

The effects of safety culture on project performance in high risk industries

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DECLARATION

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ABSTRACT

Projects are undertaken at Koeberg Nuclear Power Station in South Africa to enhance safety and to contribute to the continuity of power supply in the country. These projects are undertaken in an industry that is regarded as a high risk due to the potential consequence of a nuclear accident. Focus is thus placed on safety culture to prevent such accidents from taking place.

Since safety is a key performance indicator in these high-risk industries, and projects are undertaken to improve the overall performance of such organizations, the role which safety culture has on project performance would be of interest.

This study investigates how safety culture influences project performance and identifies the respective elements that collectively interact in contributing towards successful project outcomes in the context of Koeberg Nuclear Power Station.

The study has found that –

Safety culture plays a vital role in safety performance which is a recognized performance indicator of projects in high risk industries. Safety culture itself was found to consist of the elements of safety performance, personal values to safety, safety leadership, safety related interpersonal relations, proactivity to safety, commitment to safety and continuous improvements to safety. These elements with emphasis on safety were related to the project management knowledge areas of Time, Scope, Risk, Quality, Human Resource and Communication Management. The project managers competencies are also included amongst these elements which respectively interact with one another to influence the level of safety culture in a project. The study has revealed that these elements should be worked at by all departments involved in a project to allow the required performance criteria to be achieved. In addition, it reveals that a good safety culture provides flexibility in addressing changing requirements in a project.

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CHAPTER1: Introduction and research overview

1.1 Introduction

This chapter describes the risk and events that are applicable to the nuclear industry and highlights the varying influence that safety culture has on these events. Projects are undertaken in these industries which provides an area of research in identifying the effects which safety culture has on projects at a nuclear power plant. With the topic of interest identified, the research goals, an initial conceptual framework on the topic of interest and a research question is established in steering the research to applicable findings. The relevance of the research topic is also discussed to ensure that the research holds substance and adds value to the knowledge of the world in general.

1.2 Empirical overview of safety culture

The power outages experienced by South Africa in 2014 and 2015 highlighted the importance of electricity to the country and the importance of ensuring a stable supply. Power stations across the country collectively play a vital role in this supply with Koeberg Nuclear Power Station contributing towards this supply and ensure stability to the Western Cape grid. Koeberg Nuclear Power Station however poses the risk of a radiological release to the environment, but like many nuclear power plants have engineering safeguard systems in place to mitigate these risks.

The International Nuclear and Radiological Event Scale (INES) rating is commonly used to measure the severity of accidents and incidents in relation to the radiological release and individual exposure to radiation, which ranges from a rating of zero to seven (IAEA, 2013). A review of the nuclear incidents and accidents against the INES ratings, prior to the year 1980 indicates that the rate of incidents and accidents over five year periods were high (Wheatley, et al., 2017), this despite the engineering safe guard systems which the respective nuclear power plants had employed. The Chernobyl accident which occurred in 1986, forced the nuclear industry to reassess the way safety was viewed and brought about the need to consider organisational cultural aspects surrounding safety, resulting in the concept of safety culture (Choudhry, et al., 2007). Post the introduction of the concept the number of industry events had decreased, but as time passed the number of events in a five-year period increased with another major event namely the Fukushima Daiichi occurring (Wheatley, et al., 2017). The safety culture associated with the nuclear industry, in relationship to the accidents and events that have taken place is proposed in figure 1 and gives indication that there may be factors which when changed have an influence on safety culture which in turn has an influence on accidents that take place.

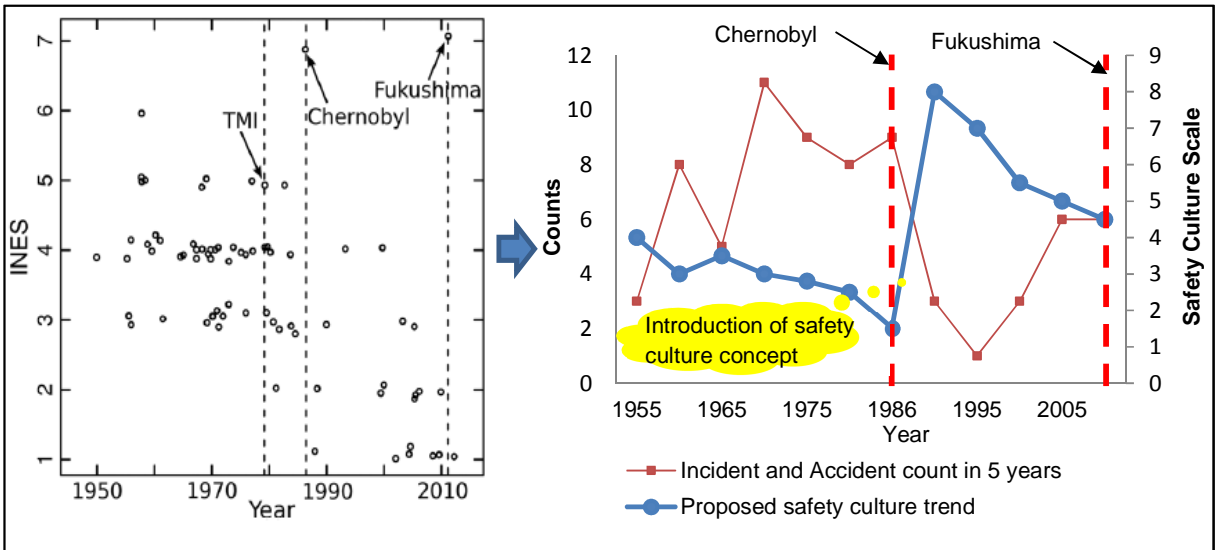


Figure 1 – Nuclear accidents and incidents (Wheatley, et al., 2017) and the proposed trend in safety culture in the nuclear industry

Respective nuclear power stations use the World Association of Nuclear Operators (WANO) performance indicators, which are a set of plant, reliability and importantly safety measurements, to assess their performance and progress (WANO, 2017). Koeberg Nuclear Power Station subscribes to WANO and uses these performance indicators to monitor its own performance and in gauging it against other nuclear operating plants (Eskom, 2018). Leadership is one of the factors in an organization which interacts with people and sets the collective objectives. Over the past decade Koeberg Nuclear Power Station has gone through leadership changes which when reviewed against the WANO performance indicators, provides indication of the influence it has on safety performance, which forms part of the overall performance. The proposed relationship can be viewed in figure 2.

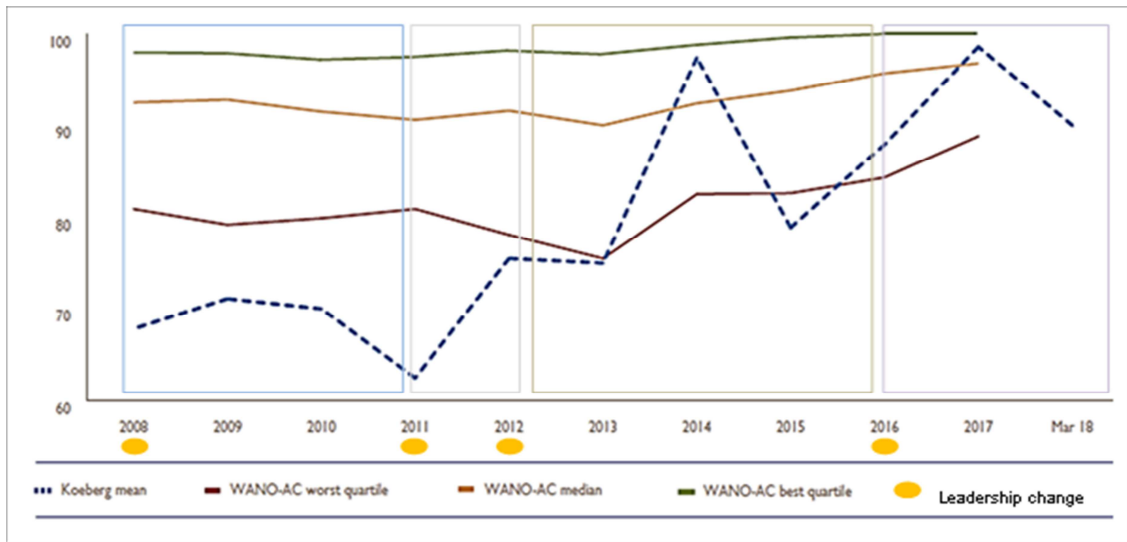


Figure 2 – Koeberg Nuclear Power Station WANO performance (Eskom, 2018) in relationship to it leadership changes

Projects are undertaken to allow Koeberg Nuclear Power Station to improve on its performance and to increase safety. The enactment of a safety culture by the people who execute the projects should ensure that when safety is challenged, the project is stopped and the safety concern addressed before proceeding. This should prevent major delays due to rework or consequential safety incidents. Leadership also sets safety objectives, whilst influencing people to work safely and may influence safety culture. These factors provide indication that as safety culture in a project environment changes, it is most likely to have a direct influence on a project's performance.

Identifying research on safety culture in a project environment is however quite broad. For this reason, a focused approach would need to be taken to narrow down the field of interest and to direct the study to a concerted effort.

1.3 Research goals

To allow the area of research on safety culture to be narrowed down and focused, the research goals were identified to motivate why the research was undertaken and what it hopes to achieve. Maxwell (1996) distinguishes between personal, practical and intellectual goals. Each of these goals in the context of the study is explained below.

1.3.1. Personal research goal

The personal goals consider the researcher's motives that inspired the research and included the personal ambition which would be gained (Maxwell, 1996). Whilst working in the nuclear industry, one is exposed to the concept of safety culture, however the way that it manifests in the business is not fully understood. People interact with each other to bring about and influence this culture. The ability to gain the research technique to understand this social interaction and how it influences business outcomes was of a personal interest as it provides the skill to better understand and influence business outcomes.

The personal goal of the research is:

To master the social research skills required to understand and influence business outcomes.

1.3.2. Practical research goals

Practical goals consider the aspects of change which bring about task accomplishment, situational change or the accomplishment of goals (Maxwell, 1996). The nuclear industry undertakes projects to improve plant performance and safety. In observing projects which were undertaken, those which were successful or event free, were found to be focused on the safety objectives of the plant, whilst when an event took place, the focus on safety was

observed to be a bit lacking. The practical goal of the research was to identify the key traits of safety culture that led to good project performance.

The practical goal which the study looked to achieve was:

To identify the key safety culture elements which positively influence project performance.

1.3.3. Intellectual research goals

Intellectual goals sort to obtain a better understanding of safety culture and focused on gaining insight as to what was going on and why things happened in the manner which they did (Maxwell, 1996). Without gaining a proper understanding of safety culture and how it brings good project performance, it would be unlikely to influence the factors which need to be present to bring about the required change in project performance. Similarly, it has been noted that safety culture initiative is in place in the organization however its effectiveness varies amongst business areas. With this in mind, the intellectual goals of the study would aim to gain an insight as to what safety culture comprises of, how it is viewed by different people and how it is perceived to bring about enhanced project performance.

With this, the intellectual goal which this study looked to achieve was:

To gain an understanding of how and why safety culture influences project performance.

The outcomes are a set of objectives which shape and guide the research to meaningful conclusions. The goals of the research however do not provide indication of the nature of safety culture and what the research would need to focus on which can be better understood through an initial conceptual framework of the topic of interest.

1.4 **Conceptual framework of safety culture**

In the absence of a comprehensive theory to explain a phenomenon, a conceptual framework can provide a tentative theory that draws on personal understanding and information to provide an explanation of the phenomena (Maxwell, 1996). The conceptual framework provides preliminary ideas of how events are brought about and serves as the basis for the initial data collection and analyses.

1.4.1. Construction of a safety culture conceptual model

The conceptual framework consists of actual ideas and concepts which are interrelated to each other, providing an understanding of how things interact and how they bring about events. This allows predictions to be made, under specific circumstances and information. The interrelationship of the information was formulated into a model using a concept analysis

approach to define, explore and clarify the phenomenon (Xyrichis and Ream, 2007). The concept analysis process considers the antecedents which are events or incidents that must occur prior to the occurrence of a concept, the attributes which are the characteristics of a concept and the consequences which are the outcomes of a concept (Johns, 1996; Xyrichis and Ream, 2008; McCabe and Sambrook, 2014). A process, outcomes model is established when the concepts antecedents interacts with its attributes and brings about a consequence (Johns, 1996). The consequences can in turn impact the antecedents creating a closed loop feedback.

A definition commonly applied in the nuclear industry to safety culture is that it is “*an organization’s values and behaviors - modeled by its leaders and internalized by its members - that serve to make nuclear safety the overriding priority*” (INPO, 2004: iii).

For culture to occur and be influenced in projects in the nuclear industry, interaction of people would need to be present. Similarly, when people and the environment are exposed to hazards, safety measures in the form of technology, procedures and policies would be put in place to prevent and mitigate such risks. A person’s knowledge of a system or process is important in keeping conditions safe or in intervening should something happen. In consolidating these thoughts, it is proposed that social interaction, risk exposure to harm and safety knowledge are three broad factors which are antecedents to safety culture.

In noting the importance of safety culture in preventing accidents in the nuclear industry, the Institute of Nuclear Power Operations (INPO) has produced a guiding document for the improvement of safety culture (INPO, 2004). Exposure to these attributes in the project environment and Koeberg Nuclear Power Station has led to their considerations (INPO, 2004:1), which are:

- *everyone is personally responsible for nuclear safety*
- *leaders demonstrate commitment to safety*
- *trust permeates the organization*
- *decision-making reflects safety first*
- *nuclear technology is recognized as special and unique*
- *a questioning attitude is cultivated*
- *organizational learning is embraced*
- *nuclear safety undergoes constant examination*

These attributes, relayed as principles, are found to be strongly linked to safety culture as they required people to take accountability, demonstrate commitment to safety and being conscious of safety.

A general review of the literature indicates that safety culture has an impact on accidents, incidents and near misses and worker behaviour (Choudhry et al., 2007; Edwards, et al., 2013). In relating the safety culture to a project environment, it was noted that time, cost and quality are general criteria used to measure project performance (Atkinson, 1999).

1.4.2. Conceptual model of safety culture in projects

In linking the antecedents, attributes and consequences, a process model is formed which helps in explaining the phenomenon of safety culture in projects. The model is a starting point for the development of a theory.

The three loops of social interaction, risk of harm and safety knowledge, named after their initiating conditions, are present in the initial conceptual model that is presented in figure 3.

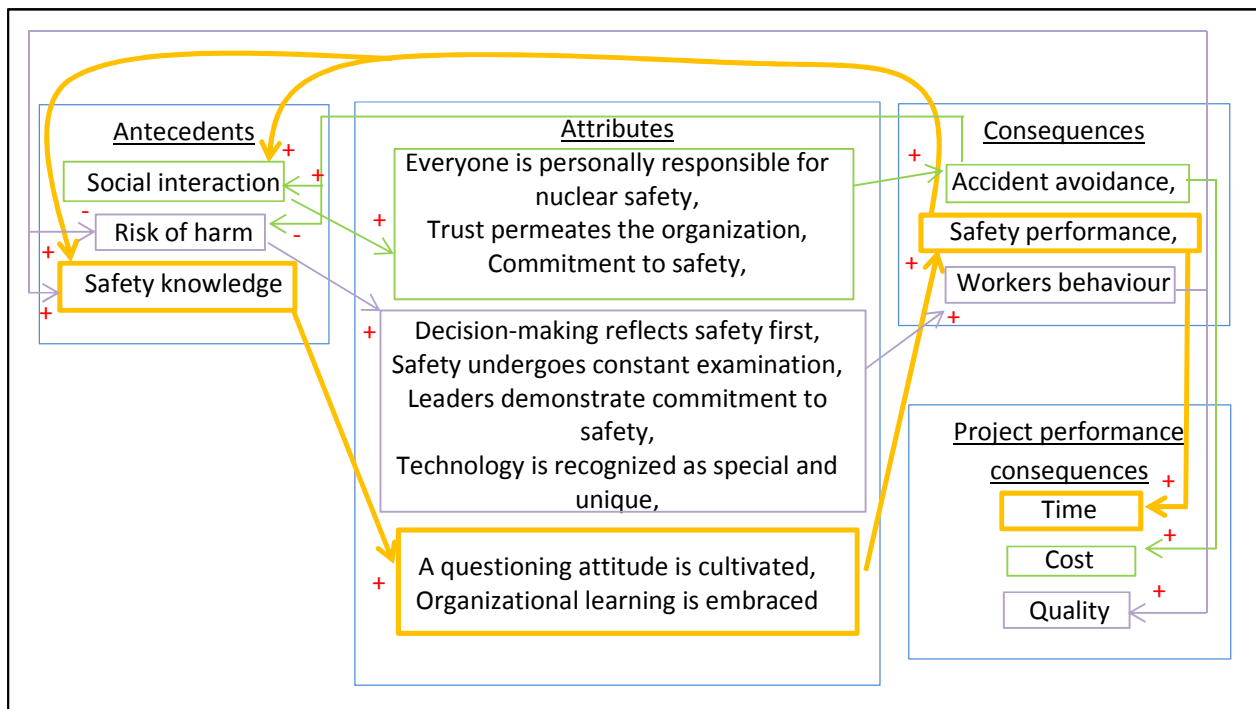


Figure 3 – Conceptual model illustrating safety culture relationship

With reference to the safety knowledge loop, the presence of a persons safety knowledge directly influences how they interact with the safety culture attributes of questioning conditions that are unclear and the need to learn how to perform work safely. This influences the safety performance of an organization, with the safety performance also directly impacting aspects of time in a project. In addressing safety issues an individual's safety knowledge is enhanced. This closes the safety knowledge loop; however, it is noted that the safety performance also impacts the social interaction of an organization which is the starting point for the social interaction loop. The manner in which the antecedent traits

interact with the attributing factors and bring about consequences has been highlighted to illustrate the interaction within this loop, however it is noted that this interactions exists within the social interaction loop and harm to risk loops too. These loops and the interaction which takes place amongst them provides indication as to how safety demands directly influences aspects of time, cost and quality in a project.

The conceptual model provides an initial understanding of the interactions which takes place, however it does not direct the way the research is to be undertaken. This is however addressed through a research question.

1.5 Research question

A research question defines specifically what needs to be understood or learnt about by doing the study (Maxwell, 1996). The research question is a key part of the design process and links the goals and conceptual framework of the study. In doing so, the research question provides guidance on the manner the research is to be performed.

The development of a research question took into consideration the context of safety culture. The effect that safety culture has on projects in the nuclear environment indicates that the question would focus on a specific industry and would be *particularizing* in nature (Maxwell, 1996). The research also looks at gaining a deeper understanding of the impact of safety culture, with aspects of culture found to be difficult to measure. A *realist* approach could be used to gain peoples experience on the subject and this information could be critically tested to obtain ideas of the phenomenon (Maxwell, 1996). As noted in the conceptual framework, safety culture interacts in a process manner to bring about specific consequences which indicates that the research question would need to be *process* in nature (Maxwell, 1996).

Taking these research question attributes into consideration the following research question has been put forward.

“How is safety culture at Koeberg Nuclear Power Station perceived to influence project performance?”

1.6 Relevance of the research

South Africa, as in many other countries, is faced with the challenges of a high unemployment rate and high levels of poverty. Economic growth and job creation are possible solutions to these challenges however these are reliant on stable electrical energy availability (IAEA, 2006).

New generating capacity is proposed to be brought online to the South African grid soon, however the ability to meet the countries total demand will also be dependent on existing generating plants (DoE, 2018). Nuclear power generation in the form of Koeberg Nuclear Power Station forms part of the existing power plants which will need to contribute towards to energy supply of the country.

Although the probabilities of a nuclear accident are small the consequences are far reaching as an accident at any nuclear station will impact the whole industry (Ahearne, 2011). The accidents that took place at Chernobyl, Three Mile Island and Fukushima illustrated this, as it affected the construction of new nuclear power plants, and intensified inspections and regulations of new and existing nuclear power plants all over the world. Safety culture is seen to influence the safety in an organisation (Cooper, 2000) and in preventing accidents from taking place.

Projects are undertaken at Koeberg Nuclear Power station to ensure the continuity of power supply but also to improve the safety of the station. Delays in such projects have as a major impact on energy security especially where such grids are already constrained (Csereklyei, et al., 2016). Some of these projects can be considered as a “large project” as it requires the management of many stakeholders, have changing priorities and objectives, whilst also being subject to a socio-political environment (Ruuska et al., 2011). Ruuska et al. (2011) notes that to achieve the objectives of such projects, multiple stakeholders with specific skills would need to be brought together. They however indicate that aspects such as experience, capabilities and knowledge of specific requirements can decrease the “distance” between “actors” in a project. Safety culture can also be considered as one of the common factors amongst stakeholders in a project which would assist in goal alignment and project success.

Barton (1992) proposed that respective companies also have core capabilities which can be used in a project environment to deliver specific objectives. These are defined by the respective competencies which allow a product to be delivered and are characterised by four dimensions. The values and norm characteristic hold the trait of corporate culture which overlaps the other three characteristics. In a high-risk environment, the focus of an organisation would be towards safety which would relay to safety culture as being an overlapping dimension. Drawing on the above- mentioned information the relevance of safety culture as it applies to the South African context is illustrated in figure 4.

