of an e-procurement application." In line with Government's plan towards a fully-fledged digital society requiring increased use of ICT in public administration, the PPO introduced the e-Procurement"</i>	PPO Annual Report 2013_PPO30	PPO Annual Report (2013)
PPO30-02	<i>"The road is generally not easy as it requires commitment to break many established orthodoxies for the technology. Requiring public bodies to embrace e-Procurement has been an unprecedented challenge to break administrative inertia. "</i>		
PPO30-03	<i>"To facilitate the transition from paper base to electronic transaction, the e-public procurement project will be supported by a change management strategy for Public Bodies and suppliers."</i>		
PPO31-01	<i>"Training has been provided during the financial year 2019/2020 to 114 public officers involving 16 public bodies to conduct procurement either as Initiators/Preparers and Reviewer of Invitation for Bids or as Evaluators to carry out evaluation of Bids. Simultaneously, 255 suppliers were trained on the system"</i>	Annual Report 2019-2020_PPO31	PPO Annual Report (2020)
PPO31-02	<i>"Training has also been provided to end users on how to prepare and submit specifications on e-Procurement System ready excel format. The submission of information on e-Procurement System ready excel form enables procurement officers to import the data from the excel into the templates on the system."</i>		
PPO32-01	<i>"In our previous Annual Report, the PPO set the deployment target of onboarding 54 of the highest spending public bodies by July 2019. This target was arrived at from an analysis of public procurement"</i>	Annual Report 2018-2019_PPO32	PPO Annual Report (2019)
PPO32-02	<i>"Training has also been provided to Evaluators in the use of e-PS to carry out the evaluation of bids. A list of names of 114 trained evaluators has been posted on the PPO website. They are available for providing their services to public bodies for evaluation of e-bids."</i>		
PPO33-01	<i>"Based on our local experience, this Office has mandated public bodies onboarding the e-PS to setup an e-Procurement Cell in</i>	Annual Report 2017-2018_PPO33	PPO Annual Report (2018)

	<i>their respective organisations to drive the transformation process”</i>		
PPO33-02	<i>“On the other hand, Procurement Policy Office, through rigorous review of its operations, is ISO 9001:2015 certified since 30 June 2018 giving credibility that its management processes merasodet the required international quality standards to deliver on its mandate.”</i>		
PPO33-03	<i>“The e-PS obtained international recognition through the Certificate of Distinction in “Innovation in Public Service Management” by the Commonwealth Association of Public Administration and Management (CAPAM), awarded to the Central Water Authority. Its implementation of e-Procurement was recognized as one of the 2018 International Innovation Award finalists and came out ahead of Singapore but just behind India in the finals.”</i>		
PPO33-04	<i>“Despite the fact that some public bodies have been provided support and handholding by PPO, uptake of this change has been slow mainly because they have not viewed public procurement as a management function which requires top level commitment, resourcing and leadership.”</i>		
PPO33-05	<i>“Following feedback from public bodies and bidders, this Office has worked with the project implementer to bring out in August 2018 an upgraded version of the e-Procurement platform in order to improve the user experience in terms of functionality and speed at no additional cost to the project.”</i>		
PPO38-01	<i>“The project has also been elevated to the public sector reform agenda of the Ministry of Civil Service and Administrative Reforms as the growing use of e-PS platform will spin eprocurement to boost public sector reform. It has the sustainable public/private content in terms of people, process, and output to use ICT as driver of performance culture in work environment.”</i>	Project Overview_PPO38	
PPO38-02	<i>“The challenge is more of management commitment to change than a technological constraint. It requires: Senior management collective commitment to harness change in process and remodel staff behavior in the new work set up to facilitate use of e-PS to carry their respective procurement”</i>		

PPO47-01	<i>“This project aims to transform the way in which approximately 5000 local and foreign suppliers do business of selling to Government as well as improving the productivity and efficiency of about 3500 public officers who are involved in public procurement processes of buying from those suppliers. It will collapse bureaucracy and deepen the use of ICT in the work environment”</i>	PPO Annual Report January 2015 to June 2016_PPO27	PPO Annual Report (2016)
PPO47-02	<i>“Within this perspective, prior to boarding e-PS, PPO assists public bodies to carry out a mock to-be by mounting and publishing an IFB on line in the test instance for them to successfully rocket it out in the live on e-PS with the actual procurement taking place online.”</i>		
PPO47-03	<i>“Requiring public bodies to embrace e-Procurement has been an unprecedented challenge to break administrative inertia. In consequence, the Policy Office embarked on a change culture, painful in some public bodies to run the last mile to routinise not only e-procurement but deepen the use of ICT in their work environment Implementation in phases will facilitate the two main stakeholders, that is, the public bodies and suppliers to shift to complete electronic procurement transactions. In essence, this aims at transforming their work methods and organisational culture to catalyse productivity with same resource base.”</i>		
PPO 47-04	<i>“ Joint Public Private Sector Steering Committee for e-PS Launch As public procurement market covers procurement transactions by all public bodies with a large number of private suppliers, a joint Public Private Sector Steering Committee comprising, amongst others JEC, Ministry of Technology, Communication and Innovation and Ministry of Civil Service and Administrative Reforms, has been working on mission mode to deliver on the launch and subsequent rollouts. The private sector partners have agreed to assist to scale up e-procurement training to reach a wider private sector supplier base.”</i>		
PPO53	<i>MOF/Q65/2018-2019/ONB7 “The Ministry of Ocean Economy, Marine Resources, Fisheries</i>	aPress Notice jetty Mahebourg_PPO53	See Annex J

	<p><i>and Shipping hereby invites national consultants for Consultancy Services for Undertaking Environmental Impact Assessment (EIA) Study for Construction of Jetty at Mahebourg.</i></p> <p><i>2. For further details, the document may be downloaded from the Public Procurement Portal on: publicprocurement.govmu.org</i></p> <p><i>3. Proposals in a sealed single envelope, clearly marked MOF/Q65/2018-2019/ONB7 addressed to The Permanent Secretary, Ministry of Ocean Economy, Marine Resources, Fisheries and Shipping should be deposited in the Quotation/Tender Box located at Level 4, LIC Building, John Kennedy St, Port-Louis, not later than Monday 23 September 2019 by 13.30 hrs (local time). Proposals by post/courier or hand delivered should reach the above address by the same date and time at latest. Late proposals will be rejected.”</i></p>		
PPO60-01	<p><i>“In consequence, to track and monitor routinisation of e-bids, Policy Office has assigned a dedicated officer to each public body that has on-boarded e-PS. They serve as Single Points of Contact (SPOC) between the Office and the public body. Initially, the SPOCs are deployed on-site at the Public body after kick off to provide hand-holding support and dedicated application training to launch an IFB on-line. “</i></p>	Annual Report 2018-2019_PPO32	PPO Annual Report (2019)
PPO60-02	<p><i>“On way forward, the Office will ramp up its e-Procurement capacity building to enable most of the major spending public bodies to carry out their procurement electronically by July 2019. In this respect, public bodies must seriously recognize that time is a scarce resource and there is urgency to deepen the use of ICT to reap its benefits.”</i></p>		
PPO60-03	<p><i>“Following a designed upgrade of the e-PS software at no additional cost, users experienced higher speed in the execution of e-Procurement transactions on the systems. Furthermore, the resilience of e-PS was tested by an independent third party which confirmed its positive performance capability for peaking usage of the system. The Office is thus assured that it can proceed with full blown implementation.”</i></p>		
PPO60-04	<p><i>“All organizations intending to do business with any of the Public Bodies of Government of Mauritius are required to register on the e-Procurement System. The Authorized Person from the organization is required to initiate the</i></p>	HOW-TO-REGISTER-ON-THE-E-PROCUREMENT_PPO08	e-procurement system of Government of Mauritius Register on e-PS (n.d).

	<i>process of registration of the organization on the e-Procurement System. The process of registration requires providing information as specified in the forms on the e-Procurement System.”</i>		
NAO04-01	<p><i>“Lapses were noted in the procurement of medical equipment and supplies in the context of the COVID-19 pandemic. These lapses included absence of proper documentation at the different stages of the emergency procurement process, non-compliance with the legal requirements and inadequate assessment of fairness and reasonableness of prices quoted by suppliers. As a result, there was inadequate assurance that the principles of value for money and transparency had been adhered to. For example, at the &lt;anonymized department&gt;, proper records on emergency procurement as required under Directive 44 of the Procurement Policy Office were not kept. The absence of documentation flouted the principles of good governance, in particular transparency in the management of public funds.”(NAO04)</i></p> <p><i>“Proper records were not kept at the different stages of the EP exercise”</i></p>	AR_2019_20_Mauritius_NAO04	NAO (2020)
NAO04-02	<p><i>“It is a fact that contracts awarded during the COVID-19 pandemic were effected in exceptional circumstances, but it remains essential that decisions are properly documented and made transparent if government is to maintain public trust that taxpayers’ money is being spent appropriately and fairly. The whole public procurement process, including current legal provisions and procedures, must be reviewed with a view to strengthening accountability and transparency and ensuring that emergency procurement does not become a fertile ground for the commission of financial abuses and malpractices at the expense of taxpayers.</i></p> <p><i>&lt;anonymized department&gt; purchased 60 Intensive Care Unit (ICU) ventilators for the Ministry for some Rs 94.4 million for which no benefit has yet been derived eight months after payment was effected, although they were procured under Emergency Procurement. 10 of them are functional but not yet commissioned at time of audit. This is a salient example where no value for money was obtained”</i></p>		
NAO04-04	<p><i>“On various counts the Ministry has not complied with procurement rules.</i></p> <p><i>1. &lt;anonymized department&gt;, as leading public body, has</i></p>		

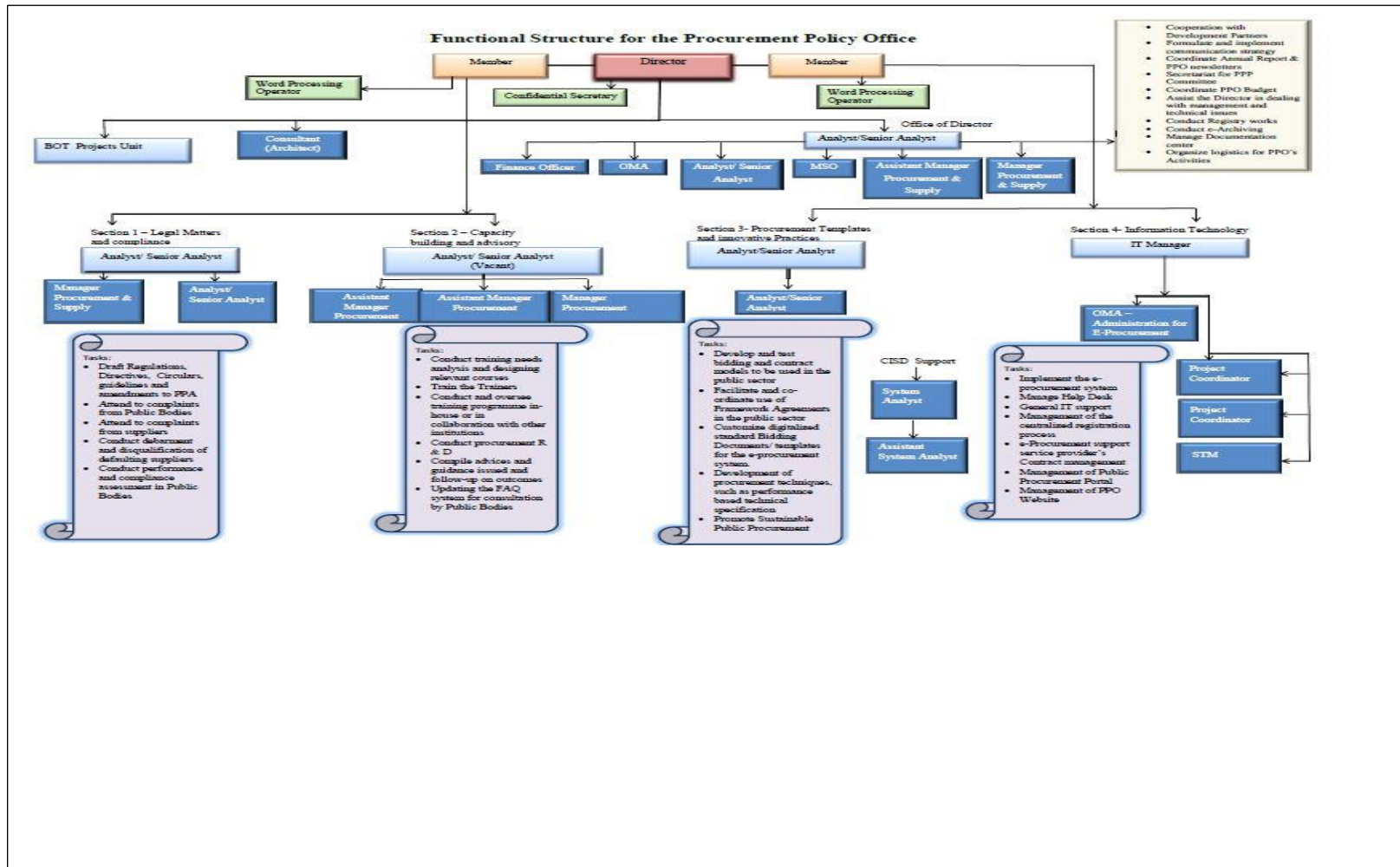
	<p><i>disbursed only 35 per cent of the total payments of Rs 1.7 billion for medical products, thus diluting its accountability for and ownership of all these medical products purchased during the COVID-19 period.</i></p> <ol style="list-style-type: none"> <li><i>2. Medical disposables were purchased from companies which had no previous dealings with the Ministry in such goods.</i></li> <li><i>3. 60 ventilators were acquired for some Rs 94 million for which no benefits have yet been derived.</i></li> <li><i>4. 50 of these ventilators were acquired from a foreign company which had never supplied any medical equipment to the Ministry.</i></li> <li><i>5. The contract for the supply of 37 out of 46 drugs was awarded directly to a wholesale pharmacy, which was not a regular supplier of the Ministry.</i></li> <li><i>6. There was a significant increase in the price quoted, ranging from 15 per cent to 3,300 per cent for the 37 drugs procured under the Emergency Procurement exercise.</i></li> </ol> <p><i>Proper records were not kept at the different stages of the EP exercise."</i></p>		
NAO04-03	<i>"There was also no evidence of any documentation regarding consideration of risks, including how the authorities had identified and managed any potential conflict of interest"</i>		
NAO04-05	<i>"The sole bidder quoted an amount of some Rs 26.1 million. A major deviation regarding the dimension of the fuel tank of the heavy-duty boat was noted by the BEC during the technical assessment of bids. However, no clarification of bid was sought. "(NAO04)</i>	AR_2019_20_Mauritius_NAO04	
NAO03-03	<i>"Inaccurate, out-of-date and incomplete specifications were noted in several procurement exercises which led to several bids being cancelled more than once. This resulted in delays in procurement of goods, increase in administration cost and non-availability of items for users. Furthermore, it increases in Costs of Items to be procured. As a result of repeated cancellations over a span of time, cost of items to be procured tend to increase. The estimated cost for the supply of 1,200 units of raincoats for</i>	Audit Report 2018-19 - Mauritius_NAO03	NAO (2019)

	<p><i>Attendants and Officers in April 2016 was Rs 2.8 million, and it increased to Rs 3.6 million for 600 units for Officers in March 2017. New tenders have still not been launched. It also causes increase in Administration Costs.</i></p> <p><i>The DBC has not exercised the expected control on bid documents and allowed a system without checks and balances to operate for a long time;"</i></p>		
NAO02-01	<p><i>"Impact of Inadequate Specifications leads to excessive Delays in Procurement of Goods</i> <i>Due to several cancellations of tenders as a result of inadequate specifications, delays were noted in the supply of goods. As shown above, in certain cases, the inventory levels were low."</i></p>	Audit_Rep_2017_18_Mtius_NAO02	NAO (2018)
NAO02-02			
NAO03-01	<p><i>"Catering Services for athletes training for IOIG 2019 totalled Rs 10.87 million.</i> <i>The Request for Sealed Quotation method of procurement used was inappropriate as the value of the procurement amounted to Rs 8.25 million and exceeded the prescribed threshold of Rs 5 million. The cost of the services was not estimated prior to start of procurement process"</i></p>	Audit Report 2018-19 - Mauritius_NAO03	NAO (2019)
NAO03-02	<p><i>"Declaration of Conflict of Interest and Confidentiality</i> <i>In respect of six procurements examined, some members of the Bid Evaluation Committee did not sign the Declaration Form of conflict of interest and confidentiality and some members of the Departmental Bid Committee did not sign the minutes of proceedings, as required under the Public Procurement Act. NAO is of the view that the Ministry should ensure that procurement proceedings are conducted in accordance with the Public Procurement Act"</i></p>		
NAO01-01	<p><i>"During the evaluation of the bid, it was observed that the bidder had also quoted as option, a Book Loader for the sum of Rs 1,472,000 which was not included in the original bidding document. The Book Loader was purported to enable loading of up to 120 book blocks at a time. The recommendation of the Bid Evaluation Committee (BEC) to purchase the Book Loader at a cost of Rs 1,472,000 was subsequently endorsed by the</i></p>	Audit_Report_2016_17_NAO01	NAO (2017)

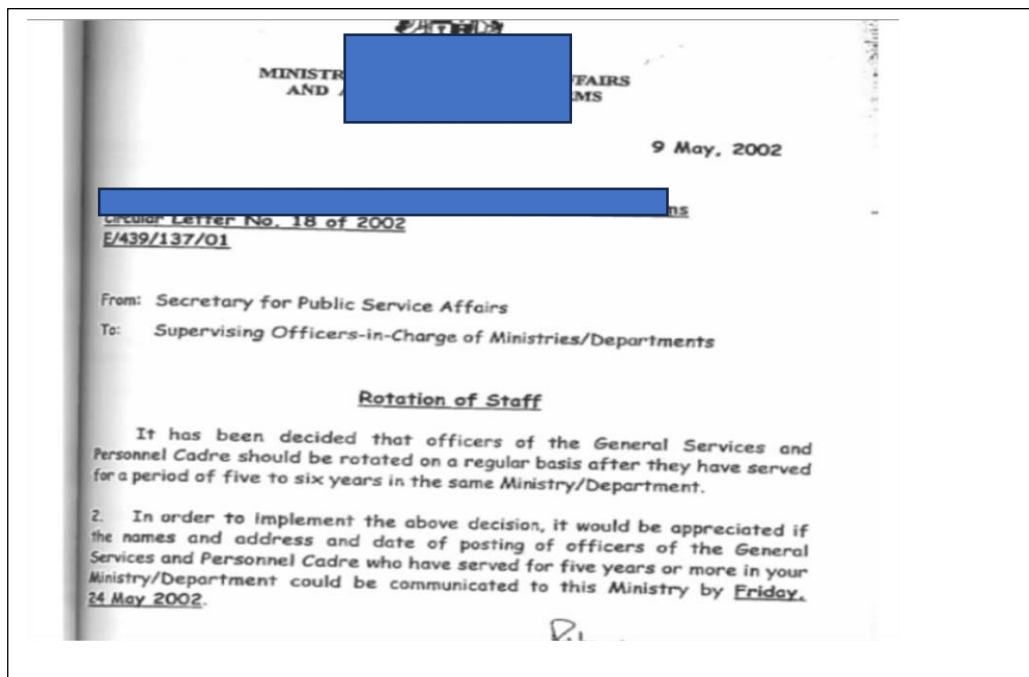
	<i>Departmental Bid Committee and the Accounting Officer. This constitutes a direct procurement from a single source without competition under the Public Procurement Act and for which the maximum allowable total cost should not exceed Rs 100,000 per single item. Hence, the acquisition of the Book Loader was not in line with proper procurement procedures."</i>		
NAO01-02	<i>"The DBC failed in its responsibility of ensuring that equal opportunities were given to all prospective bidders in a tender exercise  The Senior Officer was a permanent member on the BEC and therefore other Officers of the Pharmacy Cadre were deprived of the opportunity of forming part of the BEC"</i>	Audit_Report_2016_17_NAO01	NAO (2017)
FAQ_PPO02	<i>"Any registered user to do a transaction has to login on the e-PS with his username and password. Any transmission of confidential data via the internet is in encrypted format and digitally signed by the sender. Secured data in any bidding process is only accessible to authorized user. Furthermore, the e-PS will not allow any bid to be submitted, withdrawn, modified or substituted after the end date and time for submission of Bid Hash. The public body can have access to the bids and identity of bidders only after the bid opening."</i>		e-Procurement system of Government of Mauritius – FAQ (2021)

## B.4 - 1. PPO55 – PPO organization structure

Source: Procurement Policy Office Functional Structure (n.d.)

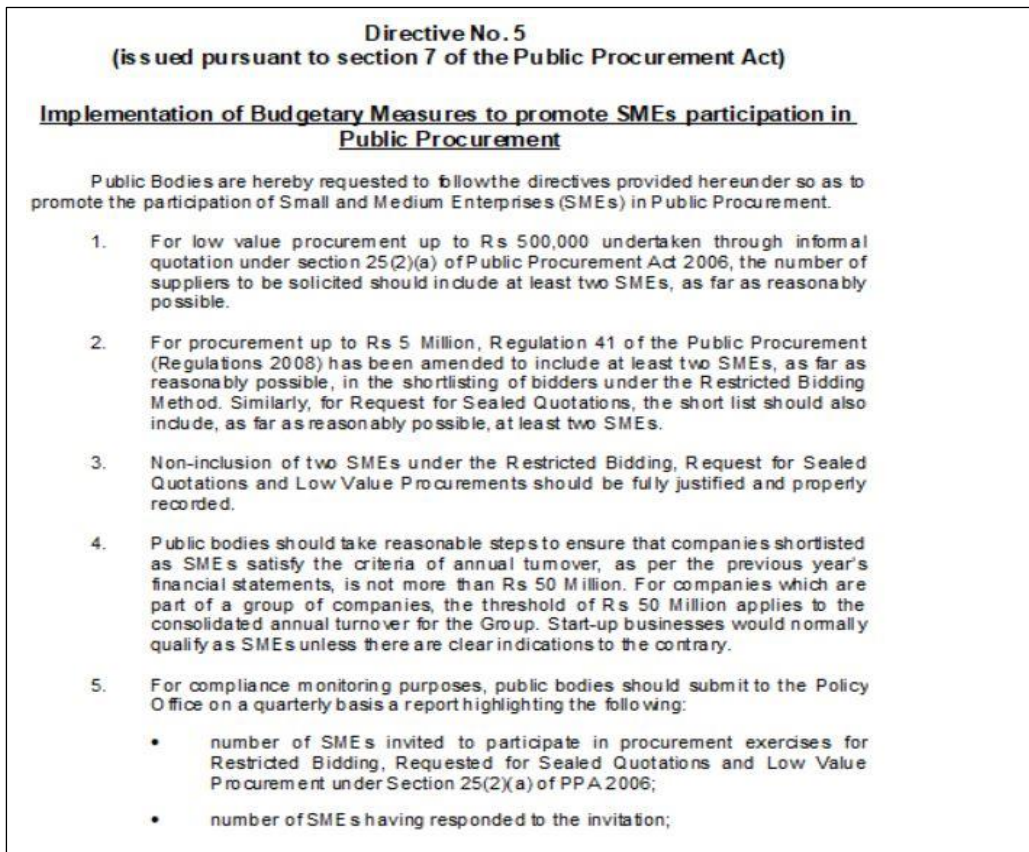


## B.4 – 2. PPO 51 – Staff Rotation in Public sector



Source: (MPSAIR circular, 2002b)

## B.4 – 3. PPO 16 -Directive 5



Source: (PPO Directives. 2012a)



**MINISTRY OF FINANCE AND ECONOMIC DEVELOPMENT**

Procurement Policy Office  
*Level 8, Emmanuel Anquetil Building,  
Port Louis, Mauritius*

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Ref: 

**Circular No 6 of 2015**

**From: Director, Procurement Policy Office**

**To : Heads of Public Bodies**

**Public Procurement (Electronic Bidding System)  
Regulations 2015**

This is to inform you that Public Procurement (Electronic Bidding System) Regulations 2015 has been posted on the PPO's website: [ppo.govmu.org](http://ppo.govmu.org).

2. You are kindly requested to disseminate the contents of this Circular to all those concerned within your organisations.

## B.4- 5. PPO 52 – Official launch

### The Government e-procurement system (e-PS) launched yesterday



Date: September 29, 2015  
Domain: Economy & Finance; Civil Service  
Persona: Business; Citizen; Government; Non-Citizen

#### Average Rating



**GIS – 29 September, 2015:** The Procurement Policy Office which operates under the aegis of the Ministry of Finance and Economic Development, launched the Government e-Procurement System (e-PS) yesterday at Hennessy Park Hotel, Ebene. The e-PS is a web based application that will enable all public bodies and suppliers to electronically conduct procurement proceedings from invitation to bid up to contract award.

The e-procurement system will help, among others, to catalyse transformation of the public sector in modernising the way public bodies carry out procurement tasks; lower transaction costs in moving from paper to digital and improve decision making by flattening bureaucracy and breaking silos; and generate efficiency gains at industry level, for both the organisation and suppliers.

With the introduction of the e-PS application, the [redacted] is the pioneer public organisation to use the e-PS by launching the first online bid for the purchase of IT equipment. By November 2015, eight other public bodies will issue bids online, and by July 2016, most of the high spending public bodies are expected to join the system.

In his address, the Minister of Civil Service and Administrative Reforms, [redacted] heong, who was present at the ceremony, stated that public procurement has always been an important area of activity for Government since public sector organisations spend huge sums of money for the procurement of goods, works and services to provide amongst others education, health, electricity, transportation, infrastructure and for maintaining law and order so as to deliver on the Government programme, not only to create the environment for inclusive economic growth but also promote citizens' welfare.

[http://www.govmu.org/English/News/Pages/The-Government-e-procurement-system-\(e-PS\)-launched-yesterday.aspx](http://www.govmu.org/English/News/Pages/The-Government-e-procurement-system-(e-PS)-launched-yesterday.aspx)

## B.4 – 6. Public Procurement Portal

The screenshot displays the Public Procurement Portal interface. At the top, the browser address bar shows the URL [publicprocurement.govmu.org/pages/procurementlist.aspx](http://publicprocurement.govmu.org/pages/procurementlist.aspx). The page title is "Public Procurement Portal".

The main content area is titled "Procurement Notices". Below this, there is a "Supplier" section with a list of links: Procurement notices, Annual procurement plans, Summary of Bid Evaluation Reports, Notice of Procurement Awards, and Addenda/Corrigenda/Clarifications. There is also a "Procurement Legislations" section with links for Public Procurement Act 2006 and Public Procurement Regulations. A "Debarred / Disqualified / Suspended Suppliers" section is also present.


The central part of the page features a "Ministry Communique" section with a blue header. The text reads: "The [redacted] regrets to inform all Prospective Bidders that due to the lockdown decreed by Government in view of the Corona virus pandemic, all closing dates for bidding have been postponed. New closing dates will be communicated when lockdown is over. The Ministry thanks you and relies on your cooperation. 07 April 2020".

Below the communique is a table of procurement items. The table has columns for Public body, Procurement ref, Category, Description, Closing date, and Details. A dropdown menu labeled "--Select category--" is positioned above the table.


Public body	Procurement ref	Category	Description	Closing date	Details
[redacted]	CPB/05/2021	Services	Procurement of Free Wi-Fi Service in Mauritius and Rodrigues	08 Sep 2021	View details
[redacted] Co Ltd	OAB/GD/ADM/VR/SG/21/002 TC (11 AUG)	Goods	Supply and Delivery of Uniform	08 Sep 2021	View details
[redacted] City	NLTA/14/40/ONB01/2021-2022	Services	The NLTA intends to rent a building of approximately 100-150 m2 in the district of either Grand Port or Savanne	08 Sep 2021	View details
[redacted]	RFP01/2021-2022	Consultancy	Formulation and drafting of a National Employment Policy (NEP) for Mauritius	09 Sep 2021	View details
Central Electricity	OAB-AMU-21-010 (IFB 3141)	Goods	Supply & Commissioning of Double	13 Sep 2021	View details

Source: [https://publicprocurement.govmu.org/publicprocurement/?page\\_id=720](https://publicprocurement.govmu.org/publicprocurement/?page_id=720)

## B.4 - 7. PPO 23 – Directive 36

  
**Directive No. 36**  
**(Issued pursuant to Section 7(b) of the Public Procurement Act 2006)**  
**Sensitising Bidders to the Government e-Procurement System**

1. In line with Government's plan towards a fully-fledged digital society requiring increased use of ICT in public administration, public bodies would, by the end of July 2019, carry out public procurement electronically on the Government e-Procurement System (e-PS). Consequently, the paper based procurement process would gradually be phased out. It is important for suppliers to get prepared for this change.
2. In preparation to meet that objective public bodies are hereby requested to include the annexed **Notice** at the verso of the first page of all their paper-based bidding documents except Informal Quotation.
3. This Directive takes effect immediately.