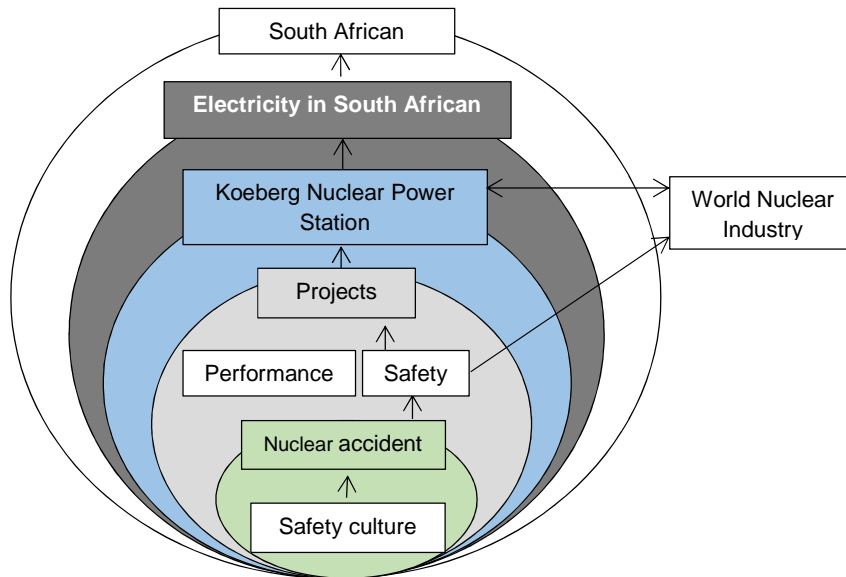


Figure 4 – Safety cultures influence and relevance to South Africa and the nuclear industry

Safety culture has an influence in accident prevention in high risk industries, in which an accident would have a major impact on the industries images and its future existence. Safety culture has a role within projects as it forms part of an organizations culture which influences the products and services it delivers. It also provides a common ground amongst stakeholders which brings about goal alignment and project success. Projects are undertaken at Koeberg Nuclear power station to improve operational performance and plant safety which together ensures the stations stable electricity supply to the country which significantly contributes to the country's economy.

1.7 Conclusion

Safety culture is seen as a key contributor in the prevention of accidents and when related to the frequency of incidents and accidents, a relation could be drawn depicting its influence. Projects are also seen to improve performance and safety at nuclear power plants and due to the nature of the industry it is noted that safety culture would naturally be adopted. With this the influence which safety culture has on project performance in high risk industries was established as an area of research.

The research goals have been established which has allowed the research topic to be focused, whilst an initial conceptual model was also established to provide a preliminary understanding and starting point to the investigation of the area of research. Drawing on the research goal and conceptual model, a research question has been developed which serves to guide the research.

The chapter has been concluded in consolidating the roles which safety culture plays in projects, nuclear power stations and South Africa in general. This allowed the relevance and contribution which the research would make, to be established. With a research focus area in place, the next stage would be the identification of the research process and the way it would be executed.

CHAPTER 2: Research Methodology and Research Process

2.1. Introduction

The research question indicates what the research would like to achieve. To answer this question a research process would need to be developed which identifies the research methodology and a planned process which would allow the question to be answered appropriately.

In addressing the initial research question an understanding of the philosophical stance of the research would inform the research methodology to be applied. Stemming from the research methodology, the research methods and processes would establish a framework for the research undertaking. This together with a research plan, which contains key milestones, would allow the research to be executed.

A well-developed research process can however be susceptible to error which would compromise the validity of the research findings. For this reason, the validity threats and the way it would be addressed, also needs to be considered.

To avoid the research undertaking and the developed findings from being achieved at the cost of the participants, research ethical issues and approaches to manage such issues have also been taken into account.

2.2. Research philosophy

In answering the research question, understanding the context of the study is important as it allows the study to be addressed appropriately. The review of the philosophical stance of the research was a starting point and provided guidance as to the way the research question could be answered.

2.2.1. Philosophical stance

The philosophical stance of the research can be understood in viewing aspects of *ontology* and *epistemology* (Ponterotto, 2005; Eriksson and Kovalainen, 2011). *Ontology* considers the nature of existence and what constitutes reality (Gray, 2014), whilst *epistemology* considers what knowledge is, its sources, its limits, how it can be produced and how it is justified (Cater and Little, 2007; Eriksson and Kovalainen, 2011). The ontological stance leads on to epistemology and these two inform the research paradigm. The research *paradigm* provides guidance to the philosophical assumptions of the research and the tools, participants and methods applicable to the research (Ponterotto, 2005) which informs the methodology. *Methodology* is the practical means as to how knowledge is gained from the

world (Eriksson and Kovalainen, 2011). Carter and Little (2007) similarly notes that *methodology* provides the justification for the methods used in a research and is a consideration of how research would be undertaken given the context of the research. They noted that *methodologies* can be defined in a broad sense which is covered by quantitative and qualitative methodologies, or narrowly in the forms of *grounded theory* or *ethnography*. The research *methods* used are the practical activities in a research and looks at the techniques, tools, procedures, information gathering and information analysis that are used to understand a phenomena (Carter and Little, 2007).

The outcome of the philosophical approach guides the selection of the methods used to gather data, perform analyses and in drawing conclusions on a phenomenon.

2.2.2. Philosophical approach

In determining an appropriate manner in addressing the research question the respective philosophical areas of *ontology*, *epistemology*, *paradigm* and *methodology* was considered.

2.2.2.1. Ontology and epistemology

When querying the *ontological* stance of the research, the form, nature of reality and what can be known about reality was considered. From the research question it is noted that the research would look at obtaining the perspective and shared meaning of different people on a particular topic. This indicates that there are many different realities which can be associated with a *relativist* realm (Ponterotto, 2005).

Epistemology focuses on the relationship between the research participant, the “knower” and the researcher the “would be knower” (Ponterotto, 2005). The multiple perspectives held by participants require interaction in understanding and drawing out information. The interaction that takes place between the participants and researcher can be reflected as being *subjectivist* (Ponterotto, 2005).

2.2.2.2. Paradigm

A look into the paradigm provided guidance as to the methodology which could be used. Several paradigms exist which could be used as a basis for this research, however the four paradigms of positivism, postpositivism, constructivism-interpretivism and critical theory were found to be common in social research (Ponterotto, 2005; Eriksson and Kovalainen, 2011). Ponterotto (2005) indicates that a positivist approach seeks *theory verification* whereas postpositivism seeks *theory falsification*. He further notes that in positivism dualism exist in which the participant and the topic of research are independent of each other, however in postpositivism a *modified dualism* is considered in which a researcher can have some influence on the topic of research, but it is closely and carefully managed. It is however

found that both positivism and postpositivism consider a *naïve* realm in which there is a single known reality. A subjectivist ontological stance is held in this research which would rule out a positivist and postpositivist paradigm.

A *constructivist-interpretivist* paradigm considers that meaning could be hidden and could be brought about through mechanism such as shared meaning, language whilst also considering the human sense making process (Ponterotto, 2005). In this approach it is assumed that the world is known through human experience and mediated through language. *Critical theory* considers that experience is lived and influenced through power relation in a social and historical context (Ponterotto, 2005). It is found that a criticalists' work is a form of social and cultural criticism which is used to emancipate oppressed groups. Both constructivism-interpretivism and critical theory considers the multiple perspectives of people and their experiences. With reality being socially constructed, interaction would need to take place between the researcher and the participant in gaining an understanding of the "lived experience" which can be undertaken in qualitative research.

The research goal however does not intend to bring about the empowerment or liberation of people, found to be applicable to a critical theory paradigm which lends the research to be more suitable to exist in a constructivism–interpretivism paradigm.

2.2.2.3. Methodological approach

Under the broader focus of methodologies, quantitative methods exist which focuses on the strict quantification of observations while variables are carefully controlled (Ponterotto, 2005). Quantitative research considers large sampling with the use of statistical procedures to determine group means and variances. Qualitative methods consider a range of empirical procedures which looks at describing and interpreting the experience of research participants in a specific context setting. Findings are presented in everyday language with participants own words being related to describe experience, events or phenomenon's (Ponterotto, 2005). The *relativist* and *subjectivist* stance which the research question holds provides indication that the research lends itself to a qualitative approach.

The three qualitative approaches of *ethnography*, *grounded theory* and *phenomenology*, were reviewed as they are found to be commonly used in gaining insight from an individual or a group on a particular topics of interest (Nicholls, 2009; Lichtman, 2014). *Phenomenology* is found to consider the lived experience of people of a phenomenon and provides a description and understanding thereof (Lichtman, 2014). *Ethnography* is the study of cultures and subcultures in describing the culture and social interaction that takes place in a particular group or subgroup (Nicholls, 2009; Lichtman, 2014). *Grounded theory* looks at the generation of theory that is grounded in the field (Lichtman, 2014). It is based on the

principles of symbolic interaction which considers that individuals have a sense of self awareness and able to see themselves through the perspective of others and adapt their behaviour accordingly (Helen and Cowley, 2004). A phenomenon may hold multiple attributes however an understanding of the conditions, interactions and variations of the phenomena can be determined with the use of *grounded theory method* (Helen and Cowley, 2004).

The review of the research question provides indication that the research looks at gaining an understanding of a phenomena. As phenomenology approach provides an overview of an individual's understanding, it may not provide an integrated understanding of social interaction and how the respective realities are weaved into an explanation of a phenomenon. Although ethnography provides an understanding of the social interaction, cultural values and meaning which people ascribes to practices, it may not provide the ability to understand and identify the specific mechanism which could bring about and improve conditions. It is grounded theories' ability to address the shortfall of phenomenology and ethnography, but to also be a means to address the research question which made it a suitable qualitative methodological approach. A diagrammatical illustration of the philosophical approach used to address the research question is provided in figure 5 below.

It is acknowledged that grounded theory can find itself in a positivist, postpositivist,

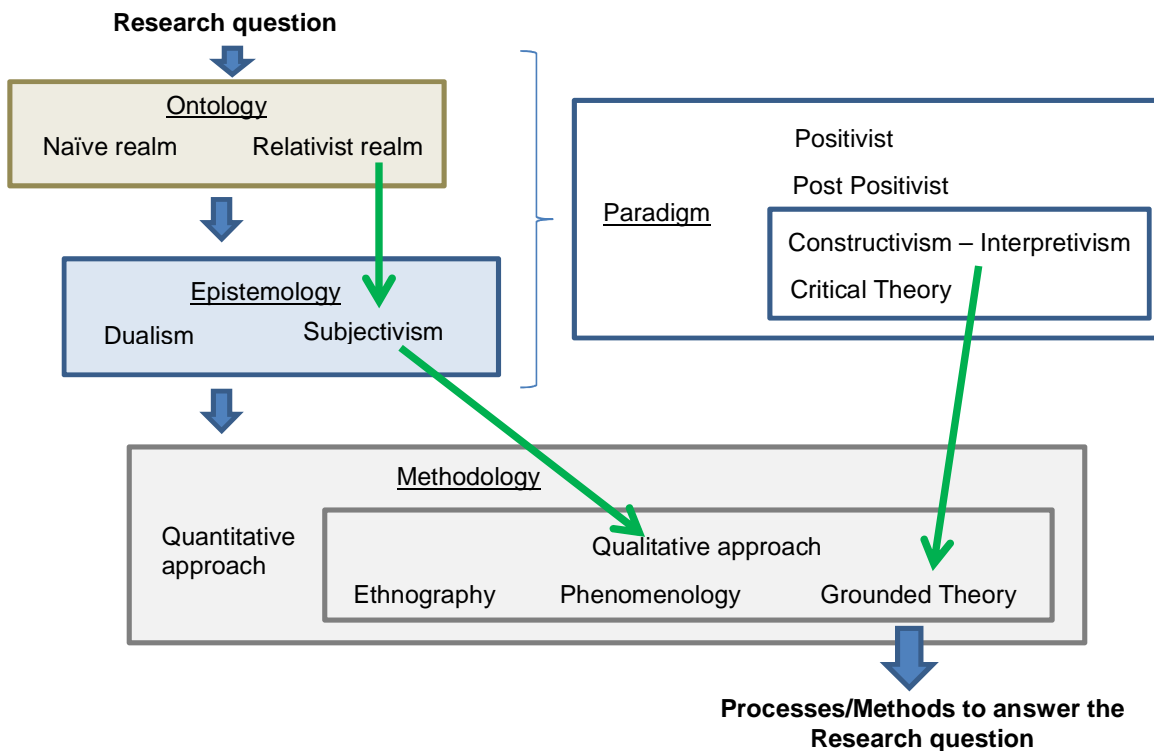


Figure 5 – Philosophical approach used in the research

constructivist or criticalist paradigm depending on the way the grounded theory is conceptualised and structured to address the research intent (Fassinger, 2005). It is however noted that the research ontological stance of multiple constructed realities and the epistemological approach in which the research would need to interact with participants to gain meaning and understanding, lends the approach to be placed in a constructivist-interpretivist research paradigm (Fassinger, 2005). As noted, the way grounded theory is constructed, allows it to address the research question which leads to the next section which expands on the grounded theory approach used in this research.

2.3. Grounded theory

Grounded theory approach is a research methodology based on symbolic interactionism which considers how peoples' realities are constructed through their social interaction (Fassinger, 2005). Grounded theory is an approach which allows the meaning created in social relations to be inspected and a means to discover how people define their realities based on the understanding of their interactions. It allows a theoretical explanation to be developed using a set of well-integrated concepts which explains and describes a social phenomenon (Corbin and Strauss, 1990) which in turn allows a research question to be answered.

LaRosaa (2005) noted that during the early days of grounded theory, codifying and the development of own methods to develop theories was encouraged which lead to the Glaser and Stauss maxims respectively in grounded theory. The principles amongst these two approaches are however the same, with flexibility allowed for the nature of a study. It is for this reason that it is important to note the specific techniques used in a research (LaRossa, 2005). The grounded theory process noted by Walker and Myrick (2006) has been considered for this research, with the key elements of data collection, coding, comparing, categorizing, theoretical sampling, core category identification and theory building having been selected.

2.3.1. Data collection

Data collection can be taken from several sources, with any source which provides insight on the question being researched being considered (Corbin and Strauss, 1990). The internet and interviews are two qualitative sources that have been considered. The internet holds an abundant amount of information (Hookway, 2008), whilst the use of interviews is a means of gathering first-hand information on a subject being researched.

2.3.1.1. Internet research

The internet is a source which holds a substantial amounts of qualitative data that can be obtained in a quick and cost effective manner (Hookway, 2008), whilst also allowing access to participant who are affiliated or closely connected to the topic under investigation (Rodham and Gavin, 2006). Online interviews and message boards allow rich qualitative data to be gathered from the public domain which is open to viewing and response (Rodham and Gavin, 2006). Weblogs are also a useful source in which intimate content is posted on a website (Hookway, 2008).

Internet information can however be inaccurate and biased with the traditional validations measures of referring to credible, trusted sources and relying on personal experience in determining trustworthy sources not being available (Metzger, et al., 2003). This can however be overcome by checking the accuracy of information, the credentials of the author and whether the website is recommended as a trusted source. The collected information can further be validated through triangulation in which the consistency of the information is established through the presence of the information or concepts in different sources, authors or different industry sites (Thurmond, 2001).

2.3.1.2. Interviews

Interviewing is a data collection technique, which allows a rich description of a phenomenon to be gathered (DiCicco-Bloom and Crabtree, 2006). Unstructured, semi-structured or structured are forms in which an interview can take place. Unstructured interviews have some guidance in the form of the research question which directs the conversation in line with the field of research. Semi-structured interviews are based upon a set of predetermined open-ended questions with new questions emerging from the interviews which could be used for the next set of interviews. Group interviews in the form of focus groups take place under semi-structured interviews in which multiple participants share their experience or knowledge on a specific topic.

2.3.2. Sampling

In developing a comprehensive and dynamic theory, good data needs to be obtained from relevant sources and in an efficient manner (Morse, 2011). This can be achieved through the sampling process with it being noted that as a theory is developed, applicable sampling methods are applied. The main sampling methods in a grounded theory study are *convenience sampling*, *purposeful sampling* and *theoretical sampling* (Morse, 2011). *Convenience* sampling considers the use of participants who are easily accessible and have

experience in the concepts of interest in the research. This sampling process is used at the initial stages of a research during which the boundaries of the research are being established and provides some form of trajectory to the research. Once established *purposeful sampling* would be used with participants selected on the initial analysis of interviews and in allowing variation on a concept to be obtained (Draucker, et al., 2007; Morse, 2011). In grounded theory sampling is sequential as it moves from convenience sampling through to theoretical sampling as the concepts begin to emerge (Draucker, et al., 2007). Theoretical sampling looks at analysing and verifying categories and the interrelationships that emerge through the coding process. This process allows theoretical ideas to be refined in probing specific cases and in providing greater clarity and comprehension of the categories (Fassinger, 2005).

2.3.3. Data analysis

Data analysis in qualitative research considers the meaning that words and language implies, however large amounts of information can exist in the text, which may have multiple meanings (Walker and Myrick, 2006). Qualitative data analysis can be used to organize and reduce the data and place it into themes, which allows descriptions, models or theories to be drawn. Coding is the analysis process in grounded theory that allows a researcher to move from data to theory. Collected data is systemically and sequentially processed and analysed allowing all potentially relevant aspects on the topic to be captured as soon as they are perceived (Corbin and Strauss, 1990).

2.3.3.1. Coding procedure

The three phases of coding namely *open coding*, *axial coding* and *selective coding* are the most widely used in grounded theory (LaRossa, 2005). Coding is one of the methods in qualitative research in which data is explored for information, with similarities or differences being placed under categories (Walker and Myrick, 2006).

2.3.3.1.1. Open coding

The actual incident, events and happening that is reported is considered as the raw data. Open coding is the starting point of data analysis in which the raw data is broken down into units of meaning which is referred to as concepts (Fassinger, 2005). LaRosaa notes that during the open coding analysis process words, phrases or sentences are identified which leads to *indicators*. The indicators can in turn be assigned with a label or a name referred to as a concept, which is reflective of the indicator.

Whilst the indicators are being coded for a concept, they are compared to previous indicators that have been identified in the same manner. This process is known as *constant*

comparison (LaRossa, 2005). As the indicators are compared to each other, the indicator may be assigned to an existing concept or assigned to a completely new concept. When a point is reached in the research when an indicator is added to a concept and it adds no significant insight to the concept it is regarded as *theoretically saturated* and can be regarded as a well-grounded (LaRossa, 2005).

The development of the categories is part of the open coding process. LaRossa (2005) however noted that categories are not merely the grouping of concepts together but placing them together under a higher level of abstraction whilst maintaining the realm of the initial concepts. The higher level of abstraction allows for the development of variables as oppose to providing an explanation of the concepts.

2.3.3.1.2. Axial coding

Axial coding serves to code data for relevance to a phenomenon that is present in a category, whilst focusing on the conditions, interactions, strategies, tactics and consequences that are present (LaRossa, 2005). LaRossa (2005:847) points out that axial coding looks at identifying the *six C's* of "causes, contexts, contingencies, consequences, covariance and conditions".

LaRosaa (2005) proposes that in translating the nouns into verbs, coding for process can be achieved. He indicates that axial coding looks at the development of a hypotheses or propositions which provides a statement of the relationship between the respective variables. It is suggested that a focal variable be placed at the centre of the analytical enquiry with queries being asked about it relating to why, what, when and how. Depending on the approach used axial coding can take place during the length of the research or to the latter end whilst performing selective coding (LaRossa, 2005).

2.3.3.1.3. Selective coding

It is through selective coding that the main story line of the research is relayed. During the final stages of analysis, data is brought together to a central theme and a theory is generated. In developing a substantive theory, a set of well-developed categories would systematically be interrelated through a relationship statement and presented in a framework which provides an explanation of a phenomenon (Fassinger, 2005). This would include statements of relationships in terms of who, what, when and how, and the consequences of an event.

Literature on grounded theory considers that a single core variable be identified from the coding process which is theoretically saturated and is centrally relevant (LaRossa, 2005), and that a condition/consequence matrix be used as a tool to develop a theory (Fassinger,

2005). Systems dynamics theory is an alternative method which allows the interrelationship of theoretical categories to be identified and the dynamic interaction which takes place between these categories to be relayed. The outcome is an explanation of the system with interrelationships amongst the constructs allowing a theory to be established.

2.3.4. Theory building

Systems thinking looks at the wholeness, interrelationships and dynamics which is present in a system (Hung, 2008). When a system is studied the interrelationships of the elements and the dynamic properties which is present in a system, can be better understood.

In *systems dynamic theory*, an extension of systems thinking, several variables exist which casually interacts with each other in a feedback loop. The interrelationship between the feedback loops makes up the system structure and it is the systems structure which determines the systems behaviour (Jackson, 2003). Causal loop diagrams can be used to identify the feedback loops and the causal structure provides an explanation of the system behaviour, with system archetypes also providing possible guidance on the structural characteristics of systems (Jackson, 2003). From the casual loop diagram, it is possible to develop a story which relays the theory of the phenomenon at hand.

2.3.5. Memo writing

The use of memo writing allows a researcher to track successive development on categories, as information is gathered and deeper understanding is obtained (Charmaz, 2008). In writing a memo, exploring and reviewing of ideas is possible. It also assists with learning and understanding of data rather than summarizing the material. This process allows ideas to emerge as discoveries unfold. Memo writing has a distinct contribution to the grounded theory as it allows the open code to be scrutinized and categories to be developed. Memos are written whenever an idea is conceived, which allows a researcher to reflect and explore further, allowing explicit analysis to take place (Charmaz, 2008). Memo writing occurs on a continual basis throughout the research process and provides an account of conceptual, procedural, questions and decisions made by a researcher (Fassinger, 2005).