  
07 March 2018

**Notice to Bidders**  
**Government e-Procurement System**

In line with Government's plan towards a fully-fledged digital society requiring increased use of ICT in public administration, public bodies would, by the end of July 2019, carry out public procurement electronically on the Government e-Procurement System (e-PS). Consequently the paper based procurement process would gradually be phased out.

The e-PS is live and a growing number of public bodies are already carrying out their procurement proceedings online.

In this respect, Bidders are advised to register at the earliest on the e-PS at the following address:

<https://eproc.publicprocurement.govmu.org>

A video for Bidders on "How to Register" can be viewed on Youtube at:

<https://www.youtube.com/watch?v=MvH-PqQRS3k>

All registered Bidders will automatically be alerted by email of all online Invitation for Bids issued by any public body. For any further information, contact the Help Desk of Procurement Policy Office by the following email or phone number:

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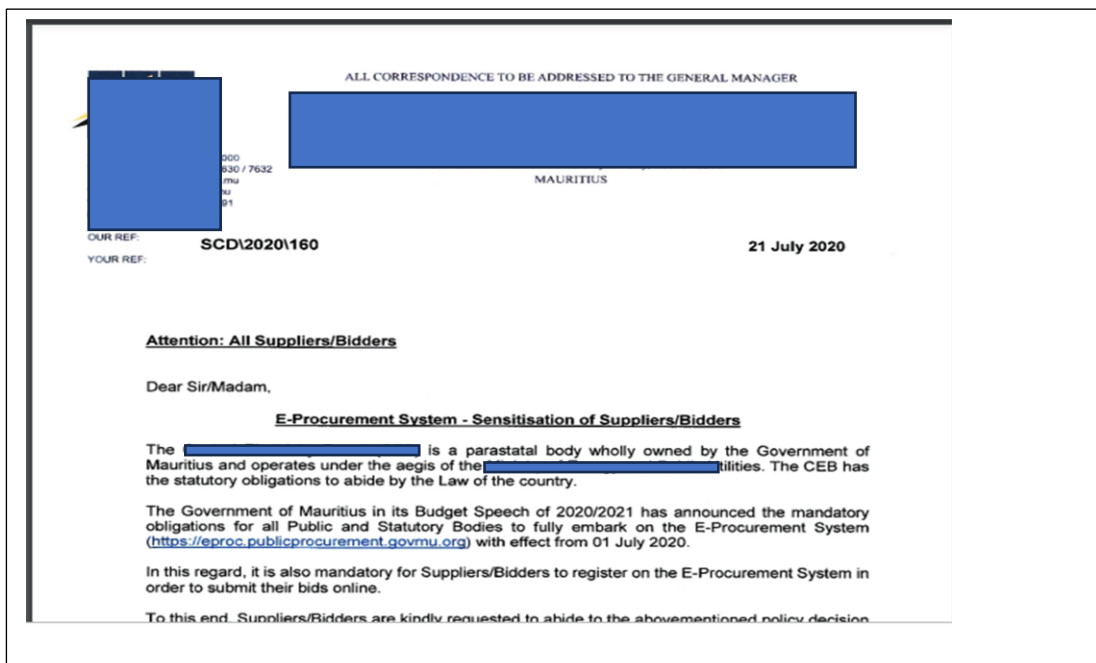
**Email:** [eprocdesk@govmu.org](mailto:eprocdesk@govmu.org)

Source: (PPO Directives. 2018)

#### B.4 – 8. CAPAM certificate



#### B.4 – 9. Organization A – Bidders' Sensitization



## B.4 – 10. PPO 20 – Directive 47

**Directive No 47**  
**(Issued pursuant to section 7(b) of the Public Procurement Act)**

**Mandatory Use of the e-Procurement System**

1. To give effect to the budgetary measure regarding the mandatory use of the e-Procurement System by all public bodies, the 55 public bodies as listed in the Appendix to this Directive shall undertake all their procurement exercises through the e-Procurement System.
2. Other public bodies have up to 31<sup>st</sup> December 2020 to fully on-board on the e Procurement System.
3. Notwithstanding the above, paper-based procurement processes may exceptionally be used where the use of the e-Procurement System is considered as not being practical for certain types of procurement such as –
  - (a) minor works, repairs and maintenance, catering of low value; or
  - (b) one-off procurements from non-regular suppliers.
4. Public bodies shall keep a register of all procurement exercises not undertaken under the e-Procurement System incorporating justifications for such deviations. Public Bodies shall submit a return of such procurement exercises, to the Policy Office, on a quarterly basis.
5. Public bodies are advised to request their suppliers to register on the e-Procurement System, otherwise they would not be able to participate in any bidding exercises.

Source: (PPO Directives. 2020a)

## B.4 – 11. PPO 11 – Cancellation of bidding process

*Government Notice No. 225 of 2016*

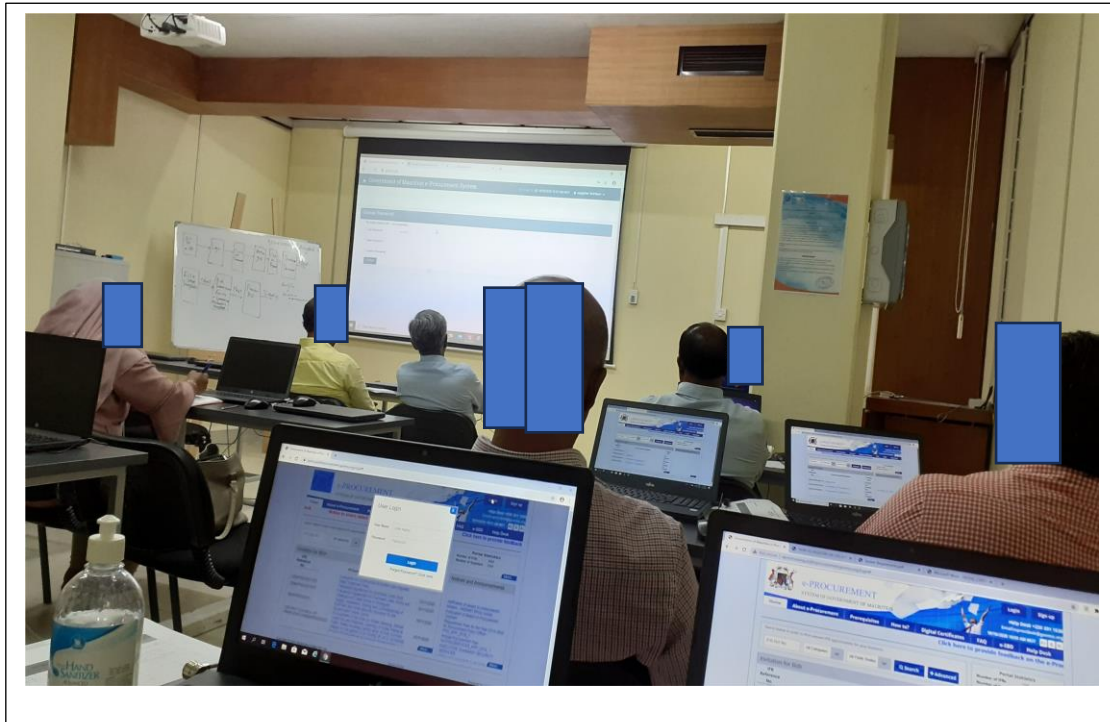
**THE PUBLIC PROCUREMENT ACT**

**Regulations made by the [REDACTED], on the recommendation of the [REDACTED]  
sections 39(1)(f) and 61 of the Public Procurement Act 1.**

1. These regulations may be cited as the Public Procurement (Cancellation of Bidding Process) Regulations 2016.
2. For the purpose of section 39(1)(f) of the Act, a public body may cancel a bidding process where it is determined that due to technical problems of the e-procurement system which are outside the control of bidders, a bidder is unable to submit bids and prejudice will be caused to bidders if the bidding process continues.

Source: (PPO Cancellation of bidding process. 2016)

## B.4 - 12. Photo of Training



Source: OBS\_TRAIN04\_EVAL

## B.4 – 13. SMEs registration

Government of Mauritius e-Procurement System

NP:13.400.22 04/01/2022 11:59 AM MUT IM Moh

Open Registration No OPR/4928  
You Are Here: Supplier Registration > Supplier Registration

Step - 1 Provide Organization Information Step - 2 Upload Organization Documents Step - 3 Select Business Interests

Organization Name: AAA

Organization Type: Individual or Sole Trader

Are you registered with the Corporate and Business Registration Department (CBRD) of Mauritius?: Yes

Are you SME organization?: ---Select---

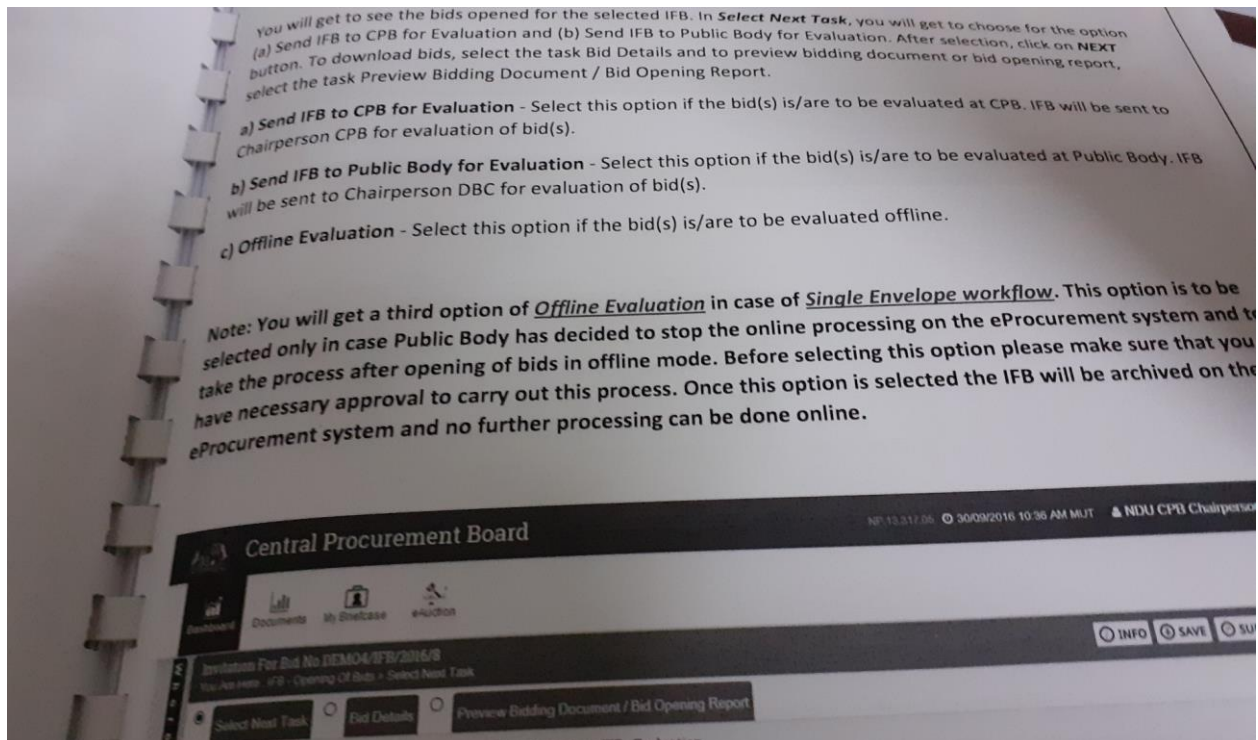
Yes  
No

Source: e-procurement portal, 2021 (<https://eproc.publicprocurement.govmu.org/register>)

After registering, the dashboard appears for completing the registration of supplier.

<https://ppo.govmu.org/Pages/SBD-ePs.aspx>

## B.4 – 14. PPO49 – User Manual – Offline/online evaluation



## B.4 – 15. Patterns in IFB submission

Government of Mauritius e-Procurement

e-PROCUREMENT  
SYSTEM OF GOVERNMENT OF MAURITIUS

Help Desk +230 201 1530  
Email: eprocdesk@govmu.org  
28/05/2021 01:43 PM MUT

Login Sign up

Home About e-Procurement Prerequisites How to? Digital Certificates FAQ e-SBD Help Desk

EU (Java Utility) Click here to provide feedback on the e-Procurement System

Portal Statistics		
6	CRB	-
7	AGRO	337
8	MNI	4
9	MSS	-
10	POLICE	356
11	ENVIRONMENT	22
12	MYESR	146
13	CIWA	543
14	CEB	2473
15	BLUE ECONOMY	136
16	IRP	-
17	BBRH	63
18	PMO	29
19	NDU	60
20	EDUCATION	92
21	MOF	99

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Type here to search

1:44 PM 5/28/2021

Source: (E-procurement portal of the Government of Mauritius – <https://eproc.publicprocurement.govmu.org>)

## B.4 – 16. PPO42 - IFB submission by public bodies

The screenshot displays the e-PROCUREMENT portal of the Government of Mauritius. The page features a navigation menu with links for Home, About e-Procurement, Prerequisites, How to?, Digital Certificates, FAQ, e-SBD, and Help Desk. A 'Portal Statistics' table is prominently displayed, listing various entities and their corresponding values. The table includes columns for an index, entity name, and a numerical value. The entities listed are DEMO4, DEMO3, DEMO2, CPB, CRB, AGRO, MNI, MSS, POLICE, ENVIRONMENT, MYESR, CWA, CEB, and BLUE ECONOMY. The values range from 0 to 2815. The page also includes a footer with copyright information for Nextenders (India) Pvt. Ltd. and a note that the portal is powered by NexProcure.

Index	Entity Name	Value
2	DEMO4	-
3	DEMO3	-
4	DEMO2	396
5	CPB	-
6	CRB	-
7	AGRO	399
8	MNI	8
9	MSS	-
10	POLICE	429
11	ENVIRONMENT	47
12	MYESR	165
13	CWA	564
14	CEB	2815
15	BLUE ECONOMY	157

Source: (E-procurement portal of the Government of Mauritius – <https://eproc.publicprocurement.govmu.org>)

## APPENDIX C

### Interview Guide

Date of interview:--/--/--

Duration:-----

#### A. Interviewee Profile

Interviewee Position	<input type="text"/>	
Interviewee classification	Public servant <input type="checkbox"/>	Bidder <input type="checkbox"/>
Interviewee Role		
End-user	<input type="checkbox"/>	
E-procurement application support	<input type="checkbox"/>	
Project/IT Manager	<input type="checkbox"/>	
Project Team Member	<input type="checkbox"/>	
Other	<input type="checkbox"/>	
Governmental Department or Company	<input type="text"/>	

#### B. Brief outline of the research

A brief description of the research will be given to the interviewee, including clarifications on what legitimation is all about and why is it important in IS implementation.

#### C. Ethics Consideration

The interviewee will be invited to sign the participant consent form and will be reassured that the interview transcript will be treated anonymously and confidentially. The interviewee will be briefed of his or her rights that (1) he or she can feel free to withdraw from the interview should he/she decides to leave at some point of time (2) he or she can request a copy of the research results and analysis (3) he or she may also choose not to answer a specific question.

#### D. Main topics of the interview and their rationale

No.	Main Themes of questions	Brief rationale
-----	--------------------------	-----------------

1.	How does the stakeholder (bidders and public servants) describe their e-procurement implementation experience?	Reconstruction of implementation events (the context surrounding e-procurement implementation)
2.	How does the project team describe their e-procurement implementation experience?	
3.	How does the project team describe the project management aspect of e-procurement?	Reconstruction of the project events (the context) and get information about future roll-out plan
4.	What were the norms, values, assumptions, expectations and concerns of the stakeholders (bidders and public servants)?	Related to the legitimation-seeking process ( <b>the theoretical framework</b> )
5.	How did the project team understand the norms, values, assumptions, expectations and concerns of the stakeholders?	
6.	What strategies did the project team used to gain legitimation of stakeholders in the implementation of e-procurement?	
7.	How did the project team judge their actions and know that legitimation was gained?	
8.	How the project team monitor acquired legitimation?	

#### **Theme D1 and D4 – List of questions**

1. In which project activities were the stakeholder involved?
2. What facilities did the stakeholder have to use e-procurement?
3. What kind of assistance (in terms of training/coaching, staff and equipment) did the project team provide to the stakeholders to facilitate the use of e-procurement?
4. How do the stakeholders perceive the new system in facilitating their work? How did the stakeholders “express” this perception to the project team?
5. Were there any pieces of evidence of the use of workarounds alongside e-procurement system?
6. Did the stakeholders found a lack of support from the project team?
7. What were the underlying assumptions of the stakeholders about changing work practices induced by e-procurement? Did these assumptions change over time?

8. Were the stakeholders enthusiastic about getting away with old working practices preceding e-procurement?
9. To what extent do the stakeholders know about e-procurement project before it was implemented?
10. How this understanding evolved? What did the project team do to enhance the knowledge of the stakeholders about e-procurement?
11. What are the concerns of the public servant stakeholders about the new system? Did public servants fear about any potential negative impacts of the institutional reform underlying e-procurement on their career, organizational climate, and working conditions? Or were they satisfied with the reform that is expected to be driven by e-procurement?
12. What do the stakeholders think about e-procurement legislation in regards to e-procurement system use, periodical circulars issued by the procurement policy office (PPO) and the e-procurement policy or any other formal instructions received for using e-procurement?
13. How do bidders evaluate the e-procurement training? How far were they satisfied with the training?
14. What do bidders think about e-signature? What are their concerns about e-signature?
15. Did the bidders show any concern about IT security aspects of e-procurement? Were the bidders concerned about database hosting location?
16. What were the requirements and expectations raised by the stakeholders?
17. How did the stakeholders escalate their concerns as well as their requirements and expectations to the project team?
18. Were these expectations and requirements different from what were promised by the project team?
19. What did the stakeholders think about the pro-claimed transparency, accountability and other good governance principles that are expected to underlie e-procurement? Does this motivate them to use e-procurement?

## **Theme D2**

How does the project team describe the e-procurement system software, the different modules implemented and future modules to be developed and implemented? Did they inscribe good governance principles in the software? What were the main obstacles encountered in the implementation? Was there any crisis at the implementation stage representing a disruption in implementation?

## **Theme D3**

The project management aspect of e-procurement implementation: project milestone and deliverables, implementation time-line, evaluation metrics, deviations from original project plan or any interruptions to the project, nature of bottlenecks, implementation roll-out progress for other sites, control of key project resources, involvement of senior management in the project.

**Theme D5**

1. How did the project team try to understand the stakeholders' perceptions about e-procurement system?
2. How did the project team understand the concerns raised by stakeholders, and how did this understanding influence the project team's actions?
3. Did the project team intend to meet the stakeholders' requirements and expectations? Why or why not?
4. Did the project team understand the norms and values of the stakeholders? And how did the project team understand these norms? Did they feel that stakeholders' current norms will be a bottleneck to the success of e-procurement implementation?
5. Did the project team hold a common assumption that stakeholders will automatically accept and use e-procurement because of mandatory use evoked in e-procurement legislation?

**Theme D6**

<b>Project leader/team</b>	<b>Stakeholders (Bidders/Procurement cadre)</b>
<p>Was the project goals clear to the project team? How did the project team describe the project goals to the stakeholders? Was the project team aware about what they intend to achieve and what is expected from the stakeholders? How did the project team introduce the project to the stakeholders and what explanations were provided to legitimize the project (eg. benchmarking against its success in sister African countries, modernization of the public sector, leveraging technology to improve efficiency in the procurement process, to curb down corruption)</p>	<p>How did the stakeholders understand the goals shared by the project team? What do the stakeholders think about the project team's knowledge of the core procurement process? What did the stakeholders think about the credibility and capabilities of the project leader and the piloting organization in driving e-procurement project?</p>

<p>Which stakeholders did the project team perceive to be important and from whom support should be sought?</p> <p>What are the strategies employed by the project team to gain support and what are the timing of the strategies (e.g.: participative decision-making, ceremonies to celebrate “small successes”, use of influential persons (OIPs), symbolic actions, “internal marketing” tactics, meeting for stakeholders’ motivation and use of “emotional tactics” such as “the success will be showcased with pride to other countries”)?</p> <p>Did they employ different legitimation-gaining strategies with different communication strategies tailored to each group of stakeholders?</p> <p>What methods and/or arguments did the project team use to convince other project stakeholders that the IS would be beneficial to both the organization and the individuals? For example, involving influential figures, talking about e-procurement success and benefits attained in other countries, the positive impacts of e-procurement in their career development?</p> <p>How frequently the project team engage with the stakeholders to evaluate the impact of their strategies for gaining their buy-in?</p>	<p>What did the stakeholders think about the attempts of the project team in getting their buy-in?</p> <p>How did the stakeholders perceive those arguments?</p>
---	--

**Theme D7**

1. What were the outcomes of the project team's attempts? Were the project stakeholders satisfied and if so, how did they express their satisfaction? If not, what were the reasons?
2. Did the perception of stakeholders about e-procurement change after the application of the legitimation strategies of the project team?

## **Theme D8**

1. Did the stakeholders consistently support e-procurement once they were convinced to do so by the project team? Was there any evidence of support disruption and what was the reaction of the project team?
2. Did the project team verify whether there's any change in stakeholders' attitudes during the implementation? How they did it and how frequent they did it? What did they learn from this action?
3. How did the project team determine the seriousness of what they observed? How did they react to it and what was their corresponding action? Did the situation improve or worsened following these actions?

### *E. Potential Probing Questions*

A list of spontaneous questions based on the responses of the interviewee

### *F. Conclusion*

1. A summary of what was discussed in the interview
2. Message of thanks

## APPENDIX D – NVIVO Coding tables and Nodes tree

APPENDIX D - Coding Table (NVIVO)			
Name	Files	References	Description of main node and 1 <sup>st</sup> level children node
<b>e-procurement implementation assessment</b>	<b>34</b>	<b>393</b>	An evaluation of e-procurement implementation
<b>Complaints</b>	25	258	The complaints made by the end-users
<i>Complicated system</i>	16	42	
complicated process	9	12	
Digital signature certificate	4	4	
document template issues and mismatch	9	25	
<i>Concerns on mandatory use</i>	9	16	
<i>dissatisfaction with support service and project team</i>	14	33	
inadequate e-proc assistance	7	9	
lack of e-proc readiness assessment	2	3	
lack of feedback from project drivers	4	5	
lack of project drivers' willingness for software improvement	3	3	
lack of user involvement in ISD	3	3	
Training	6	10	
<i>high workload</i>	5	5	
<i>inefficient system</i>	21	122	
bid opening practices	6	6	
changing level of controls	4	6	
duplication of work	4	5	
impractical for processing quotation	4	4	
Necessity of wide screen in evaluation online	5	5	
psychosocial issues	5	6	
requires knowledge of procurement to operate	2	2	
system not meeting user requirements	14	47	
data format limitation	6	6	
document type limitation	2	2	
inadequate validation and system rigidity	3	5	
lack of online self-help	2	2	
lack of user-friendliness	7	8	
limited number of reviewers	3	3	
shortcomings in online evaluation module	5	17	
automatic rejection of suppliers in evaluation	3	5	

choice of evaluation templates	1	1	
clarifications on suppliers	1	1	
inadequate validation and rigidity	2	3	
lack of dissenting feature	1	1	
No access to MIS	1	1	
perception of duplication of work	1	1	
remote access to bid data representing fraud risk	1	2	
time period of evaluation	1	1	
validation of trade licenses by CBRD	1	1	
suppliers' database search	2	4	
time-consuming and lengthier process than paper-based	17	28	
Workarounds	7	13	
<i>IT security and performance concerns</i>	6	8	
<i>lack of integration with legacy system</i>	2	2	
<i>pandemic constraints</i>	2	3	
<i>suppliers' stakeholder concerns</i>	16	27	
complicated system	6	7	
registration shortcomings	10	16	
security concern	2	3	
<b>Delays</b>	6	10	Delays associated with the implementation process
<b>economic e-procurement outcome</b>	18	30	The actual impact of e-procurement on public procurement proceedings captured by the economic outcome. It sheds light on the level of responsiveness and competitiveness of bids achieved with e-procurement. This aspect is key to public procurement as it impacts the price of goods. Low competition will tend to increase the price of goods.
negative economic outcomes	17	29	
positive economic outcome	1	1	
<b>emerging work practices</b>	6	8	
bid opening and closing	3	4	
roles assignment in practice	4	4	

<b>Implementation outcome</b>	40	87	The main status of IS usage: usage, part-usage, or fallback
<b>Fallback</b>	15	24	
Justifications	6	8	
lack of top management support	14	14	
Change in implementation outcome	8	25	
<i>parallel usage of old procurement portal</i>	7	7	Any evidence of parallel usage of former method of bidding that is the parallel usage of the old procurement portal
<b>part-usage of system</b>	10	39	
public body commitment to engage suppliers	7	7	
Readiness	7	12	
awaiting training on online evaluation	4	4	
effort for ownership	1	1	
not yet embarked on online evaluation	5	6	
<i>supplier uptake</i>	4	6	Supplier uptake – the uptake of e-procurement by private suppliers
positive suppliers uptake for eproc	3	4	
signs of lack of supplier uptake	2	2	
<b>system usage</b>	4	11	
Implementation success	6	24	
<i>context A</i>	5	27	
Championship	1	1	
engagement with project driver	2	2	
mastering e-procurement well	1	3	
plan staff training and obtain their feedback	1	2	
procurement knowledge	2	2	
proposing software improvement	1	1	
seek stakeholder support	1	7	
convince stakeholders	1	1	
demo and presentation	1	1	
explain benefits of e-procurement	1	1	
marketing technique to encourage uptake	1	3	
suppliers' management	1	1	
implementation challenges	3	8	
Leadership	2	2	
positive results	1	3	
readiness for e-procurement	1	1	
ICT infrastructure	1	3	

well-structured process	1	1
shared vision	1	2
top management commitment	1	2
<i>Context B</i>	4	49
Championship	2	13
commitment and perseverance	1	9
engagement with project driver for issues on e-proc	1	4
Enthusiasm	1	4
good inter-personal relationship	1	3
identify pitfalls and proposing software improvement	1	5
knowledge sharing	1	1
mastering e-procurement well	1	3
plan stakeholder training (staff and suppliers)	1	3
procurement knowledge	1	2
references from colleagues	3	3
seek stakeholder support	1	20
convince stakeholders	1	5
demonstrate short-comings of paper-based method	1	1
emphasis on stakeholder support as success factor	1	1
explain benefits of e-procurement	1	4
motivate suppliers to bid online	1	2
seek top management support	1	1
stakeholder engagement and participation	1	3
successful teamwork	1	1
successfully changing perception towards eproc	1	2
set aim	1	2
understanding of stakeholder beliefs , norms and attitudes	1	5
implementation challenges	1	10
evaluation module challenge	1	1
lack of adequate support from project drivers	1	4
Ownership	1	2
positive results	1	2
readiness for e-procurement	2	11
human resources	1	1
ICT infrastructure	2	5
well-structured process	1	1
shared vision	1	2
suppliers' registration success factor	1	2
<i>Context C</i>	4	4
Championship	4	6
commitment and perseverance	1	5
deal with change requirements and software improvement	2	5
degree of coercive action	1	2
engagement with project driver	1	4

Enthusiasm	1	4	
knowledge sharing	1	3	
mastering e-procurement well	1	10	
procurement knowledge	1	4	
seek stakeholder support	5	24	
convince stakeholders	2	4	
demo and presentation	1	1	
demonstrate short-comings of paper-based method	3	3	
explain benefits of e-procurement	1	3	
hand-holding on real case	1	2	
motivate suppliers to bid online	1	1	
parallel runs	2	3	
Training	3	4	
understanding of stakeholder beliefs , norms and attitudes	1	3	
implementation challenges	2	8	
Leadership	2	4	
Ownership	1	3	
perception of outdated paper-based method	2	3	
positive results	1	8	
suppliers' registration success factor	1	1	
readiness for e-procurement	2	4	
ICT infrastructure	4	4	
well-structured process	1	1	
shared vision	1	4	
top management support	3	5	