An illustration of the grounded theory process with its key elements used is provided in figure 6 below.

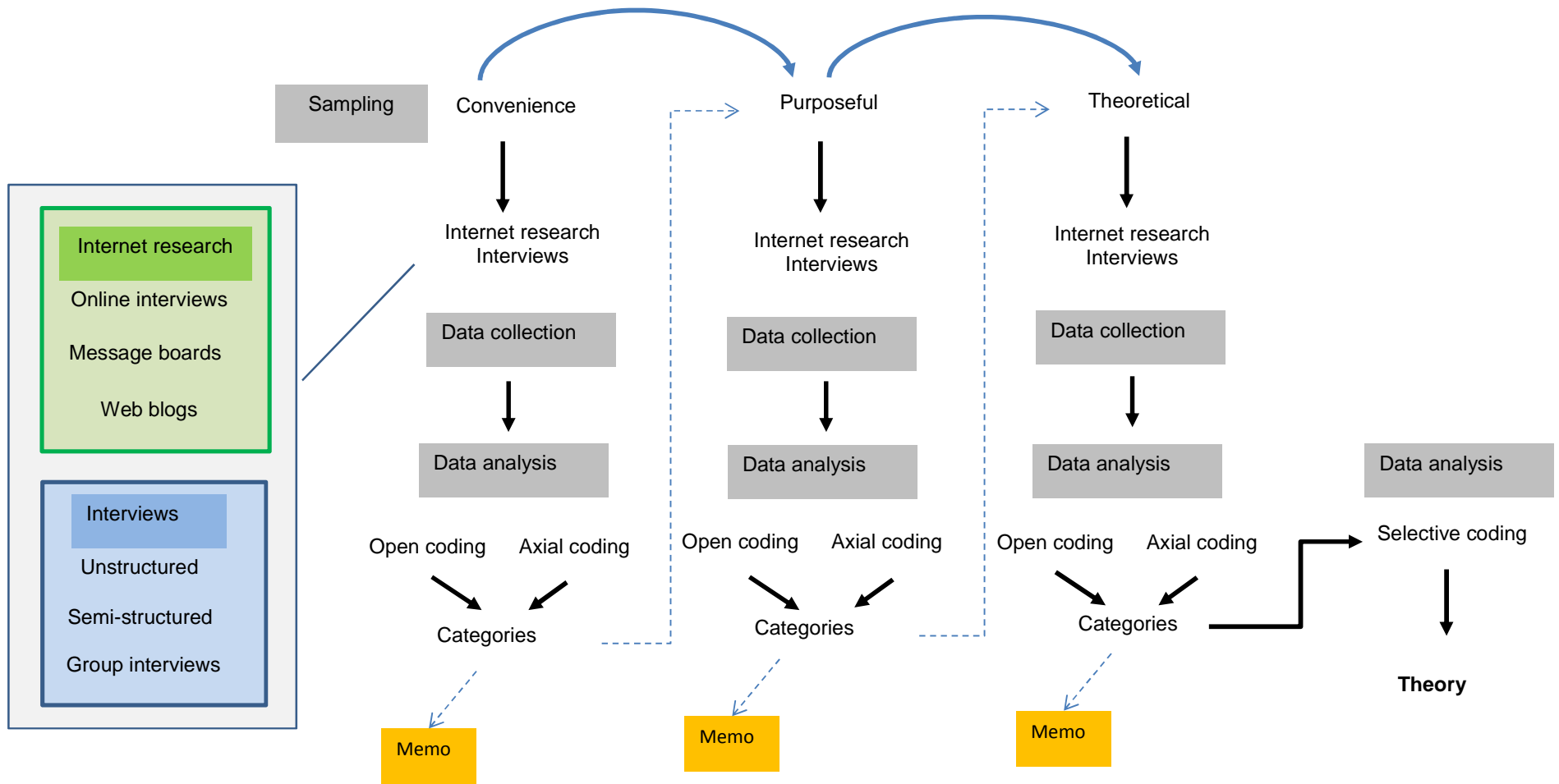


Figure 6 – Grounded Theory process and its key elements

2.4. Research process

The grounded theory approach provides an outline of the strategies and steps that would be taken in developing a theory. These components would need to be executed to allow a theory to be developed. A research process provides a map as to when and how the steps and strategies are to be implemented with flexibility included to allow new or different information to be explored as it unravels.

The research process consists of data collection, coding and category identification. This was followed by category reduction, theoretical sampling and core category identification. A conceptual framework based on the core categories was developed accompanied by a causal loop diagram, which allows a theoretical description to be made.

2.4.1. Data collection process

The actual incident, events and happening that is reported is considered as raw data. Time availability and resource constraints are factors which make data collection challenging however this can be overcome using the internet resources and interviewing. The use of the internet allows a wide source of information on a topic to be gained, whilst the use of interviews allows a rich understanding of participant's views on phenomena to be gathered.

2.4.2. Open coding, axial coding, memo and categories

Collected data is broken down and analysed to reveal incidents which are related to the phenomenon under investigation and in doing so provides indication of the relevance of such incidents. In considering the impact which an incident has on a phenomenon, the dimensions of the incident are drawn upon which include its properties, characteristics and its qualities and how it influences the phenomenon. This process falls within the open coding of grounded theory.

In combining the relevance and impact a proposition is formed which is based on the phenomenon of interest. This allows the conditions and the outcomes of the incident to be noted. This process is affiliated with axial coding. The proposition itself can be labelled with a name to form a category which captures the incident and its respective traits.

During the formation of the category, the ideas, understanding and comparisons that were made of an incident and its parameters is captured in a memo.

The process of data collection, open coding followed by axial coding is repeated, with new propositions being formed which is compared to existing ones. Where they are found to be similar, they are placed under the same category and if not, a new category is assigned. The repeated identification of an incident with similar traits allows a category to become

saturated and theoretically grounded. The process of data collection, open coding, axial coding, comparison, category identification and memoing is illustrated in the figure 7 below.

Data	Relevance	Impact	Proposition	Category (memo)
(observation, description passage)	(to Concern Variable) (leadership)	(on Concern Variable D/R)	Subject-Relevance Predicate-Impact	
“He informed the staff that that it is a new department for him, but he wished to work collectively with them. He went around in the morning greeting people and to find out how they were doing. This created a positive vibe.”.	A caring leader is able to influence worker performance	A leader who greets his workers and enquire about their wellbeing is able to establish a positive work vibe – D	A leader who cares for his workers, by greeting and enquiring about their wellbeing is able to set a positive work environment which influence worker performance	Caring (Showing interest and setting a positive environment)
People are resigning, with us hearing that strategies are being put in place to retain staff. Strategies have milestones, but as staff we are not made aware of these milestones. This has created mistrust as staff feel that their leaders are not being open with them	A leader who communicates with his staff is able to influence their performance	Not communicating leads to mistrust amongst workers and leaders – R	A leader who does not communicate with his staff will create mistrust which effects worker performance	Comparison Communication (A lack of communication leads to mistrust)

Figure 7 – Data collection, open coding, axial coding, memoing and category identification

2.4.3. Core categories

Many categories may be identified which would require some reduction or limiting as it would require a substantial amount of analytics which may also present a threat to the generalizability of the developed theory (Locke, 2001). The reduction takes place with some categories being placed under natural groupings in which the categories dimensions are guiding factors. Where obvious groupings are not apparent, comparison of the categories would be made in which similarities or differences allow categories to be placed into a higher category group (Locke, 2001).

The identified propositions would be placed under the reduced category list and the category labels, assessed and relabelled to ensure that it is reflective of the propositions under them. This leads to a list of theoretical categories with theoretical sampling performed on these categories to refine the emerging ideas. During theoretical sampling, follow ups are made on recurring patterns in data. During interviews participants may be asked to further elaborate on categories which seem to be central in the emerging theory (Draucker, et al., 2007). Open and axial coding would be performed on this data with further propositions being developed and placed under the respective categories allowing them to become saturated and forming the core categories. Concepts would be used to relay the core categories at a higher level of abstraction. Figure 8 below provides an illustration as to how the research moves from the extensive list of categories to the concept identification.

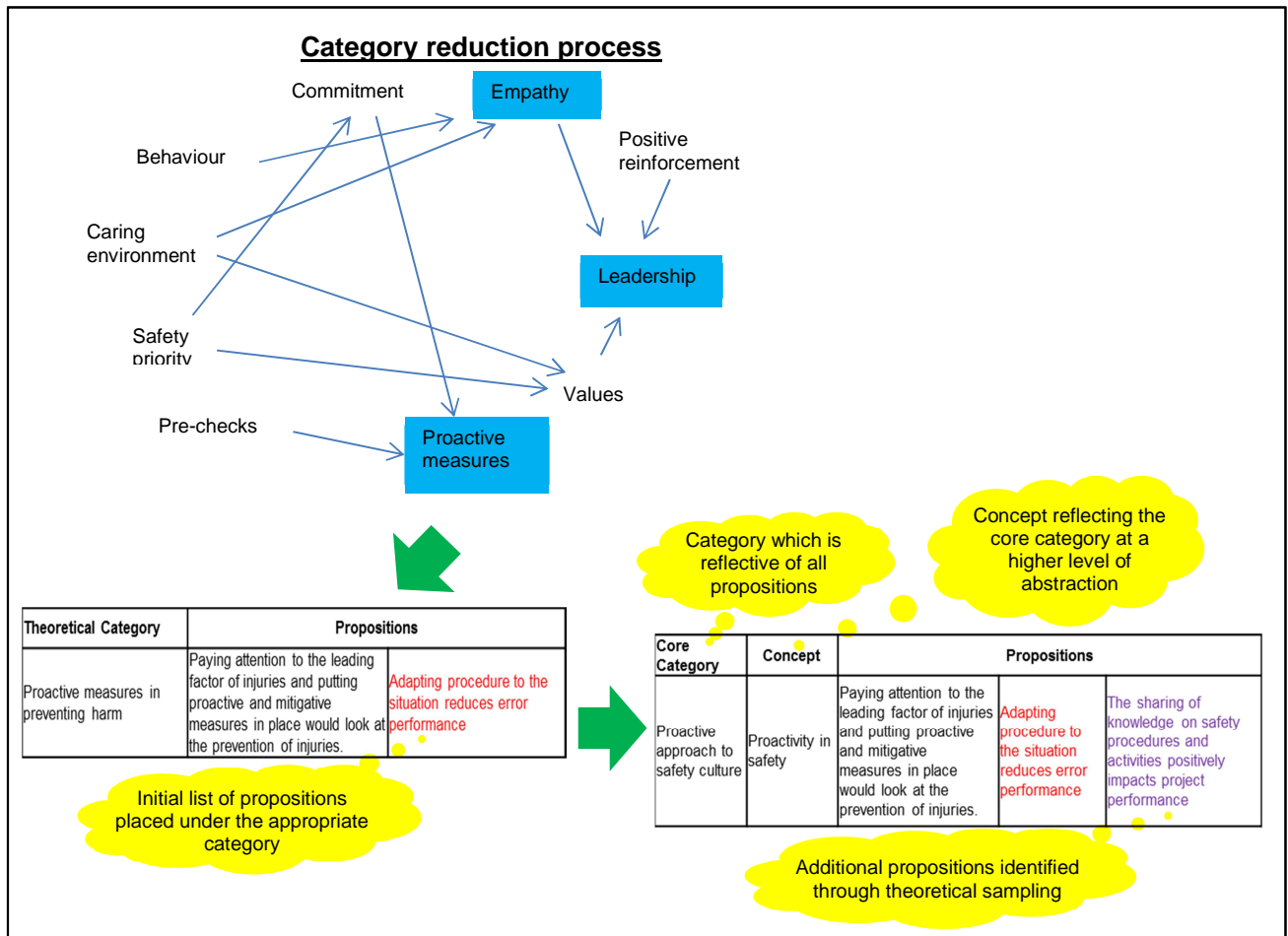


Figure 8 – The research process as it moves from category reduction through to concept identification

2.4.4. Conceptual framework

An exploratory approach has been taken in observing the world and allowing the concepts to emerge from these observations. Once this has been established literature would be reviewed to gain more data and insight on the concept (Heath and Cowley, 2004). A literature review would assist in establishing a conceptual framework of the concept with its attributes, consequences and antecedents being highlighted. A conceptual framework consists of actual ideas and concepts which interrelated to each other, providing an understanding of how things interact and how they bring about an event. In doing so one could make a prediction given specific circumstance and information of what the outcome may be. In identifying the link between the consequence and antecedents of the respective concepts the relationship between the concepts can be established and gives rise to a causal loop diagram.

2.4.5. Causal loop diagram

The links between the respective concepts serves as the basis for the construction of a casual loop diagram. Systems dynamics is used to provide an explanation of the concepts as a whole using a casual loop diagram. Feedback loops and casual relations are identified which provide an explanation of the system behaviour. The outcome is a system diagram which consists of feedback loops with interactions and its dynamics which graphically illustrates the developed theory.

2.4.6. Theory description

The final stage in the research process is a description of the developed theory. The theory is based on the causal loop diagram and provides a simple explanation of the interaction and dynamics which takes place around the phenomena.

Figure 9 illustrates how the research process moves from the conceptual framework to identifying the relations between the concepts, followed by a causal loop diagram and the formation of a theory. Figure 10 can be viewed for an integrative illustration of the research process.

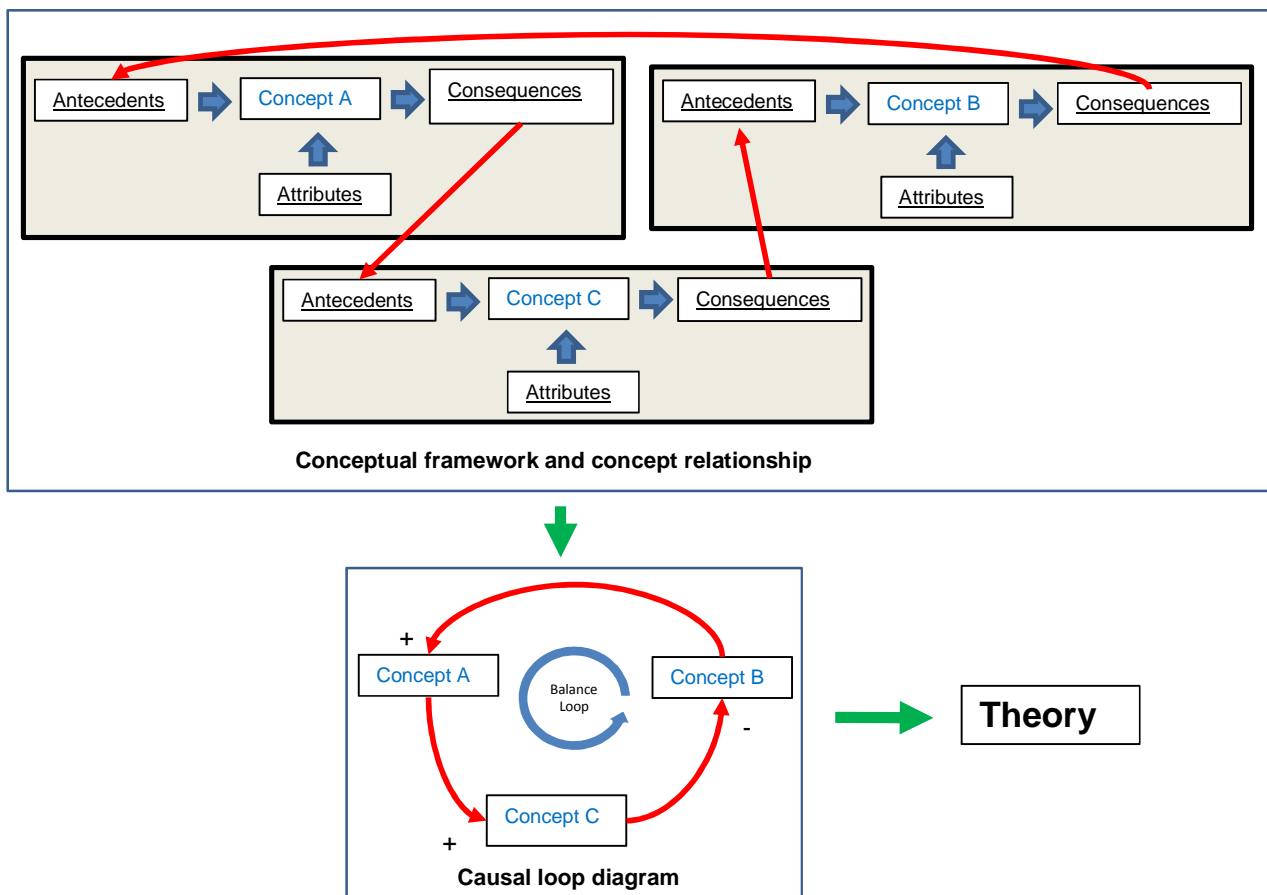


Figure 9 – Concept relations identification, causal loop diagram and theory identification

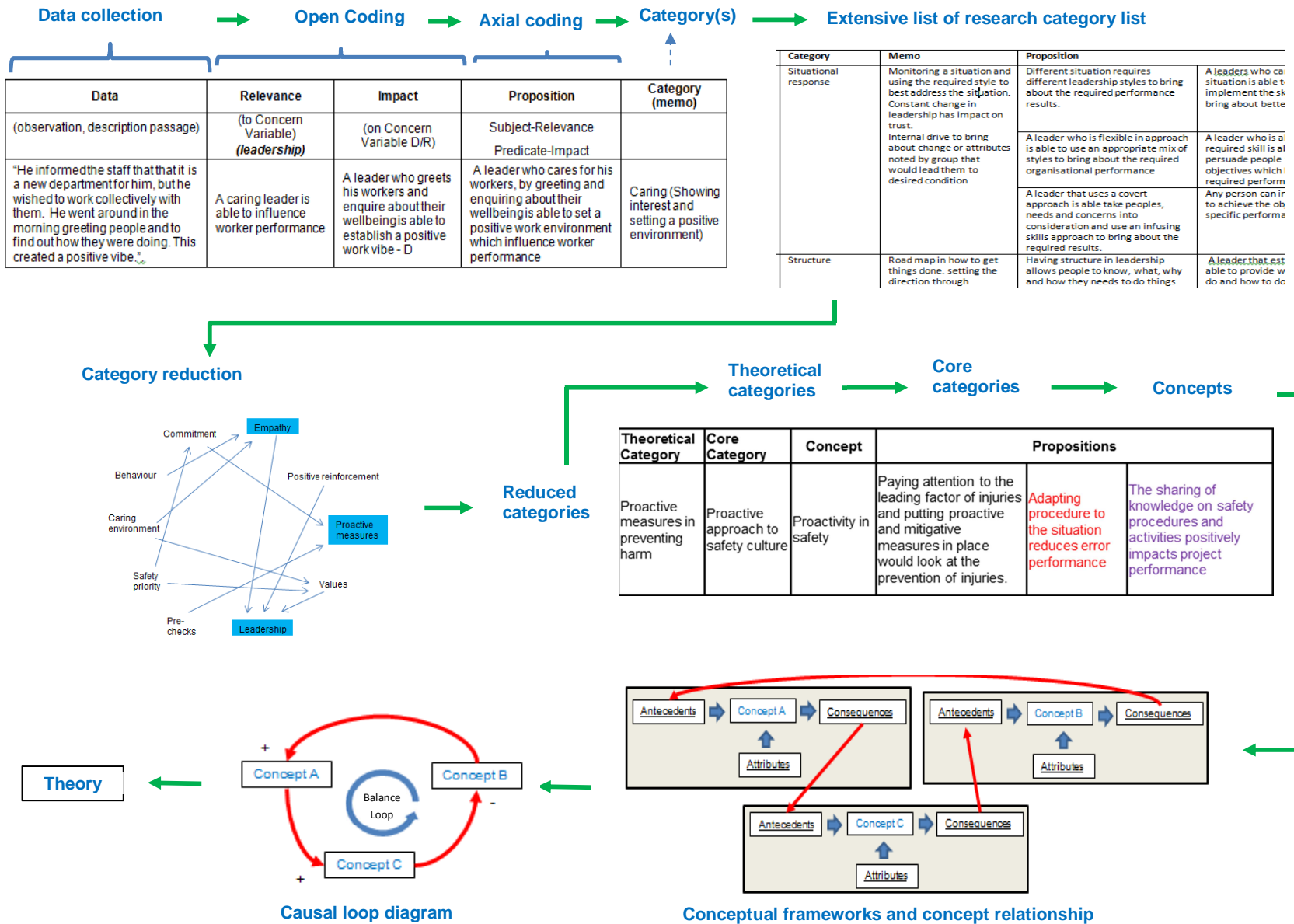


Figure 10 – Integrated research process

2.5. Research milestones

The research process provides a plan on the steps taken in moving from the data to a description on theory of the phenomena being studied. The establishment of milestones provides guidance to the research plan as it allows progress to be monitored and reference points to assess if adjustments to the research is required.

2.5.1. Cycle 1

The research has used two cycles which each have sub cycle within them, used towards the development of a theory. The initial conceptual model that was established to understand safety culture was used as a starting point for the collection of data which lead into the first cycle.

Under the first sub-cycle, convenience sampling takes place, with a broad-based internet search on the topic used to gather data on safety culture. Data is coded, leading to the formation of propositions with a total of 30 propositions noted as the first milestone.

This leads on to the second sub-cycle in which purposeful sampling is used. The internet is once again used, broadly looking at respective sites with focus placed on gaining a deeper understanding or variations of the categories identified in the previous sub-cycle. This would lead to the formation of a further 20 propositions. The additional propositions allow for the list of categories to be expanded on and to affirm the existing categories. At this point a collection of 50 propositions leads to the formation of 36 categories. These categories are reduced to 7 categories which marks the second milestone of the first cycle.

The third sub-cycle is based on theoretical sampling in which data is collected from a specific industry in which the phenomena is found, to expand or elaborate on the identified categories. An internet search on specific industry sites related to the nuclear industry would be used for the collection of data with a further 20 propositions being developed. The fourth sub-cycle would look at refining the understanding of categories in which industry specific internet sites would be used to gather information on specific topics. This would be followed up with member checking in which interviews with field experts at managerial and staff level at a nuclear power plant, would take place. This allows the personal understanding of the phenomenon to be identified. The feedback from the experts may guide further collection of data on specific topics. A total of 110 propositions would be sought allowing the categories to be saturated and theoretically grounded. At this point the core categories would be identified which marks the third milestone of the first research cycle.

In the fifth sub-cycle, literature is reviewed, and conceptual frameworks are formulated based on the concepts of the core categories. In drawing links between the consequences and antecedents the interrelationships between the concepts can be drawn which marks the fourth milestone of this sub-cycle.

The sixth sub-cycle follows on from the interrelationship diagram and with the use of system dynamics a causal loop diagram is constructed. It is from the causal loop diagram that a description of the theory is relayed which marks the final milestone of the first cycle of the research.

2.5.2. Cycle 2

In considering a second cycle it is possible to improve the developed theory, which through further observations can confirm or expands on the understanding of the initial theory (Carlie and Christensen, 2004). The first sub-cycle in the second cycle follows the same process as in the first sub-cycle of the first cycle; however the development of 60 propositions has been regarded as the milestone.

In the second sub-cycle purposeful sampling is performed using the categories developed from the position. A broad search is performed on specific industry internet site which would allow a further 60 propositions to be developed. This is followed by the third sub-cycle in which purposeful sampling takes place with specific internet sites which cover topics on the concerned variable being used to collect data. Interviews also take place with data being collected from field experts to gain personal understanding of the phenomenon. 60 additional propositions would be sought during this sub-cycle. A total of 180 propositions would allow 36 categories to be developed which would be reduced to 7 categories. The reduced categories at this stage mark the second milestone of the second cycle.

In the fourth sub-cycle of the second cycle theoretical sampling takes place on the reduced categories. Specific internet sites which cover the category topics would be used to gather data and interviews would take place with field experts to confirm or further investigate topics of interest. The coding of the data would lead to an additional 60 propositions being formed. The collection of a total of appropriately 240 propositions would be placed under the respective categories, allowing these categories to be saturated and leading to the third milestone of the research cycle, which is the identification of the core categories.

The fifth and sixth iteration of the second cycle follows the same process as that of the first cycle, in which literature research is performed on the concepts of the core categories. Conceptual frameworks are developed on the concepts and an interrelationship is drawn

amongst the concepts which lead to a causal loop diagram being developed. This leads to theory description of the concerned variable being relayed.

2.5.3. Theory integration

During the final stages of the research process the causal loop diagram of the second cycle is integrated with the causal loop of the first cycle. The combined causal diagram provides a refined illustration of the interrelationships and dynamics of the respective components which influence the initial research concerned variable. With the integrated causal loop diagram a comprehensive description can be drawn which allows the research question to be answered. An overall illustration of the research milestones is provided in figure 11 and figure 12.

The research methodology and research process allow information to be gathered and a theory on the phenomenon to be drawn. The information gathered may however be prone to misinterpretation and bias which could result in a theory which is none reflective of the actual phenomenon. To overcome these concerns research validity measures would need to be taken.

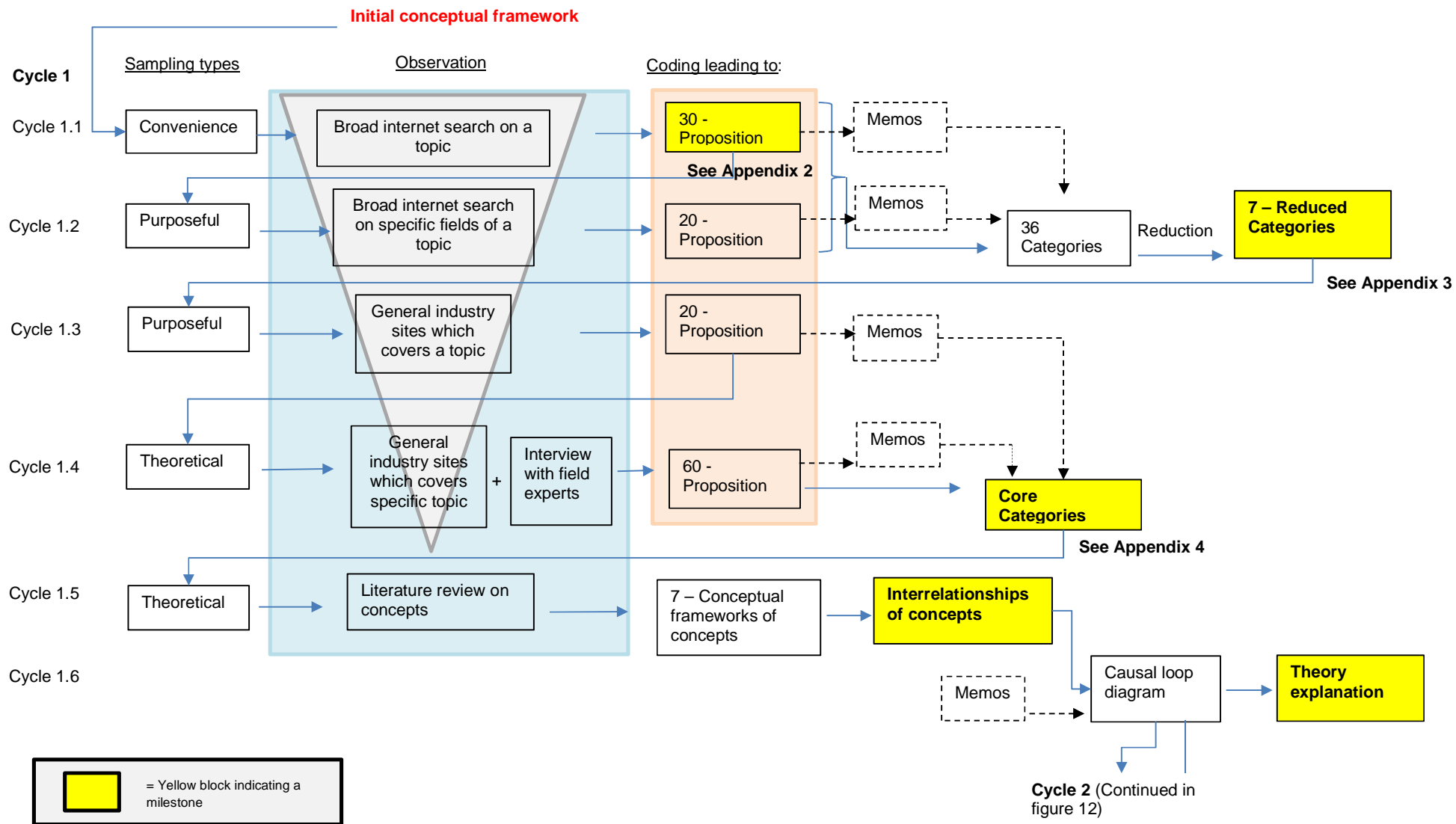


Figure 11 – Illustration of research process with milestones

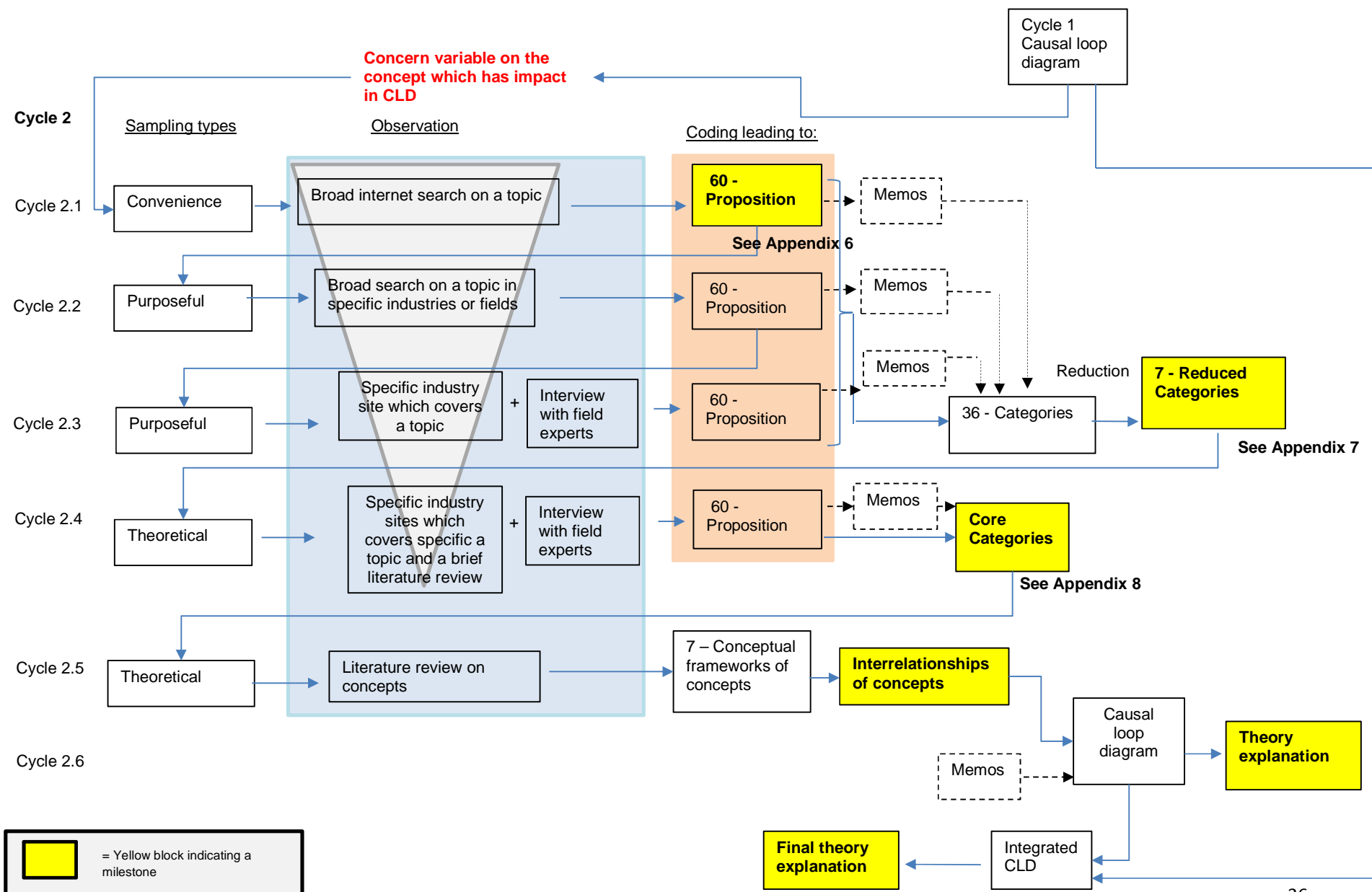


Figure 12 – Continued illustration of research process with milestones

2.6. Research validity

Maxwell (1996:87) poses the question “*how will we know that the conclusion is valid*” and further notes validity as “*the correctness or credibility of a description, explanation, interpretation or other sort of account*”. In gaining an understanding of phenomena there is a chance that it may be relayed, or conclusions drawn on it may be done so incorrectly. To ensure that this does not occur, measures to ensure validity of the final proposal will need to be taken.

Rather than treating the validity threats after accounts have been developed Maxwell (1996) proposes that validity threats be identified upfront, and measures put in place to mitigate such threats. This may be established through research rigor which consist of a reliability audit and validity checks (Long and Johnson, 2000).

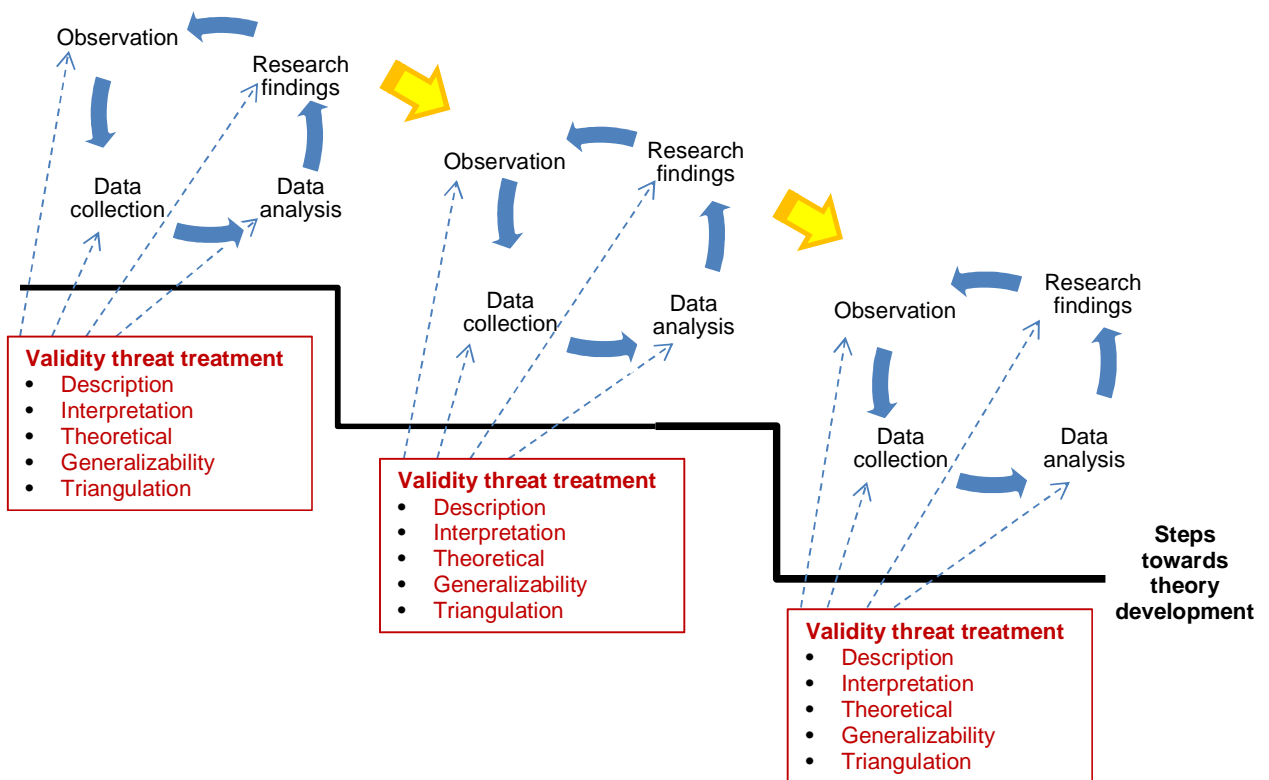


Figure 13 - Diagram illustrating the treatment of validity threats in the research

The management of research validity threats takes place throughout the research with the applicable treatment being applied as noted in figure 13. The validity threats are discussed in the section that follows.

2.6.1. Validity threats

The ability to accurately and completely capture information that is seen or heard during the research is related to as description validity, whilst the threat that the researcher applies his or her own meaning or framework, as appose to the meaning attached by a research participant is seen as interpretive validity threats. A theory consists of concepts with a relationship which exists between the concepts. Theoretical validity looks at the validity of the concepts as they would apply to the phenomenon and the explanation of the relationships between these concepts (Maxwell, 2011).

Researcher bias can also have an impact in the research conclusions, with data being selected which fits a researcher's presumed theory (Maxwell, 1996). Due to the researcher being a key driving component to the research itself this threat is regarded as inherent reflexivity of the study (Maxwell, 1996).

The ability to consider similarity of dynamics and similarities in conditions would allow for the universality of the phenomena to be drawn which is referred to as generalizability. Triangulation is also a method which can mitigate researcher bias and increase the validity, credibility and strength of the study (Thurmond, 2001). Thurmond (2001) notes that triangulation uses two or more aspects in the research to improve on the interpretation of the findings. Triangulation types include the use of multiple data sources, investigators, methodologic approaches, theoretical perspectives or analytical methods in a study.

2.7. Research ethics

Ethical considerations were included in the research to ensure that participants were not harmed and that the research brought about good (Orb, et al., 2000). The two dimensions of procedural ethics and ethics in practices was applied. The procedural ethics seek to gain approval from the relevant committees to perform research involving people and to gain access to the research participants (Guillemin and Gillam, 2004). Ethics in practice considered the ethical issues as they arise in the research (Guillemin and Gillam, 2004), with informant consent, confidentiality and participant relationships considered. The ethical principles of *autonomy*, *beneficence* and *justice* were applied to the research (Orb, et al., 2000) which allows anticipated and unanticipated ethical issues to be managed. Orb et al. (2000) notes that *autonomy* includes the respect shown to participants in providing them with the right to freely participate or withdraw at any time without penalty. They further indicate that *beneficence* considers acts of good and preventing harm, with confidentiality and anonymity possible means to prevent any harm to participants. The principle of *justice* seeks to prevent the abuse and exploitation of participants through recognizing the vulnerability of participants and their contribution to the study.

2.5. Conclusion

There are different ways in which a phenomenon could be researched, however in considering the philosophical stance; guidance could be obtained in the way the research question could be addressed. A review of the philosophical stance of this research found that it was in a constructivism- interpretivism paradigm with grounded theory being a suitable methodology to undertake the research.

Grounded theory is highlighted as a theory generating process which would provide insight and understanding in addressing the research question. As different grounded theory approaches exist, the process used in this research has been identified. Data collection, data analysis through open, axial and selective coding and theory development with the use of systems dynamic theory has been identified. The sampling techniques and use of memos were also found to be key elements which contribute to the theory generating process.

The research process has also been identified which links the components and strategies found in grounded theory in a systematic manner allowing observation of data to be taken and developed into a theory. The cyclical approach, which includes sub-cycles, identified the progressive steps taken towards to the development of a theory. The establishment of the research milestones within this process allows the research progress to be monitored and information to be consolidated. It is noted that the use of multiple cycle approach would allow the reinforcement and expansion of the understanding of the generated theory.

To ensure that the research provides an accurate and applicable theory, validity threats have been identified which would be managed. These included the use of description validity, interpretation validity, theoretical validity, generalizability and triangulation which would be applied throughout the research in managing and mitigating the research validity threats.

To ensure that the research brings about good and prevents harm to the participant, ethical issues which would be faced by the research have been considered. The two dimensions of procedural ethics and ethics in practice have been considered, with the ethical principles of *autonomy*, *beneficence* and *justice* identified as means to address anticipated and unanticipated ethical issues.

In having identified an appropriate approach which matches the philosophical stance of the research, establishing the tools, techniques and process and in identifying the means to manage validity threat, a basis was established which allowed the research question to be answered. This leads on to the following chapter in which the finding of the research is expanded on.

CHAPTER 3: Methodological application and core concept identification

3.1. Introduction

With the research framework and research plan established, it would be followed through in execution. This allows field data to be obtained, explored for meaning and the identification of the core concepts surrounding the phenomenon.

The execution of the research process starts off with the gathering of data from the respective sources. This data is documented, analysed with categories being identified. In following the research plan the research milestones is reflected on to identify how the research had developed and to note the findings that were made through the research process. These findings lead to the identification of the key concepts surrounding the phenomenon.

To ensure that these concepts truly reflect the phenomenon, the validity threats faced, and measures taken are also presented. Ethical measures taken to address the ethical issues faced in the research is discussed to illustrate how the research avoided inflicting harm to the participants of this research.

3.2. Research findings

With the research framework, research plan and milestones set, the research was undertaken. Data was initially captured from the internet allowing information to be gathered which guided the research. As the research progressed data was collected from participants at Koeberg Nuclear Power Station, with an understanding of the participant's perception and their views on the phenomenon.

This data and its source was captured and included in the documentation process. Analysis was immediately performed as data was obtained, and was reviewed for its relevance and impact, leading to the formation of a proposition. A category was assigned to the proposition with the thoughts or ideas surrounding the proposition captured under a memo. The documentation and analysis process are illustrated in table 1, with the complete list of data observation and analysis performed during cycle 1 and cycle 2 available in appendix 1 and 5 respectively.