<b>e-procurement system</b>	<b>23</b>	<b>63</b>
<b>ISD history</b>	<b>4</b>	<b>10</b>
Requirements analysis	2	2
software customization to fit standardized process	2	4
UAT process	3	4
<b>Positive features and inscribed norms</b>	<b>21</b>	<b>53</b>
<i>Accountability</i>	6	8
online nomination of chairman and set-up of committees for evaluation	1	1
role-based system	7	7
<i>Bid responsiveness</i>	4	4
Online bidders' registration and bidding	4	4
<i>Confidentiality and security of bids</i>	4	14
secured closing and opening of bids	2	5

use of Digital Signature Certificate(DSC)	3	9
changed user's identity	1	1
heavy dependence on DSC for eproc operation	2	2
robustness of security	2	3
technical pre-requisite and limitation	1	2
<i>Ethical practices</i>	5	5
Bidders registration for SMEs inclusion as equal opportunity	2	2
online declaration of conflict of interest	1	1
Reducing human touch	2	2
online bid opening	3	3
online communication, automatic notifications & online submission of clarifications	2	4
online submission of bids and attachments	2	4
Selection of bidders from database	1	1
Sense of ownership through customized child portal	2	2
System performance, accessibility and Security robustness	4	5
Transparency	9	15
Comparative statements for bidders	3	4
prevention of fraud and tampering	4	5
process workflow and full transactions audit trail	2	2

<b>legitimation providers</b>	24	33	The legitimation providers refer to public officers of different public bodies who are concerned with the procurement process and whose influence can make significant impacts in the uptake/routinization of e-procurement. They are the social actors that should confer their legitimation to e-procurement. Their attitudes, perceptions, and expectations expose their norms and values.
<b>Attitudes</b>	18	97	
Negative	16	71	
active resistance to change	13	33	
critical interpretation of success cases	6	9	
praise efficiency of paper-based method	12	22	
Pessimism	7	10	
sign of covert resistance	3	4	
Positive	11	26	
<b>Beliefs</b>	14	40	
<b>Competence</b>	24	74	
academic and professional qualifications	8	11	
e-procurement training	14	22	
ICT skills	10	12	

procurement experience	17	20	
<b>lack of confidence</b>	4	6	
<b>norms and values</b>	18	58	
be among early adopters	1	1	
commitment and work independently	3	3	
cooperation and teamwork	5	9	
ethics in procurement	8	10	
personality and approach of team	4	6	
risk-aversion	7	7	
support ICT innovation in procurement	8	9	
trust relationship	2	3	
what peers are doing	7	8	
willingness to share knowledge	1	1	
<b>Perceptions</b>	20	57	
negative perceptions	18	48	
positive perceptions	7	9	
<b>user expectations</b>	15	51	
business continuity	2	2	
improvement to evaluation module	2	4	
involvement of all stakeholders	4	6	
meaning to 'e' as paperless and faster	8	9	
Need of e-PS team onsite	5	7	
proper templates	2	2	
proper training of all users across the chain	4	8	
sense of judgement require in evaluation	2	2	
Simpler and efficient system	7	11	

<b>Legitimation seekers</b>	15	49	Legitimation seekers refer to the project team involved in the implementation and their siblings which assist to seeking the support of legitimation providers.
commitment to drive project implementation	11	27	
Competence	4	6	
project drivers and implementers	8	11	

<b>Public body context</b>	15	17	A public body context is the organization to which the legitimation providers belong. A public body has contextual attributes that influences the implementation of e-procurement. The key attributes are the ICT culture, norms, organizational rules and
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			policies, specific nature of procurement.
<b>ICT culture</b>	17	27	
<b>Norms</b>	27	71	
accountability through bid committees	2	2	
approval process	1	1	
bureaucratic communication and reporting structure	7	10	
completeness and signed evaluation report	1	1	
compliance to department rules and orders	3	3	
dissenting in evaluation	1	1	
Access to bid information only within bid committees	2	2	
procurement is very confidential	1	1	
response rate and competitiveness of bids	8	8	
staff rotation	5	6	
suppliers are important	7	9	
timeliness in procurement	17	22	
<b>organizational rules and policies</b>	16	21	
Management own rules	7	9	
procurement directives issued to public body for compliance	12	12	
<b>specific nature of procurement</b>	22	40	
<b>Non-compliance</b>	3	47	
Shortcomings in specifications	3	10	
Excessively short procurement lead time	2	3	
Exploitation of emergency procurement	2	7	
Flaws in bid evaluation	3	11	
Shortcomings in estimated cost	2	6	
Wrong choice of procurement method	2	5	
Ad-hoc paper-mode of procurement outside e-proc	2	5	

<b>Legitimation-seeking</b>	84	594	
<b>construct legitimation targets</b>	16	78	Referring to the desirable norms that are expected to be legitimated, “e-procurement as the new norm”, expected benefits, project phases and events and, sub-targets are all the attributes that explain the node.
<i>e-procurement as the new norm in public procurement</i>	13	48	

aims of e-procurement	11	16	
change culture	6	10	
change in work practice and standardization of process	2	2	
e-procurement expected benefits	8	17	
the underlying procurement process compliant with PPA	2	3	
<i>project phases and events</i>	8	22	
general announcement and ISD stage	3	3	
implementation phase 1 onboarding any PB	1	1	
implementation phase 2 high value PB	4	7	
official launching of e-procurement	3	3	
pilot phase of implementation	3	7	
<i>sub-targets</i>	5	8	
accompany users in the learning process	1	1	
address users' concerns and needs	4	4	
attempt to operationalize evaluation module	1	1	
create a reputation for e-procurement	4	5	
implementation in phases will facilitate both stakeholders to shift to complete e-proc	1	1	
improve international score in ease of doing business with e-proc	1	1	
progress self-tracking	1	1	
routinise e-procurement to reach autonomy in operations	4	4	
secure support of only high procurement value--volume public bodies	2	2	
secure support of suppliers to improve uptake	3	4	
secure top management support to own change & generate a change mindset	6	7	
timely implementation	1	1	
top management commitment and ownership	3	4	
<b>Identify LPs and learn norms and spot gaps</b>	38	252	The legitimation providers from public bodies were classified as resistant stakeholders, partly supportive and supportive stakeholders, and bidders' norms-related concerns and bidders' tendency for compliance.
<i>Existing norms inscribed in procurement process of GOM</i>	8	51	
Accepted languages	1	1	
Accountability aspects	1	11	
clearly defined roles & associated responsibilities	1	4	
Independent evaluation process	1	1	
procurement committees	1	5	
sanctions structure	1	1	
Ethical practices	7	26	

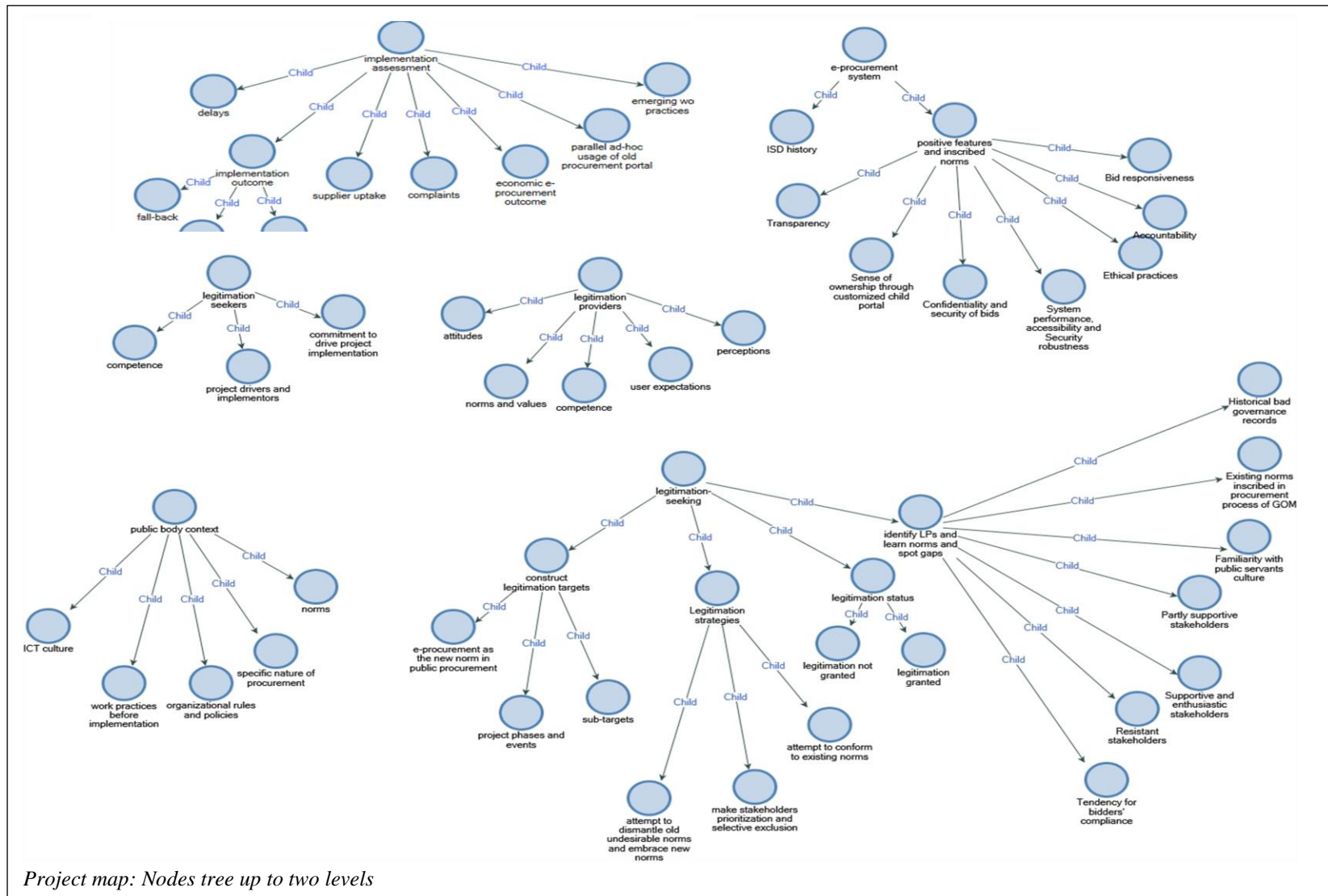
abstain from human touch or direct personal dealing with bidders	1	1	
declaration of confidentiality	2	3	
declaration of conflict of interest	2	3	
dissent in evaluation	1	1	
equality of opportunity	6	6	
Fairness	4	7	
secured reception of bids	2	4	
Timeliness in procurement	2	3	
Transparency aspects	3	10	
clearly defined procurement process chain	1	2	
Maintain proper records and communications throughout the process	3	8	
<i>Familiarity with public servants culture</i>	13	19	
bureaucratic communication and hierarchy of reporting	5	5	
different paper-based procurement practices in different pb	2	4	
general slow-to-change culture	4	4	
ICT norm	3	4	
staff rotation	2	2	
<i>Historical bad governance records</i>	4	71	
excessive delays compromising timeliness rules	3	15	
Exploitation of emergency procurement	1	4	
inappropriate method of procurement chosen	2	8	
lack of ethics	3	4	
Lack of transparency and accountability	4	19	
non-compliance to rules and heavy losses	4	13	
professional shortcomings in procurement	4	8	
<i>Partly supportive stakeholders</i>	7	44	
dependency on SPOC for using e-procurement	5	11	
constant worry of missing deadlines with e-proc	3	3	
increasing number of requests for on-site assistance	3	3	
lack of confidence for bid preparation online	4	4	
rarely complete the online bidding process on their own	1	1	
rejection of evaluation module	1	24	
concern on fraud risk with online evaluation	1	1	
concern over change in roles and power of users	1	2	
lack of dissenting feature	1	1	
pointing flaws in the system and express their requirements	1	16	
sense of judgement is imperative in procurement	1	2	
unmet paperless expectation	1	2	
top management support for bidding module	6	9	
cooperatte on staff training	4	4	
show commitment to engage and sensitize suppliers	2	2	
show commitment to move to online bidding	3	3	

<i>Resistant stakeholders</i>	15	47	
lack of top management support of public bodies	9	23	
delays in starting implementation after staff training	3	4	
e-procurement is not their priority	4	4	
non-responsiveness to meeting invitations	1	1	
overtly positive in kick-off meetings but covert resistance	3	3	
supporting end-users to use former methods of paper and old procurement portal	3	3	
unwillingness and lack of commitment in doing implementation	4	8	
lack of willingness to innovate in procurement	1	1	
Resistance to change	12	23	
express satisfaction with former methods	3	3	
fall-back to paper-method	5	5	
lack of interest	2	5	
loads of complaints about the system despite assistance	2	2	
recurrent forgetfulness on using e-proc	4	4	
self-interest	1	2	
<i>Supportive and enthusiastic stakeholders</i>	8	18	
supportive procurement staff team for the three public bodies	6	8	
clear and consistent progress in IFB online	3	3	
mastering e-proc software	2	2	
showed interest and face challenges	2	2	
sought support of pessimistic top management for one public body	1	1	
top management support and cooperation for two Public bodies	5	10	
commitment to implement e-procurement	2	2	
compliance to directives	1	1	
enthusiasm about e-proc	2	2	
identify champion for driving internal implementation	2	3	
regular progress report meetings	1	1	
<i>Tendency for bidders' compliance</i>	2	2	
<b>Legitimation status</b>	25	58	Legitimation status indicates the outcome of the legitimation process at different project phases. This node has only two children: granted or not granted.
<i>legitimation granted</i>	10	21	
e-procurement is the new norm for bidding & evaluation	10	21	
benefits reaping	4	7	
celebration of project success	2	2	
moving beyond bidding stage	2	2	
portal IFB metrics pattern	2	4	
usage of e-procurement system	4	4	