Table 1 – Process followed in data capturing, data analysis, memoing and category identification

Ref	Data	Relevance (to leadership)	Impact	Proposition	Memo	category
1	<i>However much an executive may seem to have a leadership "it" factor, the organization's health, not the claims of individuals, should come first when companies determine which kinds of behaviour will be most effective for them. In short, they should spotlight different sets of actions in different situations. Fortunately for aspiring leaders, they don't have to do everything at once.</i>	A leader's style which fits the condition will bring about the required performance	A leader's different style would be required for different conditions	A leader's style would need to fit the business conditions as different styles are required to bring about the required response and performance under different conditions	Different styles for different conditions	Situational response
ref	Website				date accessed	
1	https://www.mckinsey.com/business-functions/organization/our-insights/leadership-in-context				30/10/2017	

The abovementioned process was applied in reaching the first milestone of the cycles in which a list of propositions was identified, compared to each other and categorized accordingly. An extract of the propositions and categories that were identified in the first milestone of cycle 1 is list in table 2 below.

Table 2: List of categories and proposition identified in cycle 1.2

Category	Memo	Proposition	
Empathy encourages a culture of safety	Showing understanding allows people to be open on safety	Empathy allows an organisation to show personnel commitment and understanding to workers which allows workers to relay information on safety and directly impacts safety culture.	
Communication of safety	Communicating allows people to learn and know what to do.	Communication on safety behaviour, lessons and practices allows workers to learn from such information and in turn improves the awareness and safety culture of an organisation	In not relaying open and transparent communication a weak safety culture would be established which could lead to a disastrous outcome.
Safety as a priority	Making sure that there are no conflicts in safety actions	An organisation with a strong safety culture is more than likely to have safety as a top priority which would prevent workers in engaging in dangerous work.	A lack of clear priorities and relevant and applicable process impacts a worker's motivation which challenges safety culture

The same process mentioned above was followed during the second sub-cycle during which time categories were placed under existing or new categories. The extensive list of categories that have been developed during cycle 1 and cycle 2 can be referred to in appendix 2 and 6 respectively.

With a total of 36 categories being identified they were then reduced to a manageable list of 7 categories. The reduction process considers all the categories, in which each category is

individually assessed against others to determine if it is a part of, a type of or a kind of another category. If such a relation exists a link is drawn from the category under examination to towards those categories. The categories with the most relations towards them were consider as key categories because they represent in one way or another the categories which are related to them. A simplified illustration of the reduction process, with the use of some of the categories identified during cycle 1 is illustrated in figure 14.

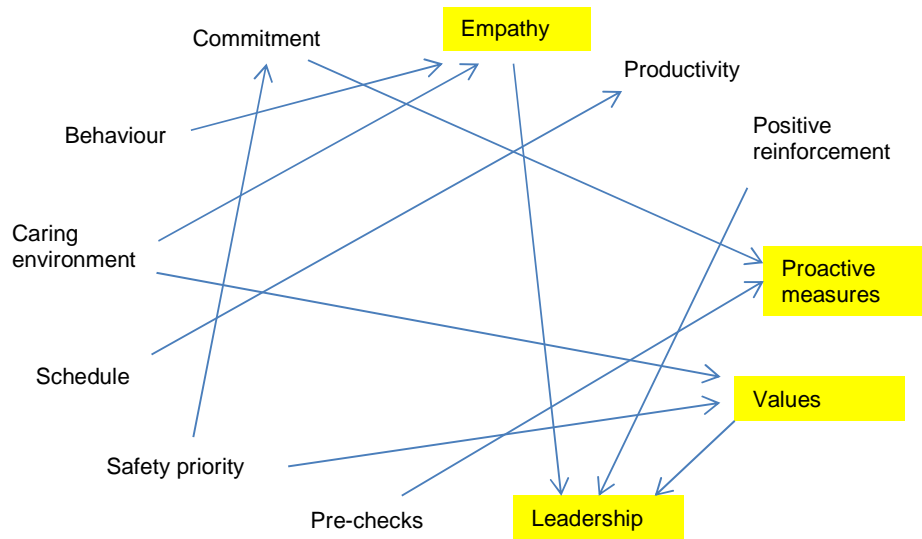


Figure 14 – Illustration of cycle1 category reduction

It should be noted that for simplification purposes, the key phrase in the category have been used in the graphical reduction process.

The reduction process leads to the milestone in which the reduced categories are established. The reduction process for the full list of categories identified in cycle 1 and 2 can be viewed in appendix 3 and 7 respectively. This was followed by the rearrangement of the proposition in which they were placed under the reduced category list. The categories' headings were reassessed and renamed to represent all the propositions which fall under them. This led to the formation of the theoretical categories. Theoretical sampling was followed with additional data gathered to confirm and expand on the theoretical categories. The data collection and analysis process were used in capturing data, analysing of data and creation of propositions. The propositions were placed under a category with the category being updated accordingly to reflect all the categories under it. This process led to the saturation of the categories and the formation of the core categories.

The list of theoretical categories which leads on to the core categories and extends to concepts for cycle 1 are listed in table 3 below. Appendix 4 and 8 can be referred to, to view

the initial theoretical categories, the core categories and the respective propositions which fall under these categories for cycle 1 and cycle 2.

Table 3 - The theoretical categories, core categories and concept identified during cycle 1

Theoretical Category	Core Category	Concept
Cycle 1		
Safety culture productivity	Safety culture influence on productivity	Safety performance
Buy-in to safety culture	Personnel commitment to safety culture	Commitment to safety
Leadership impacting safety culture	Leadership influence on safety culture	Safety leadership
Proactive measures to safety culture	Proactive approach to safety culture	Proactivity towards safety
Safety as a value	Personal values to safety culture	Safety values
Empathy	Good relationship influence on safety culture	Interpersonal safety relationship
Progressive developments	Continual improvement towards safety culture	Continual improvement in safety

This was followed by the review of the applicable literature on the concepts to expand on their understanding which is covered in greater detail chapter 4 of this document. Stemming from the concepts, antecedents, attributes and consequences, an interrelation diagram was drawn, allowing a conceptual framework to be developed, leading to a casual loop diagram and the theory building process. This is expanded on in chapter 5 of this document.

3.3. Validity measures applied

The collection and establishment of the core concepts are key to the development of a theory. The pre-emptive measures taken to address possible validity threats ensured that the information was indeed reflective of the phenomenon. The section that follows discusses the strategies used to ensure that the research results are reflective of the research phenomenon.

3.3.1. Triangulation

Data was collected from the respective internet sites, across several disciplines, authors and locations allowing data triangulation to take place. Person triangulation was also used in the interviewing process in which data was collected from managers and workers from different departments, involved with projects undertakings. The use of methodology triangulation in the form of open observation performed through internet research and open interviews allowed depth as well as richness in data to be obtained. The use of these respective

triangulation methods allowed a diverse range of data to be obtained which when compared was found to be consistent, alluding to the validity of the data.

3.3.2. Descriptive validity

During the observation stages of the research, descriptive validity was considered to accurately capture and record information. Information that was gathered from the internet was already in a text form and relayed directly from a participant who held knowledge of the topic of interest. This approach prevented any inaccurate reporting of an event or data. Interviews were also performed and where participants were comfortable, audio recordings were made, and transcripts made from it allowing an accurate account to be formed. Interviews were also held with participants with the responses being transcribed. The interview transcripts were passed on to the participant to review and to confirm whether the transcript accurately captured their thoughts and response. The use of these methods allowed descriptive validity to be maintained during the collection of the data.

3.3.3. Interpretation validity

The use of the coding process allowed meaning which is known to participant as well and those which they were unaware of, to be identified. The repeated presence of the concepts in the data allowed the concept to be confirmed. During the interview process both positive and negative case queries were posed to the participants allowing variation and a wider understanding to be gained. The threat always existed that the identified concepts were selected to confirm a specific view held by the researcher, however this was overcome through the member checking process. The identified categories were presented to participants that were familiar with the area of interest, who confirmed the interpreted concepts validity and directed to concepts which may have been omitted.

3.3.4. Research generalizability

Internet data was initially used to collect data from a broad source related to phenomenon which allowed a set of general categories to be derived. Further data was collected in the industry of interest, based on the general list of categories, allowing confirmation and further understanding of the phenomenon. Interviews were held with participants at Koeberg Nuclear Power Station who were exposed daily to the phenomenon being investigated. In following this approach, it was possible to draw a theory which was applicable to a wide range of conditions.

3.3.5. Research reflexivity

Measures have also been taken to overcome the potential influences which the researcher would have. As data was collected it was analysed and the thoughts surrounded the assignment of categories were captured in the memoing process. During the interview process, caution was taken to ensure that open questions were asked, and leading questions avoided. The member checking process was also used to ensure that the developed categories were indeed reflective of the situation and not those of the researcher.

3.4. Ethical practices applied

To ensure that the research did not harm any person, ethical measures were put in place. The procedural ethical aspect of the research was addressed through an ethics application to the Ethics Committee of the University of Cape Town, with approval granted. Permission was also sought and granted by Koeberg Nuclear Power Station senior management to perform interviews with staff.

Ethics in practices was addressed with measures put in place to address anticipated ethical issues. Information sourced from the internet was taken from public domain sites, in which participants placed information knowingly to be viewed and used. Prior to an interview taking place a letter of information and consent was provided to participants. A sample of the consent formed used can be viewed in Appendix 13. Through the consent form, participants were informed of the background to the interview and what the interviewee sought to gain. In this manner the ethical principle of justice was exercised. The participants were informed that they had the right to participate and withdraw from the interview at any time without any penalty. This together with the assurance of anonymity and confidentiality reflects the ethical principles of autonomy and beneficence that have been applied.

Unanticipated ethical issues had also arisen during the research process with a participant highlighting concerns of corruption and its impact on safety. The ethical principles of autonomy and justice were applied in maintaining the participant's confidentiality and in preventing possible abuse. At the time of this research, corruption was recognised as an organisational concern with measures put in place to address it.

None of the participant were harmed during this research with no interruptions experienced due to emotional concerns.

3.5. Conclusion

In applying the research process data was captured, analysed and consolidated at the respective research milestone. This led to the development of core categories, which underlie the phenomenon and the identification of the concepts which they hold.

The pre-emptive approach in addressing validity has seen the use of the different strategies and techniques which facilitated the collection and analysis of data to be truly reflective of the phenomenon being researched.

The application of ethical principle had also ensured that none of the participants in this research was harmed.

This in turn has set the foundation for the identification of the interrelationship of the concepts applicable to the phenomenon being investigated, which is delved on in the chapter that follows.

CHAPTER 4: Literature review

4.1. Introduction

In most research undertakings a literature review is performed in the early stages of the research to allow insights on a topic to be drawn and to guide the research. As this research has taken a grounded theory approach, the literature review has been delayed to allow the concepts to emerge from the empirical study and to avoid the existing literature in influencing the research findings.

The coding process was used to establish a set of core concepts which is reflective of the field data. It was at this point in the research that the literature review process was used to expand on the phenomenon to enhance and provide a better understanding of safety culture and its core concepts.

The literature review has taken a three-level approach. This was to allow the context in which the phenomenon exist to be understood, the phenomenon itself to be understood and a detailed understanding of the components which make up the phenomenon to be gained. The first level draws on the context in which the safety culture finds itself, with an understanding sought to identify how safety culture fits in and influences it. A link is established between safety culture, safety performance and organisational performance. Literature on each of these areas is performed to gain an understanding of the attributes which are applicable to it.

This is followed by the second level of literature review in which theories and concepts surrounding safety culture are looked at. The third level of literature review takes a closer look at the key concepts surrounding safety culture, in identifying their antecedents, attributes and consequences, to understanding what they comprise of and how they contribute towards safety culture.

Safety leadership was identified as an important concept in safety culture and to understand how it influences it, the three levelled literature review was similarly applied.

4.2. Organisational effectiveness and safety culture

Businesses are formed to meet a need, in the form of a product or service. A business may draw upon resources, skills and processes to deliver this need and to ensure that it is successful. Business success is however influenced by organisational performance in which organisational performance is seen as the measurement of an organisation's outputs in comparison to its set objectives or goals (Almtroushi, et al., 2016; Koohang, et al., 2017).

A term which is also commonly used is organisational effectiveness which is regarded as the ability of an organisation to bring about its required results (Koohang et al., 2017). Since the organisational performance looks at achieving these results it could be viewed as a substrate of organisational effectiveness (Venkatraman and Ramanujam, 1986).

4.2.1. Organisational effectiveness models

At a basic level financial indicators and operational aspects have traditionally been used to assess organisational performance (Venkatraman and Ramanujam, 1986), however these overlook the impact which individual behaviour have on organisational effectiveness, with other variables also being found to collectively contribute to organisational success (Steers, 1975). In considering a multivariable approach a holistic review of organisational effectiveness can be made as it considers the ability of an organisation to achieve its set goals, to acquire the resources needed to operate, the synergy amongst processes and people and the satisfaction of stakeholder which have an influence on the organisation (Steers, 1975; Cameron, 1980).

Quinn and Cameron (1983) have proposed a dimensional perspective in which organisational effectiveness is measured against three dimensions, namely *internal focus* versus *external focus*, *flexibility* versus *control* and concern for *ends* versus concern for *means*. These dimensions provide eight possible combinations which could be clustered under four organisational effectiveness models, namely *open systems*, *human relations*, *internal process* and *rational goals*. The effectiveness models in relation to the three dimensions are listed in the table 4 below.

Table 4 – Organisational effectiveness dimensions and the organisational criteria (Quinn and Cameron, 1983)

		Means	Ends
Open system	Flexibility	Flexibility Readiness	Resource acquisition, growth
Human relations		Cohesion Morale	Value of human resource
Internal process	Control	Information management Communication	Stability Control
Rational goal		Planning Goal setting Evaluation	Productivity Efficiency

The four organisational models are found to provide a good summary of the respective organisational effectiveness models (Quinn and Cameron, 1983) with table 5 providing a comparison as to how these models relate to other identified organisational effectiveness models.

Table 5 – List of multiple organisational effective factors

(Venkatraman and Ramanujam, 1986)	(Cameron, 1980)	(Steers, 1975)	(Quinn and Cameron, 1983)
Financial performance	Goal accomplishment	Productivity	Rational goal
	Participant satisfaction	Satisfaction	Internal process
	Resource acquisition		Open systems
Operational performance	Internal process and operation	Adaptability-flexibility	
			Human relations

4.2.2. Organisational life cycles and organisational effectiveness models

Most organisations go through a life cycle, which is influenced by factors such as structure, individuals and functional problems (Quinn and Cameron, 1983). Quinn and Camerons (1983) noted that organisational cycles were similar as they started off with an *entrepreneurial stage* followed by a *collectivity stage* leading on to a *formalization and control stage* and ending off with *structure elaboration and adaptation stage*.

Different activities are focused on in the respective stages with different criteria being applicable in measuring organisational effectiveness in these respective stages. Quinn and Cameron (1983) related their organisational effectiveness model to the respective stages of an organisations life cycle and proposed that during the *entrepreneurial stages* an *open systems model* was appropriate whilst during the *collective stage* a *human relations model* would be deemed applicable. The *formalisation stage* can be associated with the *internal process* and *rational goal models*, whilst in an *elaboration of structure* stage an *open systems models* is found to be effective, with moderate emphases on the *rational goal model* and *human relations model*.

Most established and operating organisations find themselves in the formalisation stage in which they have established processes, procedures and targets to meet their customer needs. Within established power generating plants the generated electricity, plant availability, safety and emission of gases are considered as key performance outputs (Athanasopoulos et al.,1990). The fuel used to generate electricity, together with the controllable cost such as labour cost and capital expenditure are input parameters to the electricity generating process. These may be challenged by factors which are beyond the control of such organisations, such as changing conditions (Athanasopoulos, et al., 1999).

These conditions place organisations like a power generating utility in an elaboration stage, in which the models of an open systems primarily and rational goals and human relations to a lesser extent, are used to ensure organisational effectiveness (Quinn and Cameron, 1983). The respective performance criteria can be used to assess the performance of the plant with it being noted that these could be categorised under the rational goal model. The

management of the people to bring about these changes could similarly be attributed to the human relations model. The flexibility, acquisitions and utilisation of resources needed under such changing conditions would fall under the open systems model.

One of the manners in which change and flexibility can be achieved in an organisation is through projects. It is with this, that project management would also be considered in bringing about performance change in a power generating plant. Uncertainty may be associated with change, with uncertainty largely related to risk which varies for different projects and for different industries.

4.2.3. Industry Risk Assessment

Risk is defined as the “*effect of uncertainty on objectives*” (Purdy, 2010), in which uncertainty are related to internal or external factors in an organisation which could hinder or promote an organisation in achieving its objectives. In managing risk the areas of risk identification, risk analysis and risk evaluation exist (Ahmed, et al., 2007; Purdy, 2010). Risk identification allows an understanding of a risk to be gained through aspects of how, why and when it may occur. This leads on to risk analysis in which the risk event is assessed with the risk being measured through aspects of likelihood and consequences which together produce a risk magnitude. Risk analysis is followed by risk evaluation which looks at the risk level and priority that would need to be applied for a particular risk. The last of the risk management process is the risk treatment or mitigation which looks at the controls that are put in place to influence a risk. These areas of risk management are aligned to ISO 31000 which is a risk management standard which can be applied to many fields including project management environment (Purdy, 2010).

When focusing closer on the risk analysis areas the process of plotting the consequence and likelihood on a grid, is a means of identifying the relative importance of a risk (Ahmed, et al., 2007). Items which are in a region of the grid which is regarded as intolerable would be regarded as a high risk. These high risks may have the trait of low occurrence, but very high cost impact, or similarly high occurrence rates with marginal costs however the total cumulative effect would be regarded as intolerable. Other risk criteria such as business reputation, loss of life or damage to the environment may be also be considered.

The risk analysis process can be used to assess the risk of an industry. In considering the safety context, industries such as commercial aviation, gas and oil which respectively have an impact on life or the environment have been considered as high risk industries. This process can also be used to assess activities in a project.

4.2.4. Project and organisational effectiveness

Projects are temporary in nature and under taken in a defined time period to perform tasks which have never been performed before (Malach-Pines, et al., 2009). Projects are found to be initiated to bring about change and to allow business goals to be achieved with a focus on better results and organisational performance (Shenhar, et al., 2001).

To bring about these changes project management is used with a focus on the skills, tools and techniques to meet the needs of the stakeholders in a project (PMBOK, 2013). The use of the tools and techniques in the nine areas of project management knowledge namely integration, scope, time, cost, quality, human resources, communication, risk and procurement management, can be used to effectively manage projects and to meet the set requirements of a project. These could include amongst others product performance or safety requirements.

In projects, performance is used to measure project success, which has traditionally been gauged against time, cost and in meeting the product specification (Marques, et al., 2010). Different people however may have different views on project success and to overcome this limitation a multi-dimensional framework could be considered with the dimensions of project efficiency, impact on customers, business success and preparing for the future as assessment criteria for project success (Shenhar, et al., 2001). Shenhar et al. (2001) notes that the dimension of project efficiency considers whether a project has met its schedule and budget goals, whereas the dimension of impact on customers, considers whether the product meets customer needs and expectations. They also indicate that the dimension of business success covers the benefits brought about as a result of the project whereas the dimension of preparing for the future looks at the creation of new technologies, infrastructure and market opportunities.

The dimension of efficiency looks at the short-term aspects of a project and how well the project met its resource constraints. Time and budget are commonly cited as assessment criteria under this dimension, however other measures such as cost of materials and tooling, reliability and safety measures which are applicable to a successful project implementation, could also be used (Shenhar, et al., 2001). As safety plays a key role in industries that have high safety risks, the inclusion of safety as one of the project measures would ensure the welfare of its workers and the security of associated assets. One of the features of the multi-dimensional framework is that product success is not differentiated from project success. A project may meet all of its project success criteria however if it does not meet a client's requirement, the project as a whole could be seen as a failure (Shenhar, et al., 2001). A safety accident which occurs in a high-risk industry, which is found to be related to a project could result in that project being viewed as a failure.

The literature on the nature of projects acknowledges the dispersity of project types and has focused on aspects of complexity, technology and size to name but a few, which can have an impact on the manner in which it is managed (Shenhar, et al., 2001). Little has however been observed as to the impact which safety has on projects in high risk industries. As safety performance is a project efficiency criterion, safety can be considered a fundamental element in high safety risk projects, with the role which it holds further considered.

4.3. The role of safety and safety culture in organizational effectiveness

4.3.1. Safety performance and organizational effectiveness

Safety is the process taken to prevent harm or negative risk to individuals in an organisation. In industries where safety is part of an organization's objective, safety performance is used as part of the businesses performance (Arezes and Miguel, 2003) with this also being the case in the power generation industry (Athanassopoulos, et al., 1999). Safety performance may also be used in projects to gauge project performance (Choudhry, et al., 2007).

Safety performance consists of the measurement of safety incidents and regulatory compliance (Arezes and Miguel, 2003) with absences and compliance respectively contributing towards business success. Safety measurements include statistical methods and modelling methods which primarily look at the identification and prevention of safety incidents, however these safety analysis methods are faced with the uncertainty of the future, in quantifying safety outputs and may also overlook organisational and management flaws (Adebiyi, et al., 2007). A large portion of accidents that occur are also found to be due to human error in comparison to technical or inherent job hazards (Adebiyi, et al., 2007) (Manu, et al., 2017). This has led to a need for a proactive form of safety measurement and to consider the role which an organizations culture has on the behaviour of individuals to risk in the work place, with safety culture identified as a means to achieve these requirements (Arezes and Miguel, 2003).

4.3.2. Safety culture

Organisations are largely influenced by organisational culture which is defined as the shared value and beliefs held by people in a company, in conjunction with the structures and system controls which bring about the behavioural norms in an organisation (Choudhry, et al., 2007). Safety culture is relayed as a sub component of organisational culture (Cooper, 2000) (Arezes and Miguel, 2003) and seen as the deep rooted stable traits, that an organization

holds with regards to the manner in which safety is taught, perceived and safety problems solved (Marisca, et al., 2012).

The term safety culture is prominent in high-risk industries which include the nuclear industry, air traffic control, chemical industry and mining as examples (Cooper, 2000). The dispersity of the use of the term however has resulted in no consistent approach in how it is defined, assessed and measured. A review of the definition on safety culture, as noted table 6 below, indicates that it has been interpreted in many ways.

Table 6 – List of safety culture definitions

Author	Definition
Fernández-Muñiz, et al., 2007: 628	<i>“A set of values, perceptions, attitudes and patterns of behavior with regard to safety shared by members of the organization; as well as a set of policies, practices and procedures relating to the reduction of employees' exposure to occupational risks, implemented at every level of the organization, and reflecting a high level of concern and commitment to the prevention of accidents and illnesses.”</i>
Choudhry, et al., 2007:999	<i>“the safety culture of an organization is the product of individual and group values, attitudes perceptions, competencies and patterns of behavior that determine the commitment to and the style and proficiency of an organization's health and safety management”.</i>
García-Herrero, et al., 2013:85	<i>“shared values and beliefs that interact with an organization's structures and control systems to produce behavioral norms”.</i>
	<i>“the set of beliefs, norms, attitudes, roles, and social and technical practices that are concerned with minimizing the exposure of employees, managers, customers and members of the public to conditions considered dangerous or injurious”</i>
	<i>“that assembly of characteristics and attitudes in organizations and individuals which establishes that, as an overriding priority, nuclear plant safety issues receive the attention warranted by their significance”.</i>

The presence of psychological aspects involved with the interaction of multiple people in reaching a goal, behavioural aspects involved with a job, and the situation produced by the organizational context all contribute towards safety culture (Cooper, 2000; Arezes and Miguel, 2003). Although Cooper (2000) had noted these factors to be part of the reciprocating model used to illustrate safety culture, it is observed that through the presence

of each of these factors, safety culture is influenced; hence they have been regarded as antecedents.

Several characteristics have been found to be applicable to safety culture. Value-conscious actions to safety looks at the actions that workers take which reflect safety awareness and the questioning attitude they display towards practices and guidelines (Gudela, 2007). Safety leadership is a characteristic of safety culture noted by Marisca et al. (2012) which considers that leadership is committed to safety and motivates and involves workers in this regard. Commitment to safety is a key contributor to a positive safety culture and holds the attributes of a worker who takes personal action to safety (Cox, et al., 1998). *Safety management systems* is also identified as an element to safety culture (Fernández-Muñiz, et al., 2007) and include continuous training which facilitates workers to work safely and preventative plans to avoid accidents. This respectively depicts elements of continuous improvement to safety and proactive safety behaviour. Choudhry (2007) had noted that “caring trust” is an element that would need to be present in creating a positive safety culture. This reflects the safety interpersonal relationships in which all parties look out for the welfare of each other and helping each other when needed.

The outcome of a positive safety culture is that it leads to employee involvement (Fernández-Muñiz, et al., 2007). In allowing employees to voice their opinion and to contribute towards the safety of the organization, workers gain personal satisfaction and are motivated. It is through safety culture that an organization can be flexible in managing risks with problems being promptly addressed through worker participation. This approach also allows prevention cost to be reduced.

4.3.3. Characteristics of safety culture

From the respective literature, seven elements have been drawn on, which provide an understanding of the key features of safety culture. The elements of safety as a value, safety leadership, commitment to safety, continuous improvements to safety, proactive safety behaviour, safety performance and interpersonal safety relationship have all respectively been identified. An understanding of what these elements entail and how they relate to other elements would provide a better understanding as to how they influence safety culture.

4.3.3.1. Safety Performance

In an investigation performed by Morrow et al. (2014) they were able to establish that safety culture has an impact on safety performance. Safety performance is seen as a term which covers various safety outcomes, which ranges from employee safety behaviour in which employees conform to safety procedure and safety requirements (Morrow, et al., 2014). It

also consists of organisational-level safety in which outcomes of accidents and injury rates are considered (Morrow, et al., 2014).

Individual-level factors such as ability, experience and personality have an influence on an individual's knowledge, skills and motivation and are considered as antecedents to safety performance (Griffin and Neal, 2000). It is also found that an organisations climate is an antecedent to safety performance in which leadership and group norms have an influence on an organisation's climate (Neal, et al., 2000). Safety climate is also seen as an antecedent to safety performance and looks at an individual's perception of the value of safety in the work environment. Safety climate is a specific form of organisational climate and comprises of several components which include *management values, management and organisational practices, communication and employee involvement in safety* (Neal, et al., 2000).

Safety knowledge, skill and motivation are three determinants of safety performance (Griffin and Neal, 2000). Safety knowledge and skill allows an individual to understand how to perform work safely and to conform to the safety procedures. An individual's motivation is linked to safety behaviour which has an impact on compliance to safety activities (Neal, et al., 2000).

Neal et al. (2000) proposed that safety performance consists of compliance and participation in which safety compliance considers the adherence of safety procedures and execution of work in a safe manner whilst safety participation consists of the promotion of the safety program, helping of co-workers, demonstrating initiative and improving safety in the workplace (Neal, et al., 2000).

4.3.3.2. Continuous Improvement in safety

Granerud and Rocha (2011) noted that employee behaviour and commitment are key to continuous improvement with long term commitment leading to better performance result. This performance may include safety performance. Organisational practices which include safety management systems make use of the cyclical process of reporting, feedback, planning and strategies to improve safety conditions (Granerud and Rocha, 2011). These processes on a closer inspection lends itself to continuous improvement. Continual improvement is a planned, organised, systematics ongoing process which allows for frequent incremental improvements to be made to organisations performance indicators (Granerud and Rocha, 2011; Oprime, et al., 2012).

For continuous improvement to take place organisational infrastructure and a supportive culture would need to be in place (Granerud and Rocha, 2011). Oprime, et al. (2012) had noted that an *organisations ability* to adopt a specific approach, coupled with a *constitutive behaviour* which allows workers to employ a routine behaviour to reinforce continual

improvement and the implementation of *processes and techniques* which facilitates continuous improvement, are respective elements which when present allows for the initiation of continuous improvement.

Several critical factors have been identified which influence the success of continuous improvement which can be categorised into three groups (Oprime, et al., 2012). The first category of *organisation and operations* considers the systems which are put in place to promote and support continuous improvements. The second category of an incentive system looks at aspects of recognition which motivates employees to make improvements and to reinforce the expected behaviours. The third category of support tools looks at the appropriate tools and methods used to identify and solve problems.

It is through the implementation of continuous improvement that organisations are able to make improvements in their performance in the form of productivity, quality, lead time, cost, customer satisfaction and the improvement of employee skills to solve problems (Oprime, et al., 2012).

4.3.3.3. Commitment to safety

Commitment is the “*act of pledging or promising to fulfil an obligation to someone or something at a future date*” with it also being found that a person that is committed to an organisation is dedicated and has a strong belief in the organisations goals and values (Zangaro, 2001:14).

Cox et al. (1998) performed a study in the manufacturing industry to determine the factors which influenced workers commitment towards safety. They found that *management actions* greatly influenced safety as management had an impact on workers attitude towards personal actions to safety and workers view of their commitment to safety. The quality of safety training was also found to contribute towards a worker’s commitment to safety (Cox, et al., 1998). Zangaro (2011) had noted that communication plays a key role in influencing commitment as clearly articulated goals and values of an organisation combined with a clear understanding of the role which the employee plays is likely to increase employee commitment.

Three categories of commitment have been identified by Zangaro (2011). Workers that have accepted an organisation’s goals and values and who are personally dedicated in working towards assisting the organisation in attaining success are relayed as being *morally* committed. The second considers workers who only put their best efforts forth when being noticed by influential individuals, in return for recognition or rewards and are referred to as being *calculatively* committed. Where an employee finds lack of control in the internal

environment of an organisation, feels trapped and that his actions have no impact on the organisation, such employees are referred as being *alienatively* committed.

The outcomes of workers being organisationally committed includes worker retention, higher attendance and job productivity (Zangaro, 2001).

4.3.3.4. Proactive behaviour towards safety

Worker safety participation as oppose to mere safety compliance has a greater effect on the long-term safety performance across different work contexts (Curcuruto, et al., 2015). Proactive safety behaviour looks at bringing about positive change in safety through system changes. Proactive behaviour is seen as the anticipatory actions taken by an individual or group to impact themselves and their environment (Grant and Ashford, 2008).

Grant and Ashford (2008) had reviewed the respective literature on proactive behaviour and proposed a general model. They observed that *accountability, ambiguity and autonomy* are three features which are likely to increase proactive behaviour. *Situational accountability* are the conditions in which it is expected that a worker provides an explanation and justification for the thought, emotions and behaviour which they portray. When a worker is held accountable, personal responsibility would be taken for actions taken. *Ambiguity* is the situation in which there may be uncertainty with a proactive behaviour being taken to reduce such uncertainty. *Autonomy* looks at the freedom of deciding what to do, when to do it and how to do something which installs a sense of confidence in a worker. This in turn increases a worker's proactivity in reaching the required results.

Proactive behaviour is seen to be a combination of voluntary choices in anticipating, planning and acting in advance (Grant and Ashford, 2008). The proactive approach in which workers raises their concerns and make suggestions, allows for the identification and anticipation of potential hazards, which when addressed would prevent accidents. The identification of near miss events reflects a proactive means of information and communication about safety concerns which allows an organisation to anticipate and prevent problems (Curcuruto, et al., 2015). An environment which promotes the reporting of near miss events positively influence proactive behaviour as trust would exist that safety issues would be treated fairly.

The outcomes of proactive behaviour are the reinforcement of *rewards or punishment*. In being proactive workers are faced with the likelihood of being rewarded when the outcomes are pleasing or punished when co-worker are displeased with the outcomes.

4.3.3.5. Interpersonal relationships

Prosocial behaviour in safety reflects an affiliative approach with colleagues helping and looking out for the welfare of each other which in the process establishes good social relationships (Curcuruto, et al., 2015).

The presence of employee supervision, management policy, practices and standard examples of co-worker practices, can all influence behaviour and the work place environment.

Watson et al. (2005) observed that social capital has several elements, one of which is a *relational dimension*. This dimension consists of interpersonal relationships which encompass factors of *meeting obligation, trust and norms*. Organisations may have safety management systems in place; however the engagement with employees in meeting the obligations of safety is likely to have greater influence on worker behaviour and attitudes (Watson, et al., 2005). Trust plays a pivotal role in cooperation and interaction and is seen as the willingness of a person to be vulnerable to others. The ability to build positive safety behaviour is based on the trust that workers can provide and in receiving constructive feedback. Norms consist of the relational factors which people use to govern their interfaces with others and themselves (Watson, et al., 2005). Safety norms are those which govern the behaviour and the boundaries for safe conduct which has an influence on the perception of work environment safety.

The outcome of interpersonal safety relationships are that worker behaviour can be altered which allows minor injuries to be reduced (Curcuruto, et al., 2015). Interpersonal relations also have an influence on at-risk behaviour and perceived work environment safety (Watson, et al., 2005).

4.3.3.6. Personal value to safety

It has been found that worker behaviour and their actions contribute towards accident which has sparked initiatives to promote safe behaviour and attitude amongst workers (Manu, et al., 2017). Manu et al. (2017) noted that to have an impact on behaviour the factors which influence them would need to be understood, with human values being identified as one of the intrinsic drivers of human behaviour. Values are the *“desirable, trans-situational goals, varying in importance, that serve as guiding principles in people’s lives”* (Manu, et al., 2017:912).

Values itself are formed through a person’s exposure to social experiences and is seen as a product of cultural and social systems. These values are based on individual needs, the social interactions and the need for the smooth operation and functioning of a group (Brutus and Cabrera, 2004).

Brutus and Cabrera (2004) noted that values can be listed under ten types which in turn could be grouped along four dimensions of *openness to change*, *conservation*, *self-enhancement* and *self-transcendence* (Brutus and Cabrera, 2004). *Openness to change* looks at the values which motivate people to follow their own intellectual and emotional interest in an uncharted manner. *Conservation* looks at keeping things just the way they are. *Self-enhancement* looks at the values which motivate people to enhance their own personal interest. *Self-transcendence* looks at people forgoing their own concerns and promoting the welfare others and of nature.

It is found that a worker's self-transcendence values have an impact on the intrinsic motivation which considers the natural satisfaction derived in behaving in a safe manner. A person's conservation values, in avoiding violation of social norms are influenced by customs. Where the customs encourage goodness and kindness, individuals with strong *conservation* values act safely with pleasure to avoid harmful consequences to others. Individuals with strong self-transcending values similarly seek the welfare of others and would be *intrinsically* motivated to work safely.

4.3.3.7. Safety leadership

Leadership plays a key role in an organisation's climate and safety climate (Neal, et al., 2000) which in turn has an impact on safety performance. It also has an important role in interrelationships with employees and is found to influence worker behaviour to safety (Watson, et al., 2005).

There are both internal and external factors such as legal and political requirements, organisational and social determinants which have an impact on a condition faced by a leader in addressing safety (Sienkiewicz-Malyjurek, 2016). The legal and political determinants include aspects of regulations or policies, whilst organisational determinants consider the environment in which the organisation finds itself. The social determinant considers aspects of social culture and inter-organisational trust.

For leaders to address the dynamic, collaborating and at times conflicting requirements faced in managing safety one of the key attributes for such leaders is to have the ability to handle complexity. Getting team members to work together and in building close relations, lends to the attributes of "sharing" in a leader, whilst the ability to resolve conflict and in sharing control points to a collaborative attribute.

The outcomes of leadership in the safety management domain, is the coordination of activities amongst a host of parties, the communication amongst internal workers and external parties. Leadership also brings about the motivation of respective parties in safety efforts.

4.3.3.8. Summary of safety culture elements

In reviewing the respective elements of safety culture their antecedents, attributes and effects were drawn from the literature. These have been summarised in table 7 below and provides an understanding of the respective elements and how they individually contribute towards safety culture.

Table 7 - List safety culture concepts and its antecedents, attributes and consequences

Concept	Antecedents	Attributes	Consequences
Safety Performance	<ul style="list-style-type: none"> - Organisational climate - Safety climate - Individual factors 	<ul style="list-style-type: none"> - Safety knowledge - Safety skill - Safety motivation 	<ul style="list-style-type: none"> - Safety compliance - Safety participation
Continuous improvement (CI) in safety	<ul style="list-style-type: none"> - Organisations adoption of required approach for CI - Constitutive behaviour to enforce CI - Facilitating process and techniques to improve CI 	<ul style="list-style-type: none"> - Organisation and operation - Incentive systems - Support tools 	<ul style="list-style-type: none"> - Increased organisational performance - Customer satisfaction - Employee skills to solve problems
Commitment to safety	<ul style="list-style-type: none"> - Management actions to safety - Safety training - Communication of safety 	<ul style="list-style-type: none"> - Morally committed - Calculatively committed - Alienatively committed 	<ul style="list-style-type: none"> - Job productivity - Positive safety culture - Workers retention
Proactive behaviour to safety	<ul style="list-style-type: none"> - Accountability - Ambiguity - Autonomy 	<ul style="list-style-type: none"> - Anticipating - Planning - Acting in advance 	<ul style="list-style-type: none"> - Reward or punishment reinforcement of safety - Safety performance
Interpersonal relationship	<ul style="list-style-type: none"> - Supervision of an employee - Management policy and practices and - Standard examples co-worker practices 	<ul style="list-style-type: none"> - Management safety values - Shared trust - Safety norms 	<ul style="list-style-type: none"> - Worker behaviour and attitude to safety - Enhanced work environment safety perception - Reduced at risk behaviour
Personal values to safety	<ul style="list-style-type: none"> - Individual need - Social interaction - Smooth function of a group 	<ul style="list-style-type: none"> - Openness to change values - Conservation values - Self- enhancement values - Self-transcendence values 	<ul style="list-style-type: none"> - Intrinsically motivated to safety - Safety oriented behaviour
Safety leadership	<ul style="list-style-type: none"> - Legal and requirements - Organisational characteristics - Social characteristics 	<ul style="list-style-type: none"> - Complexity - Sharing - Collaborative 	<ul style="list-style-type: none"> - Coordination of safety activities - Communication - Safety motivation

In particular safety leadership has been noted as one of the key driving elements in safety culture (Earl, 2003) and for this reason a focused review of safety leadership has been taken to gain an understanding of the aspects within leadership which collectively combine to form safety leadership. The section that follows takes a closer look at the safety leadership characteristics and how these establish safety leadership which influences safety culture in an organisation.

4.3.4. Leadership models applicable to safety culture

Leadership has been differentiated from management with it being proposed that management coerce and address short term views, whereas leaders persuade and considers long term views (Allio, 2012). It is however found that managers need to lead their workers and that leaders will need to manage which relays to the interchangeability of the concepts.

Over the past few decades six main schools on leadership theory have been developed namely the *trait, behavioural or style, contingency, visionary or charismatic, emotional intelligence* and the *competency* schools of leadership theory which sought to describe effective leadership (Turner and Muller, 2005).

Within the traits school of thought, effective leaders are seen to be individuals born with a set of common shared traits which could be categorised under abilities, personality and physical appearance (Horner, 1997; Turner and Muller, 2005). No conclusive link however can be made with these traits and a leader's greatness (Horner, 1997).

The behavioural or style school of leadership theory initially considered that effective leaders adopted a specific style or behaviour (Turner and Muller, 2005). Studies that were performed under the behaviour theory of leadership noted that depending on the frequency of a displayed behaviour a leader could be categorised under being people or task focused. (Horner, 1997).

As a strong link between performance and leadership style could not be drawn, researchers looked at other alternatives to provide an explanation to leadership effectiveness (Allio, 2012). The contingency school of leadership theory proposed that leaders would be effective if they were able to assess a situation and match it with an appropriate leadership characteristic as appose to using a universal leadership theory for all situations (Horner, 1997; Turner and Muller, 2005).

The visionary or charismatic school of leadership theory was established from the study of leaders who were able to bring about successful organisational changes. Transactional and transformational leadership fall under this school of thought. Transactional leadership is found to focus on rewarding people for meeting objectives, but also for taking action when tasks are not going as planned. Transformational leaders are noted to demonstrate charisma, whilst they also develop a vision and challenge people to new ideas and approaches (Turner and Muller, 2005; Allio, 2012).

The emotional intelligence school of thought propose that it is a leader's emotional intelligence rather than his intellectual capabilities which has an impact on a team's

performance. Six leadership behaviours namely visionary, coaching, affiliative, democratic, pacesetter and commanding are found to be related to the emotional intelligence with the first four being found to lead to better performance (Turner and Muller, 2005).

The competency school of thought on leadership considers that effective leaders have specific competencies; however, what differentiates this school of thought from the trait's theory is that competencies can be learnt. Competencies are defined as the skills, knowledge and personal characteristics, which when combining specific competencies can bring about different leadership styles which are applicable to a specific condition (Turner and Muller, 2005). Cognitive, emotional, behavioural and motivational have been found to be four competencies related to effective leadership.

Denison et al. (1995) noted that a great deal of literature on leadership paid attention to the bipolar categories of leadership in which it is viewed as either being autocratic or democratic, task-orientated or relations-orientated as examples. Conditions may however exist in which opposing categories present themselves simultaneously which has led to research in the *paradoxical perspective*, with it being proposed that effective leaders under these conditions have both cognitive and behavioural capabilities to recognise and react to such situations (Denison, et al., 1995). Behavioural complexity is noted to be like cognitive complexity which considers that a person can hold two opposing ideas at the same time but still retain the ability to function.

The organisational effectiveness model noted by Quinn and Cameron (1983), displays behavioural complexity as the dimensions of stability competes with flexibility, internal focus competes with external focus and the concern to meet the end needs competes with the concern to gain the means (Denison, et al., 1995). Denison et al. (1995) proposed that eight respective leadership roles could be matched with the respective dimensions of the organisational effectiveness model. In relationship to the structure elaboration phase which most power generating organisations find themselves in, an innovator role which displays creativity and facilitates changes combined with a broker leadership role which looks at acquiring the required resources whilst maintaining external legitimacy through networking with external contacts, were proposed to be most appropriate.

Safety culture is closely related to organisational culture with it being found that leadership plays an important role in establishing and changing it (Ruchlin, et al., 2004). The establishment of the direction in an organisation is seen as one of the tasks which need to be in place for organisational change (Ruchlin, et al., 2004). This task together with aligning workers through communication is brought about by leadership.

4.3.5. Safety Leadership characteristics in safety culture

The literature on leadership is vast with many characteristics found which contribute towards it. The respective leadership models indicate that aspects of behaviour, contingency, emotional, visionary and charismatic leadership styles could be applied. The *paradoxical perspective* however considers that multiple characteristics may be required simultaneously to bring about effectiveness. Aspects of leadership which brings about organisational cultural change would be included in these characteristics. An understanding of what these leadership characteristics entail and how they relate to safety leadership would provide a better understanding as to how they influence safety culture which is discussed further in the sections that follow.