<i>legitimation not granted</i>	18	37	
compliance to mandatory without acceptance	3	3	
delays in implementation and forgetfulness	8	11	
disatisfaction of Legitimation seekers	3	3	
enforcement of mandatory use	4	6	
no improvement in IFB metrics pattern for onboarded PBs	2	3	
return of paper-based procurement and press cuttings	5	5	
slow supplier uptake	2	2	
unachieved targets	4	4	
<b>Legitimation strategies</b>	60	206	Legitimation strategies refers to the activities carried out by the legitimation seekers to gain support of the stakeholders and compose of 3 child nodes “attempts to dismantle undesirable norms and embrace new norms”, “attempts to conform to existing norms” and “stakeholders’ exclusion and prioritization. The “attempts to conform to existing norms” excludes the undesirable norms of legitimation providers.
<i>attempt to conform to existing norms</i>	21	33	
extending full support to enthusiastic stakeholders	1	2	
humbly acknowledging short-comings in e-procurement system	1	3	
improve software to meet needs of users	5	9	
increase user-friendliness for suppliers	1	1	
meet requirements for better performance of e-procurement system	2	2	
issue directives for bids cancellation	1	1	
issue rule of offline mode to meet demands of user for timeliness in eproc	2	2	
meet demands for refresher training	2	2	
promise for software improvements to meet users' expectations	3	3	
publish e-SBD to address concern of users on templates problem	1	1	
readiness of the stakeholders for e-procurement	3	3	
re-assuring stakeholders on security and reliability of e platform	2	2	
software loose coupling and allow offline evaluation	5	5	
<i>attempt to dismantle old undesirable norms and embrace new norms</i>	54	169	
adopt a soft-transition philosophy	26	55	
change management	2	2	

e-procurement support services	24	46
dedicated officers for hand-holding (SPOC)	19	28
online helpdesk support	6	6
process-based support	3	4
remote assistance	2	2
self-training videos on Youtube channel	1	1
six weeks on-boarding program for routinization	2	2
user manual	2	2
initial pilot phase	2	2
mock platform	4	4
phased approach to implementation	1	1
build-up reputation of e-procurement	11	21
praising efficiency of software	3	8
show-casing	11	13
encourage public bodies to engage their suppliers	5	5
enforce change management strategy through e-PS cell and championship	4	5
improve credibility of team through ISO certification	1	1
introducing performance measurement	2	3
issue of directives and user manuals to assist in learning process	11	12
e-procurement user manuals	8	8
FAQ on website	2	2
quality control on preparation of bids	1	1
sensitization of bidders	1	1
mandatory use after successive failure	2	2
organize and provide training for all	10	13
meet training needs tailored for local and international suppliers to increase uptake	1	1
offsite training	9	9
on-site training, coaching and handholding to improve confidence in bidding	1	2
personal contacts and relationships	7	9
raise national awareness about e-procurement	2	3
ceremonial action	2	2
media coverage	1	1
request successful stakeholders to help others	1	1
seek support from powerful stakeholders from public and private sector	5	6
stakeholder engagement & communication	17	30
use marketing technique	3	3
<i>make stakeholders prioritization and selective exclusion</i>	2	4

## Nodes tree



Project map: Nodes tree up to two levels

## APPENDIX E

The table below shows the code names and corresponding NVIVO coding statistics for all interviews conducted during the period of the research.

Name	Codes	References
EPROC29B	14	31
EPROC08_OBS	9	13
EPROC29C	28	76
EPROC28	73	233
EPROC02	32	58
EPROC03	14	18
EPROC04	46	138
EPROC05	43	60
EPROC06	40	95
EPROC07	23	29
EPROC09	31	41
EPROC10	37	60
EPROC12	92	302
EPROC13	61	125
EPROC14	23	47
EPROC16	22	39
EPROC17	34	70
EPROC18	0	0
EPROC21	88	303
EPROC22	33	69
EPROC23	65	190
EPROC24	57	116
EPROC25	59	156
EPROC26	70	206
EPROC27	83	292
EPROC29	56	149
OBS_TRAIN02	7	8
OBS_TRAIN03	10	14
OBS_TRAIN04_EVAL	15	27
EPROC01	80	272
EPROC_29A	72	173
EPROC_GROUP_3_PSO_ACCT	26	38
EPROC_GROUP_3_MPSO_ACCOUNT	73	221
EPROC_PSO_FDL	16	30
EPROC11	78	192
EPROC20_GROUP_4_AMPPO_ACCT	63	140

## APPENDIX F

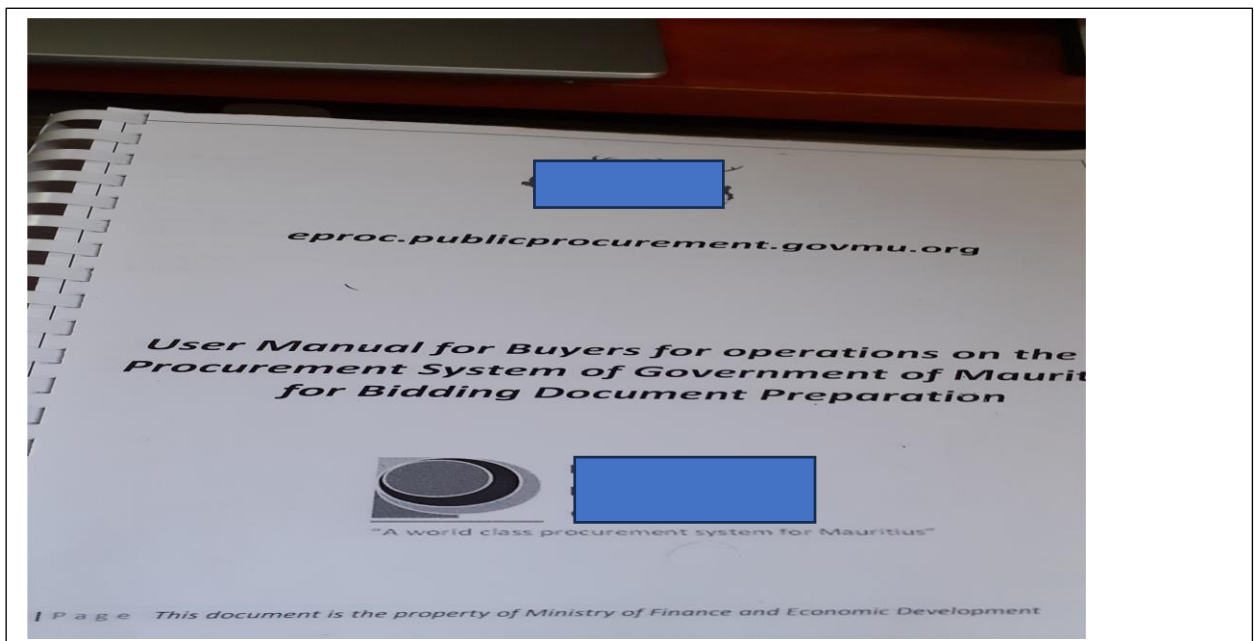
### F.1 – Extract of Public Procurement Regulations 2008

Number 27 of the Public Procurement Regulations 2008, regarding the reception and security of bids, stipulates that:

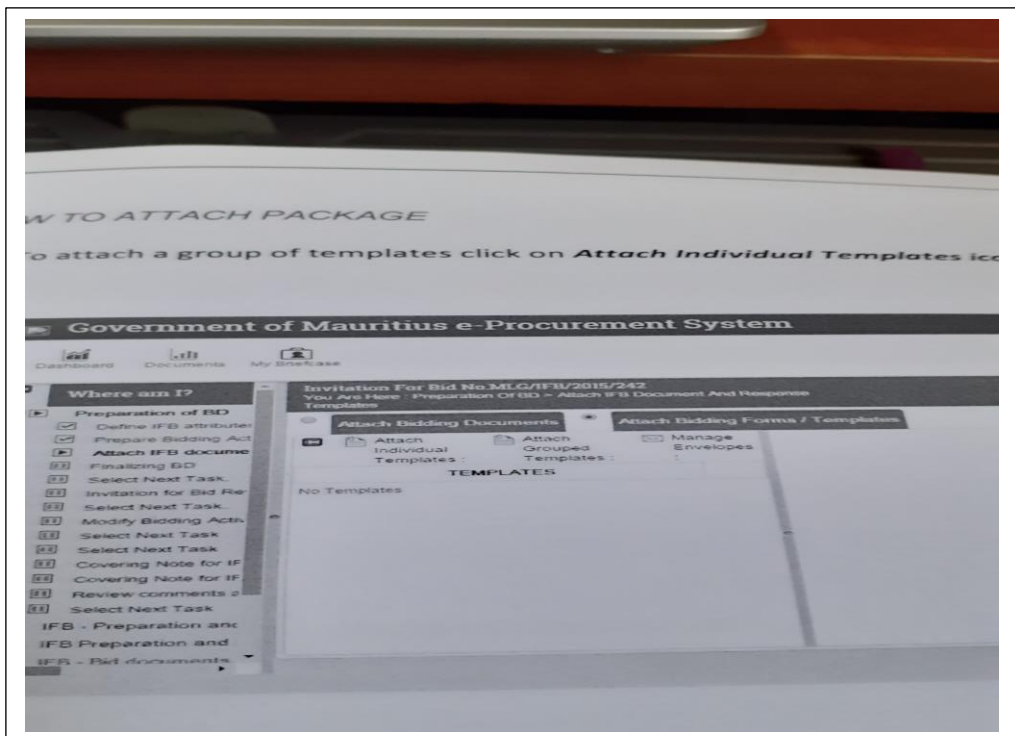
*“Reception and security of bids (1) A public body shall maintain a securely locked bid box into which bidders may deposit their bids. (2) If the size of the offer envelope makes it impossible to place them in the bid box, such envelope shall be handed over to the officer in charge of the Registry of the public body, who shall record the date and time of receipt, ensure that the bids are kept in a secure area and handed over to the tender committee at the bid opening.”*

Source: (PPO Regulations, 2022)

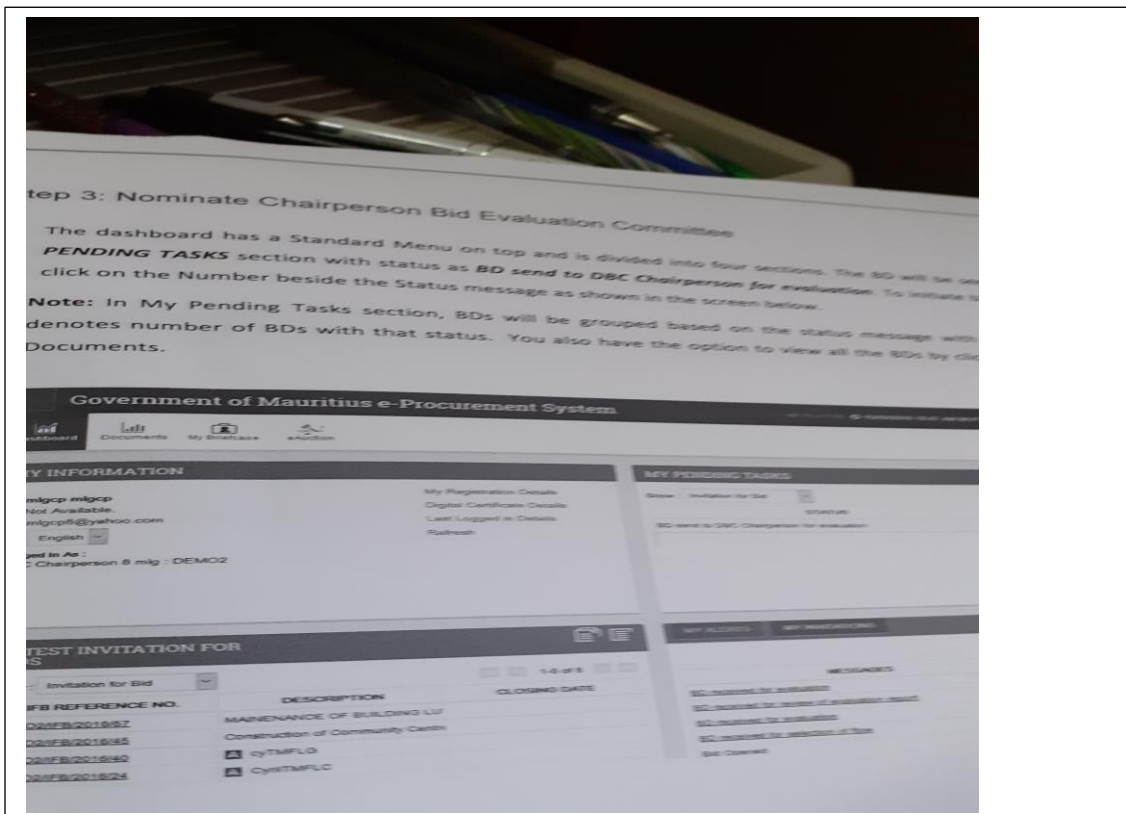
### F.2 – User Manual



### F.3 - e-procurement templates requirement



### F.4 – Committees set-up in e-procurement



## F.5 – Public Notice of bids

**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF HAEMODIALYSIS MACHINE FOR**  
[REDACTED]

1. Bids on appropriate forms are invited from **qualified and eligible local bidders** for the “**Supply, Installation, Testing and Commissioning of Haemodialysis Machine for** [REDACTED] [REDACTED]
2. Other details of the requirements and conditions are contained in the bidding document.
3. The bidding document is available free of charge on this website:publicprocurement@govmu.org
4. Any clarification sought by any bidder shall be addressed in writing to the Senior Chief Executive, [REDACTED], SSR Street, Port Louis Attn: Manager Procurement and Supply, Fax No. [REDACTED] so as to reach him **at least fourteen (14) days** before the deadline for the submission of the bids.
5. Bids in sealed envelope clearly marked “**Supply, Installation, Testing and Commissioning of Haemodialysis Machine for** [REDACTED] – **MHPQ/EQ/2020-2021/Q14**” and indicating the closing date should be addressed to the [REDACTED] and deposited in the **Bid Box** at the under-mentioned address or sent by Courier Service or Registered Mail so as to reach the **Senior Chief Executive**, [REDACTED] on or before **Monday 21 September 2020 up to 10.00 hours** (local time) at latest.