4.3.5.1. Safety leadership behaviour

Safety leadership behaviour is seen as those actions that have a positive influence on worker safety behaviour (Conchie, et al., 2013). Job demands which encompass workload, competing demands and situational constraints are factors which influence safety leadership behaviour (Conchie, et al., 2013). Autonomy and social support which can be grouped under job resources are also factors which influence safety leadership behaviour.

A leader may demonstrate one of four behaviour styles which include *constructive*, *supportive-disloyal*, *tyrannical* and *derailed* (Einarsen, et al., 2007). Leaders that focus on organisations goals whilst at the same time are concerned about the welfare of workers are regarded as *constructive* leaders. A leader which displays consideration for the welfare of subordinates however acts contrary to the objective of the organisation is seen to display a *supportive-disloyal* behaviour, whilst a leader which focuses on meeting organisational goals at the cost of the subordinates is regarded as showing a *tyrannical* behaviour. In derailed leadership behaviour, leaders demonstrate both anti-subordinate and anti-organisational behaviour. The respective leadership behaviours could further be focused in meeting organisational objectives in which *goal-orientated*, *involving* and *engaging* behaviour could be displayed (Dulewicz and Higgs, 2005). In a *goal-orientated* behaviour, leaders set direction and behave in a manner which orientates others in achieving these goals. In an *involving* behaviour, a leader largely influences the direction, however, allows others in setting the direction and in determining how the goals are to be achieved. In an *engaging* behaviour, a leader facilitates other in developing the required capabilities to set the direction and the means to achieve it.

Behaviour can be directed to workers or the organisation, to improve workers wellbeing, motivation and satisfaction (Einarsen, et al., 2007). The behaviour demonstrated by leaders

also influences the reciprocating behaviour demonstrated by workers (Vroom and Jago, 2007).

4.3.5.2. Situational safety leadership

Under conditions of routine job operation Zohar (2002) noted that a specific leadership approach was suitable in maintaining reliable safety performance, however where safety procedures were found not to address a safety condition, a different leadership approach would be more suitable. A study performed by Vroom and Jago (2007) found that the situational context has an impact on a leaders behaviour and that a specific behaviour is appropriate in a specific situation (Vroom and Jago, 2007; Sims Jr., et al., 2009).

The severity of the condition is seen as a situational factor, as the greater the severity of a condition the more directive and more prompt a response is applied (Sims Jr., et al., 2009). The experience of the team or person which a leader engages with is also seen as a factor to a situational response as a leader would either coach or direct accordingly. These two factors also tie up with the environmental characteristics and subordinate's characteristic identified by Vroom and Jago (2007) which in the safety context can be relayed as environmental safety characteristics and subordinate safety characteristics.

Sim Jr. et al. (2009) proposed that the five different leadership styles of aversive, directive, transactional, transformational and empowering could be used in situations. An aversive style would be applicable where a leader may reprimand a worker who is close to harming himself or others. A directive leadership style would be applicable where a leader provides instructions in situations where there may be uncertainty in what needs to be achieved and where compliance is required. In situations where a leader has some form of control a transactional style may be used in which rewards are provided for compliance. Where higher performance would be required a transformational leadership style could be adopted as a leader would build relations and gain commitment in reaching goals. In the situation where worker know what needs to be done and have the required skills, an empowering leader would allow others to empower themselves in achieving the required goals.

The leadership style that is used is based on the outcomes that a leader wishes to achieve (Sims Jr., et al., 2009), with it being found that situational leadership can bring about job satisfaction, acceptance of leadership and the efforts to elevate performance (Vroom and Jago, 2007). The respective leader dimension can bring about a better safety climate, safety behaviour and safety performance through fewer injuries (Zohar, 2002).

4.3.5.3. Leadership safety relationships

A leader may establish and coordinate the goals and process required for workers to reach required goals however the way a leader acts and interacts with people impacts the morale and attitude toward their work (Mastrangelo, et al., 2014). The quality of relationship between a leader and members is found to have an impact on injuries in the working environment (Zohar, 2002).

For a good relationship to be established, Mahsud et al. (2010) observed that the perception of a worker to be competent and dependable together with worker values, attitude and attributes would all need to be present. The organisational context, which includes aspects of organisations culture, human resource practices and team dynamics also have an influence on the relationships between a leader and workers (Mahsud, et al., 2010), which can be referred to in the safety context as the safety climate (Zohar, 2002).

A leader's empathy and ethical values contribute towards a favourable relationship between a leader and workers. It is with a leader's empathy that a leader assesses and understands a worker's feelings and attitude and uses an appropriate relations- oriented behaviour, to support, encourage or empower an individual. The former's ability to help, protect and consider the welfare of others is portrayed through ethical values which assist in developing and maintaining a cooperative relationship. A leader's ethical values leads to the use of a relations-oriented behaviour as these values guide a leader to be supportive, helpful, non-exploitive and non-abusive towards workers. Behaviour similarly, also has an impact on these relations, with a relations-oriented behaviour identified as a behavioural style which could be adopted by a leader (Mahsud, et al., 2010). This behavioural style includes the provision of support, recognition, skills development, soliciting of ideas and concerns and delegation of authority and responsibility to workers.

A leader who engages in high quality relationships are found to be more effective with greater organisational commitment, better worker performance and greater worker retention (Mahsud, et al., 2010). Leaders that can display a concern for workers and their welfare, have an influence in worker behaviour (Zohar, 2002). Personal leadership is noted to be an important link between the professional leadership and worker commitment; however the process of building trust, demonstrating care, sharing and acting in an ethical method takes time to establish (Mastrangelo, et al., 2014).

4.3.5.4. Leaders establishing purpose

The intellectual stimulation which a transformational leader would relay to workers is through the clear identification and articulation of a vision which would inspire workers (Zohar, 2002). Professional leadership is found to be the formal part of leadership and contains aspects

such as direction, vision and mission which establishes why and how goals of an organisation are to be achieved (Mastrangelo, et al., 2014).

In organisations where different departments have different goals, role conflict and role ambiguity are most likely to be present however this can be reduced through professional leadership.

The direction formulated by a leader is synonymous with the mission, vision and philosophy and allows a leader to establish a common purpose (Ruchlin, et al., 2004; Mastrangelo, et al., 2014). A company's existence is established through its mission and its goals are set through its vision. Direction combined with process allows followers to know what the goals of an organisation are and how to achieve it. Coordination looks at a leader acquiring the required resources to achieve the set goals. It also importantly looks at aligning the organisation, its resources and processes to a common purpose. Communication is seen as part of the alignment process as it allows individual that are key to the process to be informed and enlisted whilst also allowing a coalition to be made towards the implementation of the vision (Ruchlin, et al., 2004).

The outcomes of the application of professional leadership, is the reduction in role conflict and role ambiguity, resulting in an increase in job satisfaction and organisational commitment (Mastrangelo, et al., 2014). The clarity which is brought through professional leaders would also result in the likely cooperation of workers with management.

4.3.5.5. Transactional safety leadership

The rewarding of workers who display safe practices whilst maintaining reliable performance during job operation is a method used by transactional leaders which influences injuries (Zohar, 2002). It is the ability of a leader to get subordinates to perform as expected that can result in performance levels to be exceeded.

The presences of tasks in the form of safety priority which must be met are basis for a transactional leader who looks at getting people to perform them efficiently and reliably (Zohar, 2002). Role ambiguity is seen as a precursor for transactional leadership as leaders look at emphasizing the required performance and the roles which workers must play in reaching them. Trust is also found as the basis for the feeling that workers have that they are being treated fairly and that they are receiving the appropriate compensation for their actions. This indicates that the presence of trust is important in a transactional leadership role.

Transactional leadership itself consists of three dimensions (Pounder, 2001). In *contingent reinforcement* subordinates are rewarded for achieving a specific performance level, whilst

active management by expectation looks at a leader actively identifying and taking steps to rectify deviations from expected performance levels. *Passive management by expectation* considers that a leader only acts when problems present themselves.

In this manner they would they would bring about safety conformance which is related to safety compliance (Jiang and Probst, 2016). Through contingent reward or punishment, a transactional leader is found to bring about the required performance results (MacKenzie, et al., 2001).

4.3.5.6. Transformational leadership

Transformational leadership is seen as an extension of transactional leadership (Pounder, 2001) however it goes beyond follower compliance as it looks at influencing the beliefs, values and needs of followers in attaining specific objectives (Kuhnert and Lewis, 1987). In increasing people's awareness of conditions and possible outcomes, a transformational leader can relay and inspire a vision of change which is to the benefit of all.

As transformational leaders can have followers perform beyond expectation, trust between a leader and follower would need to be present (MacKenzie, et al., 2001). The presence of role ambiguity which considers the discrepancy in information which a worker has and that which is required to complete a task is also seen as a contributing factor which when influenced on by transformational leadership brings about the desired outcomes (MacKenzie, et al., 2001). Gregory et al. (2011) had found that when a leader shows awareness of subordinates' perspective, such leaders are demonstrating a transformational behaviour. Empathy and positive attributes are two dimensions when taking perspective, with it being noted that a leader that takes perspective is an antecedent to transformational leadership.

Transformation leaders act in accordance with the deep, non-negotiable personal values, which when expressed to others can bring a common understanding and a change in people's goals and beliefs. The four characteristics of *idealised influence*, *inspirational motivation*, *individualised consideration* and *intellectual stimulation* are commonly associated with transformational safety leadership (Gregory, et al., 2011; Jiang and Probst, 2016) and found to impact employee safety behaviour (Gregory, et al., 2011). In demonstrating the ideal safety behaviour, a transformational leader can influence workers in making them aware of the required safety behaviour and that safety is a shared goal (Jiang and Probst, 2016). Transformational safety leaders provide inspirational motivation in getting workers to forgo their own interest for the collective good. The intellectual stimulation shown by transformational safety leaders allows workers to voice their concerns and find new ways to solve safety related issues. The individual consideration looks at the mentoring and special

attention which a transformational safety leader displays towards the wellbeing, safety and development of workers.

Transformational safety leadership is found to have a strong relationship with the safety motivation and safety participation of employees which translates to fewer accidents and injuries (Jiang and Probst, 2016). Transformational leaders who encouraging workers to attend safety meetings, attend safety training and in voicing their suggestions to improve safety can stimulate creativity amongst workers as they generate new ideas to help solve safety problems and in assisting co-workers solving safety problems. The inspiration and encouragement translated by transformational leaders to workers to behave safely results in workers helping others and in creating a safe working environment.

4.3.5.7. Emotional Intelligence

In leader member relationships of high quality, leaders display a concern of workers physical and emotional welfare which have an influence on the safety behaviour of workers (Zohar, 2002). Individual consideration which is a characteristic in transformational leaders holds an attribute of coaching and mentoring (Pounder, 2001), with safety coaching playing a vital role in behaviour-based safety intervention and injury prevention (Wiegand, 2007). A leader's emotional intelligence is found to have an impact in the manner and effectiveness of their safety coaching.

Worker behaviour which is based on past exposure or comfort to conditions, are observed by a safety coach prior to providing feedback to influence safety behaviour (Wiegand, 2007). The situational context such as change, found to be present in events, bring about emotions in people (Dulewicz and Higgs, 2000; Wiegand, 2007). The use of emotional intelligence by a safety coach to assess and influence emotions is seen to influence and reduce injuries.

Emotional intelligence is related to the ability of a person to manage the emotion in oneself and in others (Hawkins and Dulewicz, 2007), with it also used in safety coaching to identify a coaches own emotions and that of workers (Wiegand, 2007). When coaches identify their own emotions and that of workers, they can provide accurate and honest emotional expression, with worker being willing to accepted feedback when given without concerns of alterative motives. Safety coaches who use empathetic understanding of emotions by placing themselves in someone else's shoes, allows them to gain a better perspective, to anticipate behaviour and to use appropriate responses to gain the required output. A coach's ability to understand emotions allows for the differentiation of the levels of intensity and provides a balance in providing feedback on the importance of a situation. The management of emotions allows safety coaches to use the appropriate emotion in a

situation. It is also important in limiting negative emotions in workers and enhancing positive emotions without downplaying the situation.

The ability of a leader to understand and interpret emotions of workers plays a role in influencing worker behaviour. Safety coaching itself involves the observation and understanding of worker behaviour, with the use of behavioural feedback to motivate workers to work safely.

4.3.5.8. Summary of safety leadership elements

The review of the literature has allowed the elements of safety leadership to be identified with their antecedents, attributes and effects being highlighted. This has been summarised in table 8 below. These have allowed an understanding of the respective elements in safety leadership to be identified and how they individually contribute towards safety leadership.

Table 8 – The key antecedents, attributes and consequences for the respective elements identified for safety leadership

Concept	Antecedents	Attributes	Consequences
Leader safety behaviour	<ul style="list-style-type: none"> - Job demands - Job resources - Situational constraints 	<ul style="list-style-type: none"> - Goal-oriented - Involving - Engaging 	<ul style="list-style-type: none"> - Worker safety behaviour - Worker motivation - Worker wellbeing
Situational safety leadership	<ul style="list-style-type: none"> - Environmental safety characteristics - Worker safety characteristics 	<ul style="list-style-type: none"> - Transactional safety leadership - Transformational safety leadership - Empowering safety leadership 	<ul style="list-style-type: none"> - Higher safety climate - Safety oriented behaviour - Improved safety performance
Leadership safety relationships	<ul style="list-style-type: none"> - Competent and dependable workers - Worker values - Safety climate 	<ul style="list-style-type: none"> - Empathy - Ethical values - Relations-oriented behaviour 	<ul style="list-style-type: none"> - Better worker performance - Worker behaviour - Worker commitment
Transactional safety leadership	<ul style="list-style-type: none"> - Safety tasks - Worker role ambiguity - Presence of trust 	<ul style="list-style-type: none"> - Contingent reinforcement - Active management by expectation - Passive management by expectation 	<ul style="list-style-type: none"> - Worker compliance to safety - Achievement of safety performance goals
Transformation safety leadership	<ul style="list-style-type: none"> - Presence of trust - Worker role ambiguity - Awareness of subordinate perspective 	<ul style="list-style-type: none"> - Idealised influence - Inspirational motivation - Individual consideration - Intellectual stimulation 	<ul style="list-style-type: none"> - Safety motivation - Safety participation - Safe work environment
Emotion intelligence	<ul style="list-style-type: none"> - Worker behaviour - Situational context 	<ul style="list-style-type: none"> - Perceiving emotion - Understanding emotion - Managing emotion 	<ul style="list-style-type: none"> - Prevention of injuries - Influence worker safety behaviour - Motivation to work safely
Leadership establishing safety purpose	<ul style="list-style-type: none"> - Direction - Systematic process - Role conflict and ambiguity 	<ul style="list-style-type: none"> - Mission, vision - Constancy - Coordination 	<ul style="list-style-type: none"> - Common purpose - Job satisfaction

4.3.5.9. Literature concept integration

In reviewing the literature, the concepts informing safety culture has been identified. An overview of the literature review process is illustrated in figure 15, with it depicting how safety culture contributes to organisational effectiveness and how the respective elements of safety collectively contribute towards organisational effectiveness.

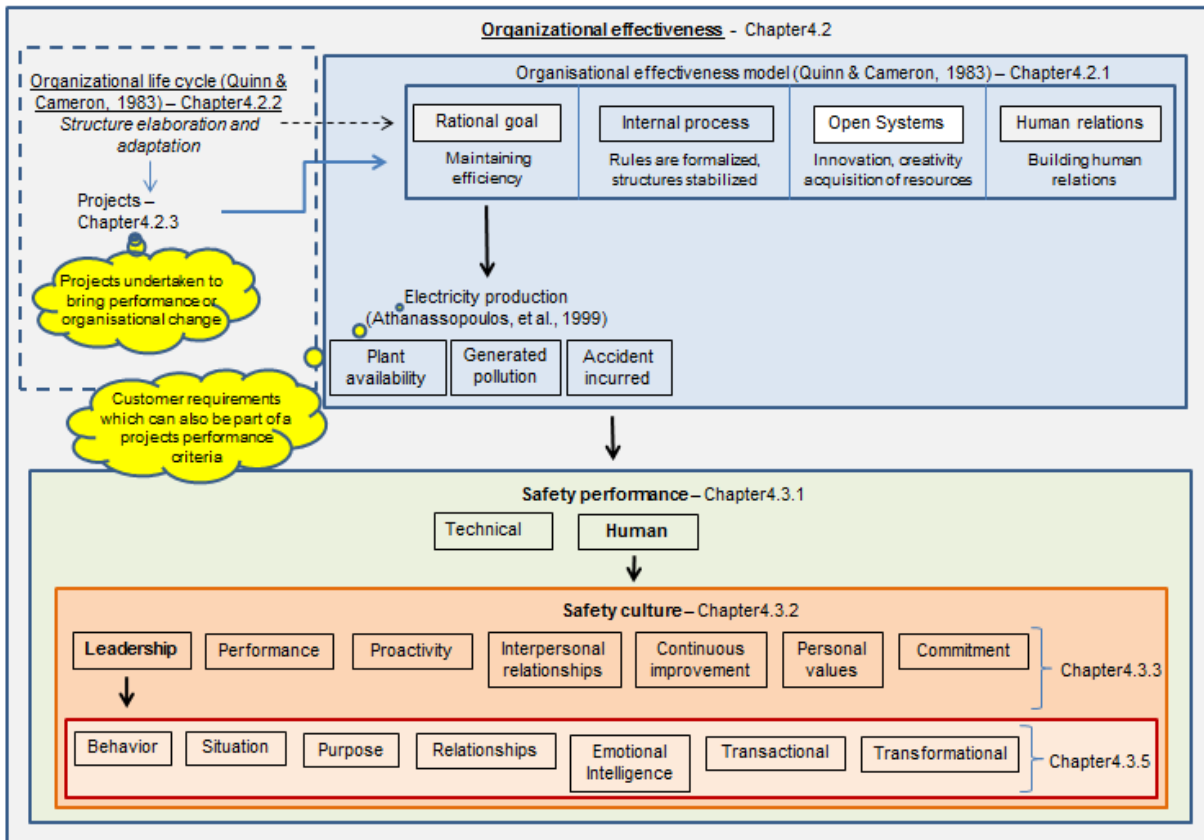


Figure 15 – Safety cultures contribution to organisational effectiveness

The way these element influence safety culture in a project environment is however not prevalent as the manner in which the respective concepts interact with each other is not clear. This can be achieved in drawing the interaction of the respective elements which will be expanded on in the chapter that follows.

4.4. Conclusion

In performing a review of the literature, it was possible to obtain an integrated body of knowledge which is relevant to safety culture. It was found that organisation success is the primary driver with the use of a multivariate organisational effectiveness model as an appropriate tool to assess such success. Organisations that seek to improve or adapt to market needs could use project management to bring about such changes. Change itself

can bring about uncertainty which is linked to risk which varies amongst industries. The process of risk assessment allows these risks to be classified with it found that industries or projects which have an impact on life or the environment are considered as high risk. Safety itself was noted as a project performance criterion in high risk projects. Safety culture was found to provide an alternative means to better manage aspects of safety as it considers elements of uncertainty and the human factors which could impact safety.

The literature revealed that safety culture comprises of several elements however these could be filtered down to key elements which were in line with the core concepts identified in the coding process of this research. A closer look at these elements provided an understanding of their antecedents, their characteristics and the consequence which they brought about. Safety leadership was highlighted as a key element in safety culture with a closer look taken in identifying the concepts which contributed towards it.

With an enhanced understanding gained through the literature review it is possible to integrate the respective core concepts through the characteristics and the consequence that they bring about and formulate a theory of safety culture in the project management environment. The section that follows looks at the process taken in developing such a theory.

CHAPTER 5: Theory building

5.1. Introduction

The literature review has provided further insight into the core concepts which are applicable to safety culture in a project environment. Individually they do not provide an understanding as to how safety culture contributes towards project performance.

This chapter discusses the theoretical foundations that have been adopted in building a theoretical model to explain safety culture. Although the core concepts have been identified, they are in a static state and need to be framed into a variable state to assist in better defining relationships and the impact a change in the concept would have. A theoretical model based on the core variables would also allow the research question to be addressed, with its practicality also being assessed.

5.2. Theoretical foundation

Theories are useful as they help make predications and provide an understanding of what and why something is taking place (Christensen and Raynor, 2003). A theory primarily consists of a set of well-developed categories with causal links between circumstances, action and outcomes (Christensen and Raynor, 2003).

Christensen and Raynor (2003) proposed that the construction of a theory takes place in three stages, in which the first stage a phenomenon is observed and documented to allow a broad foundation of the phenomenon to be established. In the second stage associated attributes of the phenomena are identified and categorised accordingly to allow meaningful differences to be highlighted. In the third stage a hypothesis is formulated which considers what causes the phenomena and why. They indicate that theory improvement is integral to theory validity in which a phenomenon is viewed under different situations and the outcomes are compared to the initial identified categories. In this process the theory is either confirmed or the identified anomalies are categorized to improve on the initial theory. The ability to determine circumstances or contextual situations which affect the outcomes brings about greater predictability.

In carefully observing a phenomenon a researcher can identify the attributes which bring about specific outcomes. These attributes can be placed into a category allowing a researcher to draw correlations between specific conditions and an outcome (Christensen and Raynor, 2003). The correlation of the categories to outcomes however does not reflect causation, which is best determined in understanding the causal process.