[REDACTED]

Source: Public Procurement Portal, 2021

**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF HAEMODIALYSIS MACHINE FOR**  
[REDACTED]

1. Bids on appropriate forms are invited from **qualified and eligible local bidders** for the “**Supply, Installation, Testing and Commissioning of Haemodialysis Machine for** [REDACTED] all [REDACTED]
2. Other details of the requirements and conditions are contained in the bidding document.
3. The bidding document is available free of charge on this website:publicprocurement@govmu.org
4. Any clarification sought by any bidder shall be addressed in writing to the [REDACTED], [REDACTED] Anquetil Building, SSR Street, Port Louis Attn: Manager Procurement and Supply, Fax No. [REDACTED] so as to reach him **at least fourteen (14) days** before the deadline for the submission of the bids.
5. Bids in sealed envelope clearly marked “**Supply, Installation, Testing and Commissioning of Haemodialysis Machine for** [REDACTED] – **MHPQ/EQ/2020-2021/Q14**” and indicating the closing date should be addressed to the **Senior Chief Executive**, [REDACTED] and deposited in the **Bid Box** at the under-mentioned address or sent by Courier Service or Registered Mail so as to reach the **Senior Chief Executive**, [REDACTED] on or before **Monday 21 September 2020 up to 10.00 hours** (local time) at latest.

[REDACTED]

Source: Public Procurement Portal, 2021

**THE JUDICIARY  
INVITATION FOR BIDS**

**Authorised under Section 16 (1) of the Public Procurement Act 2006**

**Procurement of Access Control System**

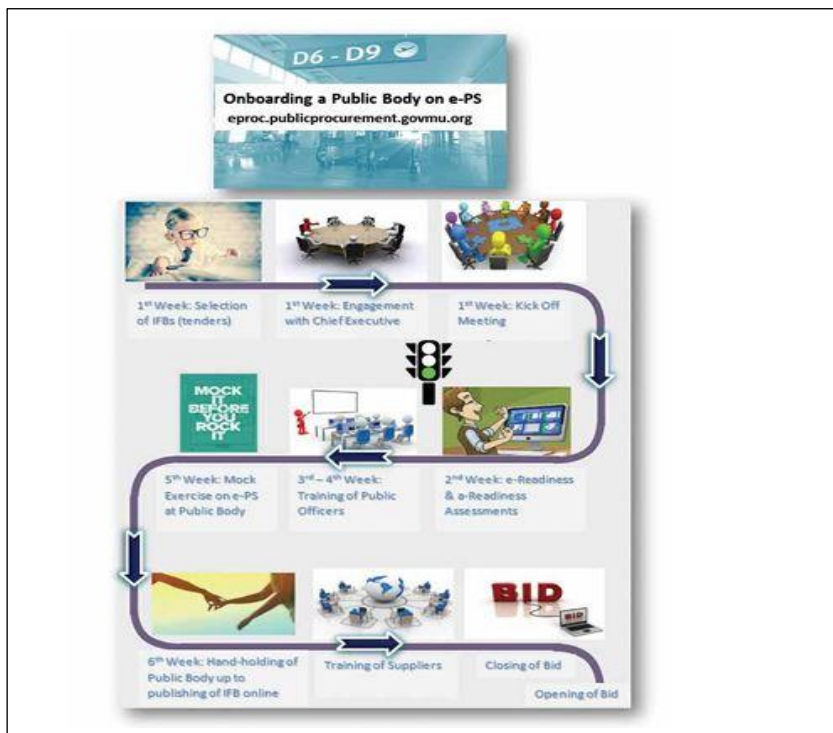
**at [REDACTED]**

1. [REDACTED] invites sealed bids from eligible and qualified bidders for Procurement of Access Control System at The [REDACTED] Building.
2. Other details of the requirement, specifications and conditions are contained in the Bidding Document.
3. The bidding document is available, as attachment to this Notice of Procurement, free of charge on the Public Procurement Portal [publicprocurement.govmu.org](http://publicprocurement.govmu.org)
4. Any clarification sought by any bidder shall be addressed in writing to The [REDACTED] Registrar, [REDACTED] Building, Edith Cavell Street, Port-Louis, or through e-mail [REDACTED] so as to be received at least **fourteen (14) days** before the deadline for the submission of bids.
5. Bids in sealed envelope clearly marked "**Procurement of Access Control System at The New [REDACTED] Building – ONB/6/2020-2021**" and indicating the closing date should be addressed to The [REDACTED] Building, Edith Cavell Street, Port-Louis and deposited in the **Tender Box** located at the above mentioned address on or before **Wednesday 30<sup>th</sup> June 2021 up to 13 00 hours (local time) at latest. Late bids will not be accepted. Electronic bidding shall not be permitted.**

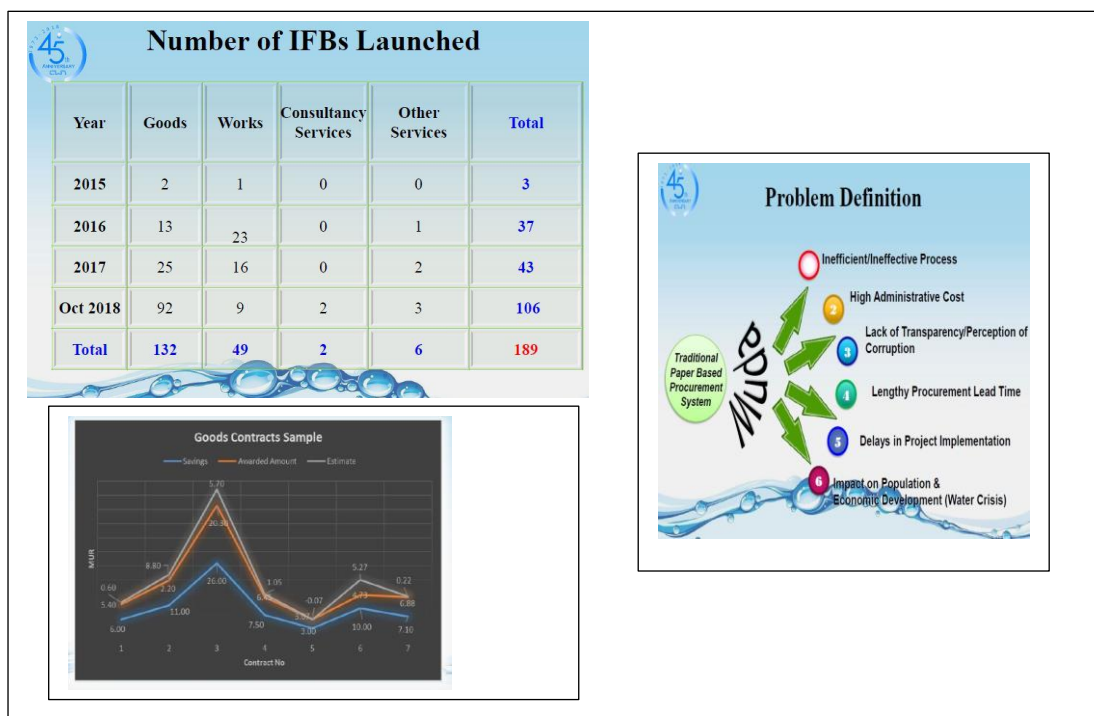
Source: Public Procurement Portal , 2021

### F.6 – Flow-chart – Onboarding a public body on e-PS

Flowchart for six weeks' long onboarding of public bodies on e-PS (PPO Annual report, 2016)



## F.7 – Statistics on IFBs – Organization C



Source: (on-site consultation Presentation slides of success of e-PS in Organization C)

## Appendix F2

The benefits of e-procurement were clearly spelled out as follows (E-procurement system of Government of Mauritius, 2015):

- *“Deepen use of ICT in work environment, bridge the G2B digital gap with the private sector and catalyse reform of public sector in modernizing the way public bodies will carry out procurement tasks.*
- *Lower transaction costs in moving out from paper to digital and improve decision making by flattening bureaucracy and breaking silos work structures.*
- *Generate management information on each procurement transaction that enables performance driven procurement.*
- *Increase speed of procurement transactions through relaxation of time and space constraints - connect anytime from anywhere.*
- *Generate efficiency gains, increased transparency and accountability in use of taxpayer’s money.*
- *Lower potential for fraud and corruption.*
- *Enhance competition and help lowering contract prices.*
- *Shorten procurement cycle by compressing bid preparation time, minimize errors in bids, improve bid quality and responsiveness through timelier information on all aspects of the procurement and reduce risks of challenge and application for review.*
- *Promote government sectoral policy for increased access and share of SMEs in public procurement.”*

## Appendix F3

### **Extract of Procurement Guidelines (Procurement Policy Office Procurement guidelines 2017)**

#### *“Powers and Functions of Procurement Committees*

*(1) A Procurement Committee has to ensure that all procurement proceedings are conducted in accordance with the provisions of the PPA, its regulations and other established procedures.*

*(2) A Procurement Committee has to strive to achieve best value for money, taking into account:*

*(a) the evaluation criteria and methodology disclosed in the bidding documents;*

*(b) the qualification criteria and methodology disclosed in the bidding documents;*

*(c) equality of opportunity to all bidders; (d) fairness of treatment to all parties;*

*(e) the need to obtain the best value for money in terms of prices, quality and delivery, having regard to set specifications, and (f) transparency of process and decision.”*

#### *“Declaration of Conflict of Interest*

*(2) At the first meeting of the Evaluation Committee, the Chairperson has to ensure that all members would be available for the whole duration of the bid evaluation as per the work plan specified.*

*(3) Prior to taking cognizance of the bids received and the name of bidders the Chairperson, Members and Secretary to the Evaluation Committee have to sign a first declaration of no conflict of interest as per the format contained in the model Bid Evaluation Report.”*



The hermeneutic approach is undertaken for the other concepts forming part of the research topic. For example, the search circle is kick-started with concept of “*implementation of e-procurement in the public sector*” that enhances the understanding on the process of e-procurement implementation, the challenges that are being faced and the outcome in different countries. After an initial critical assessment, deep knowledge about the procurement process concept becomes necessary for better understanding of e-procurement challenges especially the dynamics of stakeholders’ acceptance or rejection of the phenomena. Searching and acquisition of materials related to the procurement concept were mostly obtained from sources outside of IS discipline. As advocated by Boell and Cecez-Kecmanovic 2014), the iterations must stop at some time when saturation is felt. In this study, when all the concepts were finally tied together and when the critical assessment clarifies on the relevance and importance of legitimation in addressing stakeholders’ acceptance issues of e-procurement implementation that provides an opportunity to research e-procurement from a legitimation lens, the hermeneutic process was stopped. The breakdown of the final selection of academic papers that are retained for the literature review is shown in table 2. The coverage of publications for the key concepts identified, with respect to category is shown in table 1.

*Table 1: Coverage of academic papers by discipline/paper type*

<b>Category</b>	<b>% coverage of academic papers</b>
Information System, and other IS related	74%
Public Procurement	4%
Public Administration	9%
Practitioners’ papers	13%

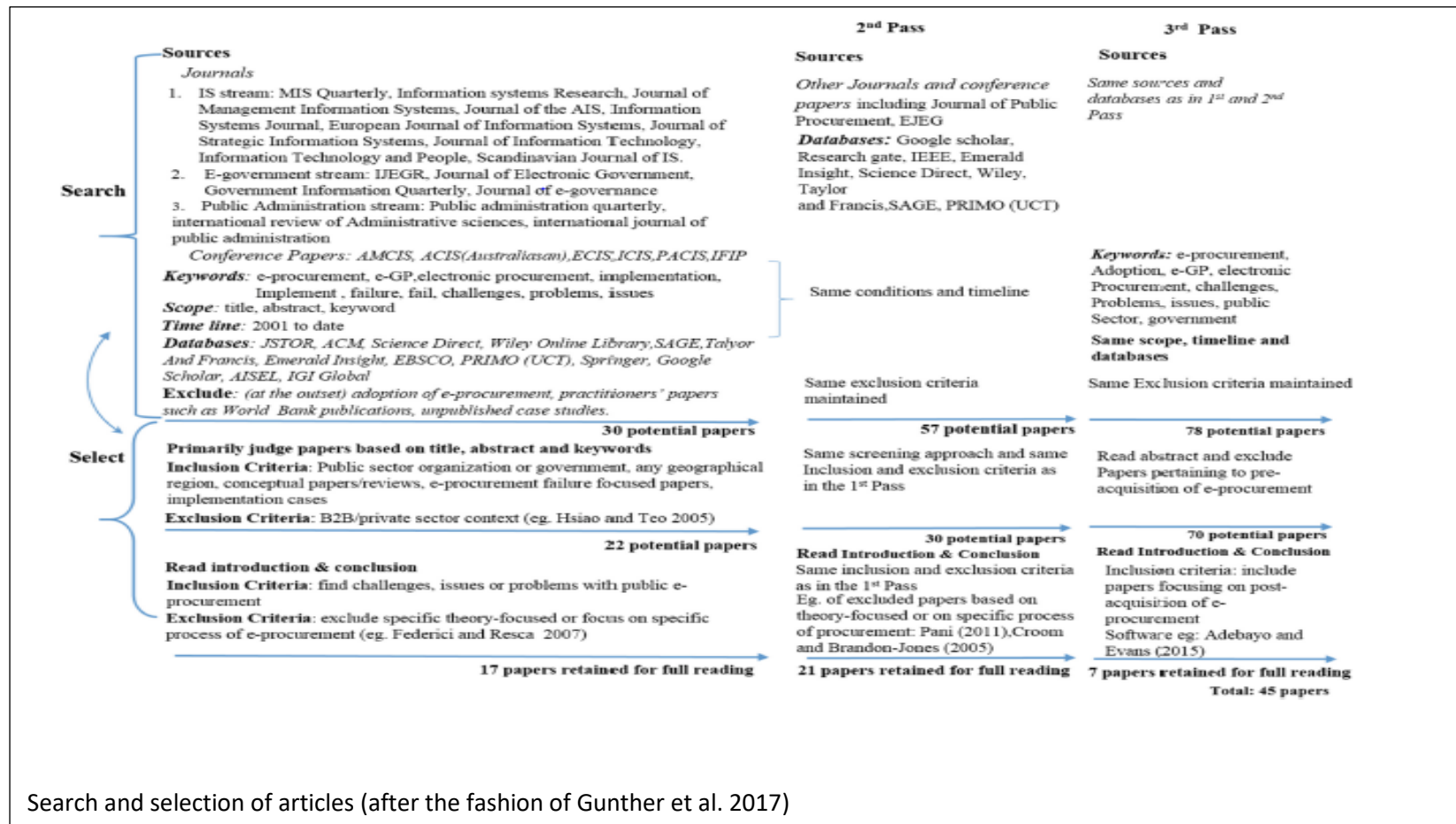
Journals	Key concepts					
	Procurement process & corruption	e-procurement implementation	Legitimation/legitimation-seeking	Public sector Leadership	Public sector context	Demand-side stakeholders of PP
Basket of 8 IS Journals & IS conferences (ICIS, AMCIS, PACIS, ECIS)		10	20	5	15	10
Additional IS / ICT related journals – Q1*		4	14		10	4
Other IS related journals & conference papers	9	13	22	2	9	13
Public procurement Journals (Q1 & Q2)**	3	3				3
Public Administration Journals (Q1 & Q2) ***	2	4		6		4
Practitioners' papers: OECD, World Bank, ADB and AfDB	14	6		2	1	6

\*, \*\*, \*\*\* - SciMago Journal ranking

Table 2: Breakdown of statistics on papers selection by discipline/paper type

## APPENDIX H.1

The following diagram shows the process undertaken for the systematic literature review for the implementation challenges of e-procurement:



## APPENDIX H.2

Table H.2 below provides a summary of legitimation-seeking activities using the LAM framework (Flynn and Hussain, 2004) integrated in the theoretical framework presented in Chapter 3.

Table H.2: Summary of legitimation-seeking activities

Phase	Construct legitimation	Learn the norms and spot gaps	Apply Legitimation strategies	Impacts of legitimation strategies applied	Legitimation Status
ISD	<p>e-PS is the new norm for better transparency and accountability.</p> <ul style="list-style-type: none"> <li>• aims and expected benefits.</li> <li>• change culture.</li> <li>• change in work practice and standardization of procurement process.</li> </ul>	<p>Historical bad governance records of several public bodies</p>	<ul style="list-style-type: none"> <li>• Inscribe good governance practices underlying the existing procurement process in e-procurement plus new norms behind the aim of e-PS.</li> <li>• Digital signature certificates for ensuring suppliers on bid security and confidentiality</li> </ul>	<p>Two public bodies expressed enthusiasm to implement e-PS following announcement</p>	<p>Not Applicable</p>
		<p>Knowledge of good governance practices inscribed into existing procurement process. Some public bodies diligently follow procedures. <i>“Not all public bodies are bad”</i></p> <p>Bid Security and confidentiality concerns with digitalization</p>			
		<p>Familiarity with the slow-to-change culture of public officers</p>	<ul style="list-style-type: none"> <li>• Loose software coupling in system design facilitated by a phased approach to implementation.</li> <li>• Government-wide stakeholders’ communication to announce about the project.</li> <li>• Constitution of implementation team</li> <li>• Commitment of legitimation seekers</li> </ul>		
		<p>One procurement law but different procurement work practices in public bodies</p>	<ul style="list-style-type: none"> <li>• Standardization of process</li> <li>• Customized child portal for look-and-feel and sense of ownership</li> </ul>		

		ICT norm	No gap		
		“SMEs need equal opportunity.”	<ul style="list-style-type: none"> <li>SMEs option catered in online registration on e-PS allowing smooth registration of SMEs.</li> <li>Margin of preference for SMEs in public procurement process inscribed in e-procurement</li> </ul>		
<b>Official launching</b>	creating a reputation for e-procurement to sell the product among the 202 public bodies	Two public bodies, A and C, expressed enthusiasm. The former positively responded to the call of the project team for participating in the UAT of e-PS and was cooperative in the endeavor. The latter’s CEO has a shared vision with LS	Raise national awareness to both suppliers and public bodies about e-procurement and its usefulness to mitigate corruption, through ceremonial action and press coverage: Public Body A was privileged for grand launching of e-procurement	Satisfaction with launching ceremony	Not Applicable
	<ul style="list-style-type: none"> <li>Secure support of suppliers to improve registration for success of pilot phase.</li> </ul>	1. Readiness of local and international suppliers to use e-PS which is an innovation for the suppliers’ community.	<ul style="list-style-type: none"> <li>Seek support of powerful stakeholder, JEC of the private sector and build partnership for roll-out of e-PS among supplier community and training of suppliers.</li> <li>Invitation for training of suppliers through press communique and training kick-started.</li> <li>Organize training for all.</li> <li>User-friendly application for online e-PS registration</li> <li>Assistance to the local and international suppliers in terms of</li> </ul>	<ul style="list-style-type: none"> <li>Upward trend in registration of suppliers</li> </ul>	Partly granted

	<ul style="list-style-type: none"> <li>• Pilot stage involving 7 public bodies at the start, will reduce the risk of failure and enable LS to gather information on the experience of LPs and improve the software thereof</li> <li>• To use the successful output of pilot for future showcasing</li> <li>• Build trust relationship between stakeholders and legitimation seekers</li> </ul>	<ol style="list-style-type: none"> <li>2. Readiness of the 7 public bodies including the two enthusiastic ones in terms of ICT infrastructure, procurement structure and human resources. They responded positively to participate in pilot and hence willing to cooperate.</li> <li>3. General slow-to-change culture in public sector</li> </ol>	<p>helpdesk service and training materials in terms of You-tube videos, and online manuals to register online for e-procurement.</p> <ul style="list-style-type: none"> <li>• Helpdesk assistance for purchase and use of digital signature certificate</li> <li>• Adopt a soft transition philosophy. Phased approach to implementation, sustained ICT support services in terms of dedicated officers for handholding, helpdesk, process-based assistance, and user manuals, free training, mock platforms, six-weeks long on-boarding and follow-ups.</li> <li>• Extend full support to the two enthusiastic stakeholders giving the project team the “green card” to liaise and work directly with the software supplier.</li> <li>• Personal contacts and relationships</li> <li>• Stakeholder engagement and communication</li> <li>• Encourage public bodies to engage suppliers where LS recommended</li> </ul>	<ul style="list-style-type: none"> <li>• Success of e-procurement implementation in the two enthusiastic public bodies A and C, with IFB launched.</li> <li>• Fallback in the other public bodies</li> </ul>	
--	--	--	---	--	--




			<p>them to sensitize their suppliers to embrace e-procurement.</p> <ul style="list-style-type: none"> <li>• Improve LS team credibility through ISO certification</li> </ul>		
<b>First phase</b>	<ul style="list-style-type: none"> <li>• implementation in phases will facilitate both stakeholders.</li> <li>• Secure top management support of 23 public bodies on-boarded in this phase, to own the change and generate a change mindset to remodel staff behaviour to facilitate use of e-procurement.</li> <li>• accompanying the public bodies in the learning process</li> <li>• top management commitment and ownership</li> <li>• Address users' concerns from lesson learned in pilot and needs to improve uptake.</li> </ul>	<ul style="list-style-type: none"> <li>• Resistant stakeholders characterized by lack of top management support to the initiative underpinned by overtly positive in kick-off meeting but shows no commitment afterwards, "e-procurement is not their priority."</li> <li>• Active resistance of the legitimation providers "nourished by" a lack of top management support to e-procurement</li> <li>• Realized that change will not be possible without a champion.</li> </ul>	<ul style="list-style-type: none"> <li>• Adopt the soft-transition philosophy as above.</li> <li>• Showcasing of success cases of public bodies, A &amp; C to encourage the public bodies to change their negative attitudes</li> <li>• Stakeholders' engagement and communication</li> </ul>	<p>One successful scenario (public body B). The rest fallback to former methods of procurement namely paper-based and old procurement portal Fallback was mainly characterized by a combination of factors defined in a spiral loop (explained in section) Loads of complaints were made by</p>	Slightly granted

		<ul style="list-style-type: none"> <li>Concerns of suppliers about lack of user-friendliness of registration module</li> <li>Concerns of suppliers about reliability of electronic platform and data integrity of online submission of bids</li> </ul>	<ul style="list-style-type: none"> <li>Recommend the setting up of e-PS cell headed by a champion to manage change.</li> <li>Improvement of the module of registration of e-procurement to meet suppliers' needs for better user-friendliness.</li> <li>Test the robustness of the platform to re-assure stakeholders about reliability of the electronic platform. Dissemination of user manual on the e-procurement portal that explains the safety mechanism of digital signature certificate</li> </ul>	<p>legitimation providers.</p> <p>Slow progress in registration of suppliers causing negative economic outcome in online bidding</p>	
<b>Second phase</b>	<ul style="list-style-type: none"> <li>Focus only on high spending public bodies (high-volume high-value procurement organizations) constituting a total of 54 organizations out of 204 public bodies and secure the support of their top management.</li> <li>Timely implementation of e-procurement after having evaluated that implementation is taking too many years.</li> </ul>	<p>Active resistance to change by some legitimation providers characterized by</p> <ul style="list-style-type: none"> <li>Recurrent forgetfulness on how use e-PS</li> <li>Loads of complaints about the system, underpinned mainly by a perceived complicated system that caused conflict between their timeliness norm in procurement and inefficient system; and their ICT norm with and inefficient system.</li> </ul>	<ul style="list-style-type: none"> <li>Selective prioritization and exclusion of stakeholders</li> <li>organize refresher training for those who have forgotten how to use e-procurement.</li> <li>Humbly acknowledged shortcomings in the system and took commitment to improve user experiences on e-procurement based on complaints</li> </ul>	<p>Part-usage of e-procurement by some public bodies characterized by top management support.</p> <p>Fallback to former methods by some public bodies</p>	<p>Legitimation was still not granted</p>

	<ul style="list-style-type: none"> <li>• Address users' concerns and needs</li> <li>• Routinize e-procurement.</li> <li>• Operationalize online evaluation module.</li> <li>• Progress self-tracking</li> <li>• Management commitment and ownership</li> <li>• Improve their international score in ease of doing business with Mauritius</li> </ul>	<ul style="list-style-type: none"> <li>• Praising paper-based method because of a complicated e-PS</li> <li>• Negative economic outcome that conflicted with their responsiveness and competitiveness norm in bidding</li> </ul> <p>General slow-to-change culture</p>	<ul style="list-style-type: none"> <li>• Issue directive for launching informal quotation of low value in offline mode</li> <li>• Encourage public bodies to sensitize their suppliers to improve registration on e-PS.</li> <li>• Securing support of private sector stakeholder MCCI to improve uptake by</li> <li>• Secure support of other powerful stakeholders for progress monitoring</li> <li>• Sought the support of successful stakeholders to help other public bodies which are implementing e-procurement.</li> <li>• Introduction of PTI to monitor progress</li> </ul>	<p>Exclusion of resistant public bodies not falling in high value-high volume category</p>	
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## APPENDIX I

### I.1 Ethics Approval letter from the University of Cape Town

	<h2>Faculty of Commerce</h2>
	<p><b>Private Bag X3, Rondebosch, 7701</b> 2.26 Leslie Commerce Building, Upper Campus Tel: +27 (0) 21 650 4375/ 5748 Fax: +27 (0) 21 650 4369 E-mail: <a href="mailto:com-faculty@uct.ac.za">com-faculty@uct.ac.za</a> Internet: <a href="http://www.uct.ac.za">www.uct.ac.za</a></p>
	<p> @Commerce UCT  UCT Commerce Faculty Office</p>

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11<sup>th</sup> November 2019

Ms Idah Mohungoo  
Department of Information  
Systems  
University of Cape Town

Dear Ms Mohungoo

REF: REC 2019/10/058

**SEEKING LEGITIMATION FROM STAKEHOLDERS IN THE IMPLEMENTATION OF E  
PROCUREMENT- THE CASE OF THE GOVERNMENT OF MAURITIUS**

We are pleased to inform you that your ethics application has been approved. Unless otherwise specified this ethical clearance is valid for 1 year and may be renewed upon application.

Please be aware that you need to notify the Ethics Committee immediately should any aspect of your study regarding the engagement with participants as approved in this application, change. This may include aspects such as changes to the research design, questionnaires, or choice of participants.

The ongoing ethical conduct throughout the duration of the study remains the responsibility of the principal investigator.

We wish you well for your research.

Shandre Swain  
Administrative Assistant  
University of Cape Town  
Commerce Faculty Office  
Room 2.26 | Leslie Commerce Building

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## I.2 – Approval from the research organization



University of Cape Town  
UNIVERSITY OF CAPE TOWN  
UNIVERSITEIT VAN KAPSTAD

**Department of Information Systems**  
Leslie Commerce Building  
Engineering Mall, Upper Campus

OR

Private Bag X3 - Rondebosch - 7701  
Tel: +27 (0) 21 650 2261 Fax: +27 (0) 21650 2280

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[15.10.2019]

To: Director, Procurement Policy Office.

**Request to conduct research in your organization on e-procurement**

Dear Sir,

The researcher, Mrs Idah Mohungoo is working on a research project as part of her doctoral studies at the University of Cape Town on a part-time basis. The researcher, in this case, has chosen to conduct a research entitled 'Seeking Legitimation (buy-in/acceptance) from the stakeholders (end-users) of e-procurement system – case of Mauritius'. The researcher would like to request permission to conduct this research at your organization. The objective of the research is to understand what are the strategies used by your organization to get the legitimation (buy-in) of the stakeholders to increase the uptake of e-procurement, and to recommend appropriate legitimation (buy-in/acceptance) strategies to achieve project success.

Your participation in this research is voluntary. All information will be treated in a confidential manner and used exclusively for the purpose of this study. No individual names, including organization names will be recorded or published. You will not be requested to supply any identifiable information, ensuring anonymity of your responses. You can choose to withdraw from the research at any time for whatever reason, in accordance with ethical research requirements.


The study adopts a qualitative research method and will specifically use interviews to collect data from the key decision makers, project team members and the end-users. The interview will be conducted at a place which is most convenient to you and will last about 45 minutes. If you are willing to participate in this study, I will be grateful if you could sign the attached form.

Should you have any question, regarding this research, please feel free to contact me on my mobile number 57779590 or email on [imohungoo@govmu.org](mailto:imohungoo@govmu.org) or [MHNIDA001@uct.ac.za](mailto:MHNIDA001@uct.ac.za).

**Management Consent Form**

I, [REDACTED], approve Mrs Idah Mohungoo, to conduct the research on '**Seeking Legitimation (buy-in/acceptance) from the stakeholders (end-users) of e-procurement system- case of Mauritius**'. I am aware that participation is voluntary and that participants may choose to withdraw from this study at any time, should they choose to do so.

[REDACTED]



15/10/19  
Date