In drawing these causal processes, the use of a concept analysis approach can be used as it allows the exploration of the category's characteristics, their precursors and the effects which they bring about (Xyrichis and Ream, 2007). With the precursor and effects of the categories identified, the relationships between respective categories can be drawn, in which the output of one category can be linked to the input of another. A causal loop diagram can be developed which provides a holistic illustration of the interrelationship of the respective categories, which also reflects the dynamics which takes place amongst them.

An understanding of the interrelationship between the categories, the dynamics which takes place and the integration of the categories can be understood through systems thinking (Woei, 2008). System dynamics, which is a subset of systems thinking, indicates that behaviours in socio-economic settings can be illustrated by a small set of generic structures, called system archetype (Wolstenholme, 2003). The causal loop diagram can be illustrated as one of these archetypes, with the process of analogy assisting in the selection of the correct archetype.

The process of analogy itself considers that a situation which needs a solution, can consider past similar conditions which have had a solution applied which yielded successful results. This provides an opportunity to apply the past solution to the current condition with similar successful outcomes. The characteristics of the past and current conditions would however need to be alike to ensure that the solution works for the existing situation. The developed causal loop diagram, can be compared to an archetype which holds a similar structure, followed by a comparison of the characteristics of the causal loop and the archetype (Gavetti and Rivkin, 2005). Where the characteristics match, the archetype would be adopted. In formulating a theory, the categories which are present in the real world would be integrated with the identified generic archetype.

The outcome is a theory that considers the key parts of a phenomenon, its interrelationship and an understanding of how the phenomenon works. The dynamic diagram of the key parts provides an understanding of the parts and allows predications to be made. A graphical illustration of the theory building process is illustrated in figure 16.

With the process of theory building having been identified it was possible to review the attributes and more significantly the categories noted in the observation process and develop a theory surrounding the narrowed down categories referred to as concepts on safety culture in a project environment.

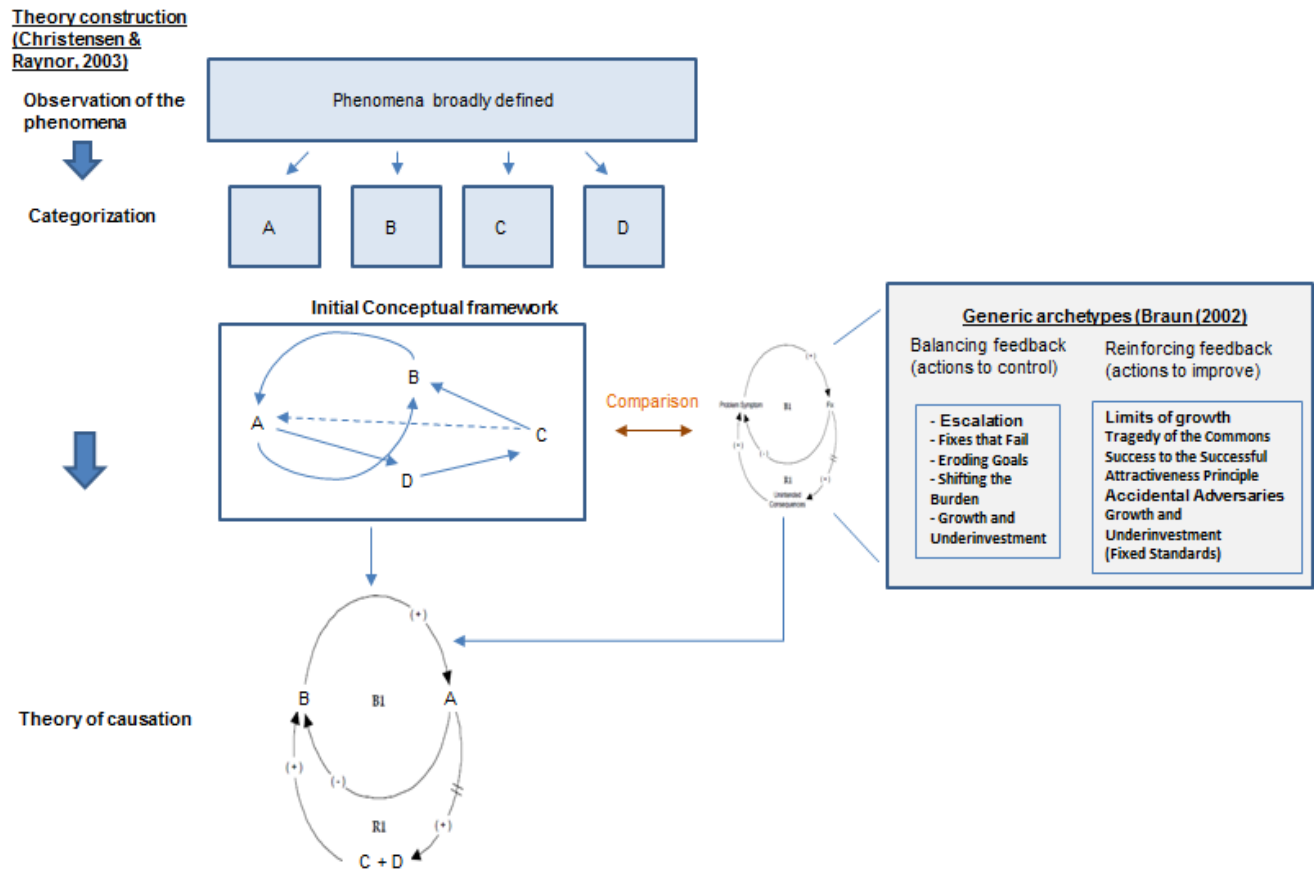


Figure 16 – Theory building process

5.3. Framing of the safety culture core variables

The core concepts identified in chapter 3 depicts the attributes present in the field, which similarly has been confirmed to be applicable through the literature on the phenomenon. These core concepts are however in a static form and do not provide indication of the state of a condition it may be in, with not much that can be drawn to the impact which it has should the concept change. Relaying the core concepts in a variable form would allow the different extents to be considered, leading to a better understanding of its impact.

5.3.1. Safety culture core variables

5.3.1.1. Level of safety performance

Safety performance can improve or deteriorate, hence the high or low **level of safety performance** provides an indication of the variation of the concept.

5.3.1.2. Extent of continuous improvement in safety

The amount of effort put into continuous improvement has an impact on its effective; hence the **extent of continuous improvement in safety** provides an indication of the varying effort placed in this variable.

5.3.1.3. Degree of commitment to safety

A person could be fully committed or lack commitment to safety; hence the **degree of commitment to safety** provides indication of the variation of the concept.

5.3.1.4. Extent of the application of proactive safety behaviour

Proactive measures taken in safety can reduce accidents; hence the **extent of proactive safety behaviour** taken provides indication of the variation in the measures to prevent accidents.

5.3.1.5. Extent of safety related interpersonal relationships

The presence and intensity of relationships between workers promote a safe work place, with the **extent of safety related interpersonal relationship** having an impact on the safety environment in a workplace.

5.3.1.6. The degree to which personal values to safety are applied

A person who applies his personal values which promote safety would display behaviours which enhance safety. The **degree to which personal values to safety are applied** has an impact on the influence of worker behaviour and actions to safety.

5.3.1.7. Extent of safety leadership application

Leadership has an influence on safety culture, with the application of leadership or lack thereof reflecting the **extent to which safety leadership is applied** to safety which has an influence on safety performance.

5.3.2. Safety leadership core variables

5.3.2.1. Type of safety leadership behaviour

Leadership behaviour reinforces worker safety behaviour or negatively impacts it, which indicate that the **type of safety leadership behaviour** displayed has an influence on worker behaviour.

5.3.2.2. Varying safety conditions faced by a safety leader

The safety context may require an organization to meet safety requirements or to improve their safety systems, which indicates the **varying situational safety conditions** which requires to be addressed.

5.3.2.3. A leader's level of safety relationship

The safety relationship which a leader establishes looks at the safety welfare of workers and of a leader. **A leader's level of safety relationship** has an impact on the safety environment which is established.

5.3.2.4. The degree of professional safety leadership

The establishment of purpose by a leader seen as professional leadership allows everyone to work to common safety objectives. The **degree of professional safety leadership** in establishing safety purpose relates to the extent to which a common safety purpose is established in an organization.

5.3.2.5. The degree of transactional safety leadership

Transactional safety leadership looks at getting workers to achieve expected performance through rewards or punishment, with the **degree of transactional safety leadership** reflecting the extent to which leaders apply themselves in reaching the required safety goals.

5.3.2.6. The degree of transformational safety leadership

Transformational safety leadership looks at getting workers to go beyond expected safety performance. The **degree of transformational safety leadership** reflects the extent to which leaders apply themselves in getting workers to go beyond the required safety goals.

5.3.2.7. The level of a leader's emotional intelligence

Emotional intelligence is seen as the ability of a person to manage emotion of others and of oneself. **The level of a leader's emotional intelligence** would reflect the degree to which a leader assesses workers emotions to safety.

5.4. Theory development

With the core concepts identified, followed by a literature review on the categories, insight was drawn on their attributes, influencing factors and outcomes which can be viewed in Appendix 9 and 10. Traditional approaches considers that something can be understood by studying the individual parts, however this may overlook the dynamic and complex interaction which takes place amongst the elements (Woei, 2008). Noting that the respective concepts are merely part of bigger system, the interaction that takes places amongst these concepts was considered.

Where the output of a concept was related to the input of another, a link was drawn which allowed the interrelationships between the respective concepts to be identified. The interrelationship developed for the safety culture and safety leadership variables can be viewed in Appendix 11 and Appendix 12 respectively. The relationships also provide indication of causal loops which exists amongst the core variables. In considering that most systems loops could be reflected by a list of generic archetypes, the safety culture and safety leadership casual loop diagrams were compared to the list of generic archetypes.

It was found that the Fixes that Fail archetype held a reinforcing and balancing loop structure with two elements common amongst the loops, which resembled the safety culture causal loop diagram. Further comparison indicates that the ‘problem symptoms’ could be related to the ‘degree of commitment to safety’; the ‘fix’ could be related to the ‘level of safety performance’ and the ‘unintended consequence’ was related to the ‘extent of safety related interpersonal relations’ variants. The ‘extent of safety leadership’ takes time to influence the ‘extent of safety related interpersonal relationships’ which is presented through the delay which is present in the compared archetype. The comparison of the safety culture causal loop diagram and the ‘Fixes that Fail’ archetype is illustrated in figure 17.

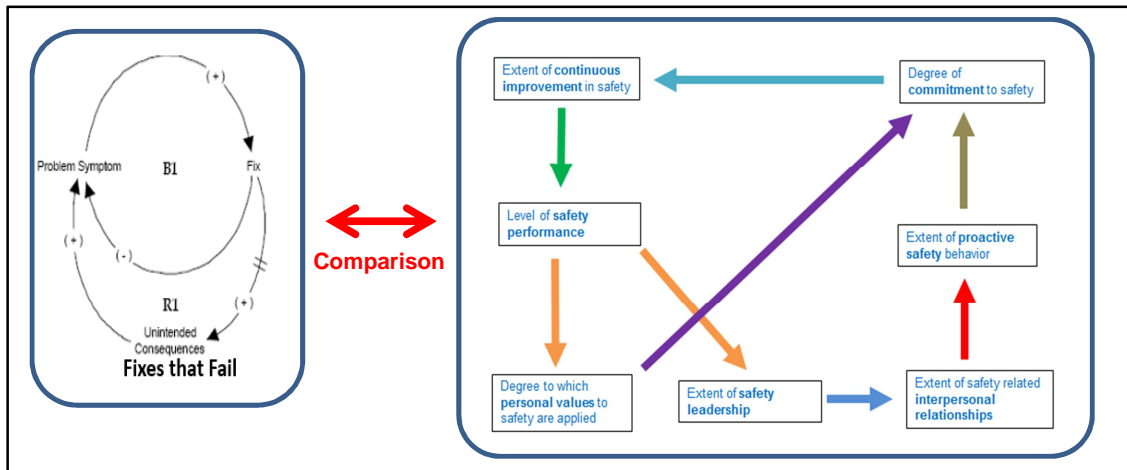


Figure 17 – Comparison of the ‘Fixes that Fail’ generic archetype to the safety culture causal loop diagram

The “Fixes that Fail” archetype structure was adopted, and the core variants integrated allowing a theoretical account for safety culture to be developed, which is illustrate in the figure 18 below.

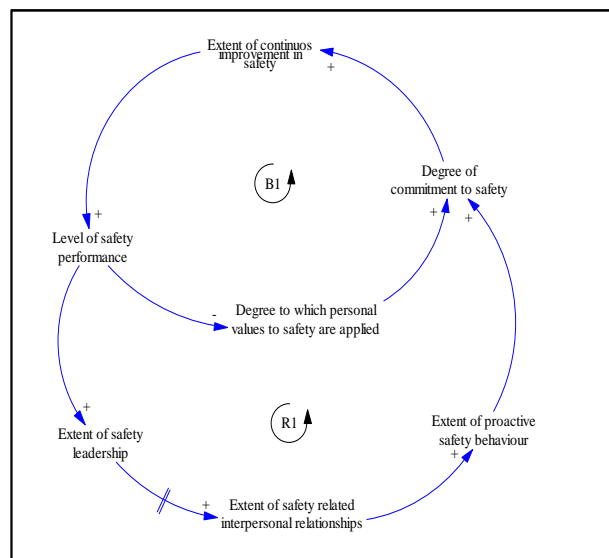


Figure 18 – Theoretical illustration of safety culture

The safety leadership causal loop diagram was found to consist of two balancing loops with the element of 'situational condition' being common amongst the loops. An external link is also found to be present amongst the two loops. This casual loop diagram when compared to the list of generic archetypes was found to have a similar structure, to the 'Shifting the Burden' archetype. Further comparison between this archetype and safety leadership causal loop diagram indicated that the 'problem symptom' could be related to the 'varying situational conditions faced by a leader', the 'symptomatic solution' to the 'degree of transactional safety leadership', the 'fundamental solution' to the 'degree of transformational safety leadership' and the 'side effects' could be related to the 'level of a leaders emotional intelligence'. The 'degree of transformational leadership' takes time to influence 'the level of a leaders safety relationships' which depicts the delay in the comparative architype. An illustration of the comparative process is provided in figure 19.

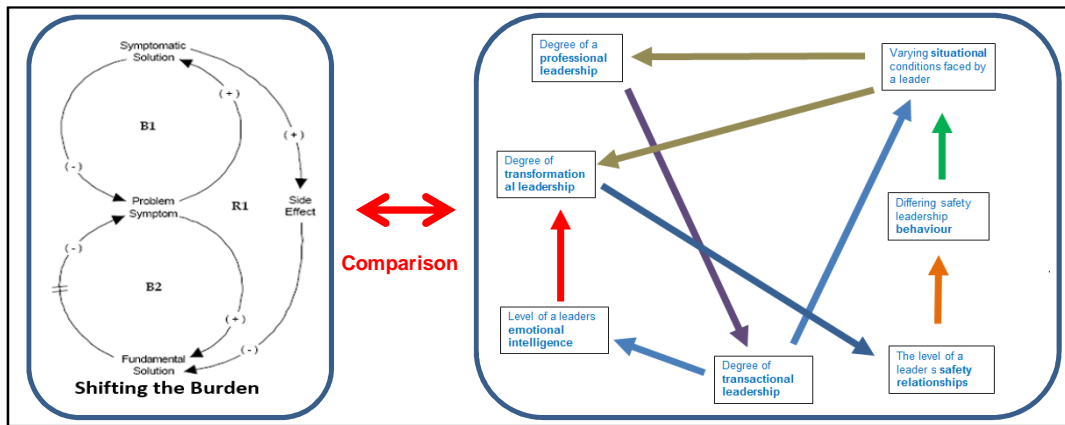


Figure 19 - Comparison of the 'Shifting the Burden' generic archetype to the safety leadership causal loop diagram

Given that the "Shifting the burden" archetype structure and the safety leadership concepts were common, it was adopted, with the respective core variables integrated into the generic archetype to produce a theoretical account of safety leadership in safety culture. The outcome is systems diagram is illustrated in figure 20.

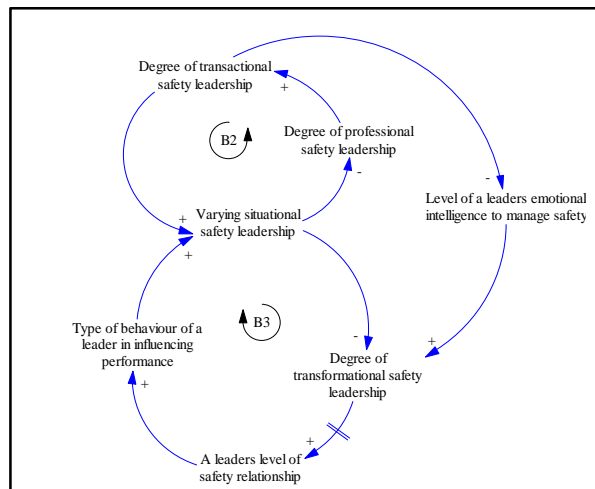


Figure 20 - Theoretical illustration of safety leadership

As safety leadership is one of the key concepts within safety culture itself, the two system diagrams were combined to provide an integrated theoretical account which provides an explanation of safety culture. The integrated theoretical account is illustrated in figure 21.

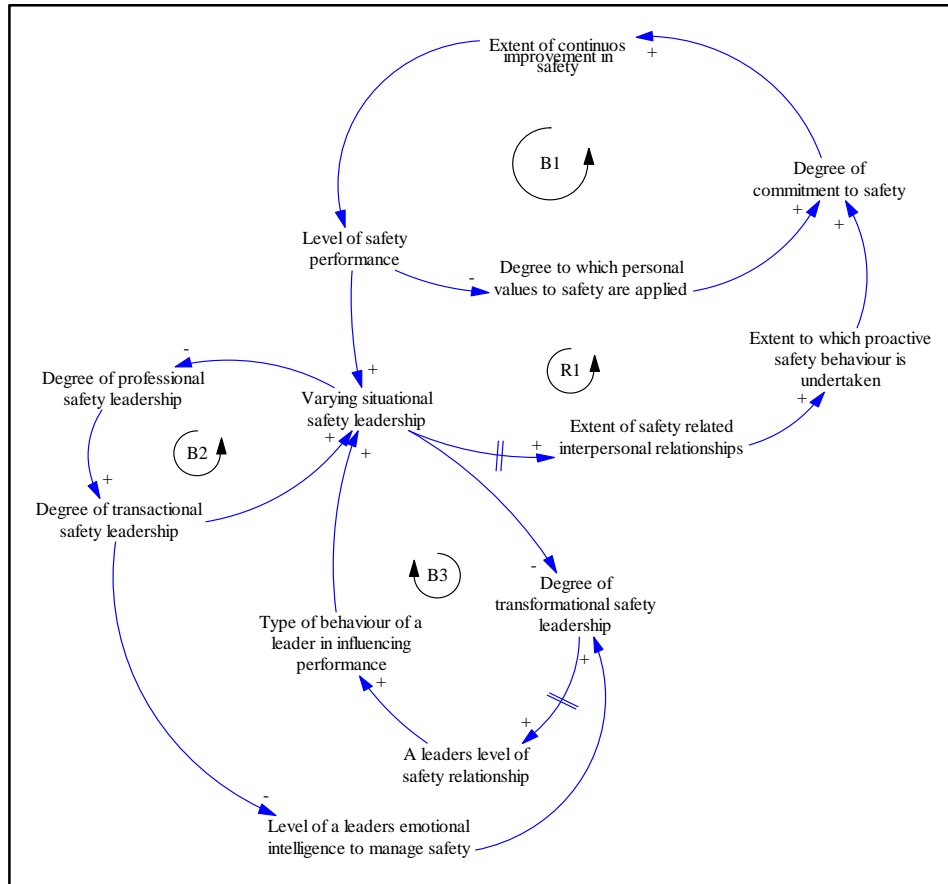


Figure 21 - Integrated theoretical system diagram

The theoretical model provides a graphical illustration of how the respective concepts interact with each other to influence safety culture. A descriptive overview of the model would complement and enhance the understanding of what is taking place.

5.5. Safety culture theoretical description

The theoretical model consists of the respective core variants which interact with each other to form either balancing or reinforcing loops. These loops reflect the causal relationships which are present in safety culture and have been expanded on below.

Balancing safety performance loop 1 (B1)

The degree to which a worker applies his personal values to safety influences his commitment to safety, which in turn mediates the extent to which continuous improvement to safety is made and this brings about the level of safety performance in an organisation. The

level of safety performance however has an opposite relation to the degree to which a person would apply his personal values to safety.

Reinforcing leadership influencing loop 1 (R1)

The level of safety performance has a direct impact on the varying situational safety leadership that is displayed to address the given safety conditions. The situational safety leadership that is displayed mediates the extent to which safety related interpersonal relationships are established, however these relationships take time to develop. These relationships influence the extent to which proactive safety behaviour is undertaken which facilitates commitment to safety. This commitment mediates the extent of continuous improvements in safety and this influences the level of safety performance in an organisation.

Situational safety leadership has an unintended impact as it could either improve or have a negative impact on safety performance. A description of the balancing loops and side effect which contribute to the situational safety leadership is provided below.

Immediate transactional safety leadership response loop (B2)

The varying situational safety leadership, which is related to the safety performance level, has an opposite relation to the degree of professional leadership that is applied to establish safety purpose. Safety purpose, however, directly influences the degree of transactional safety leadership that is applied, which in turn influences the situational safety leadership used.

Safety transformational response loop (B3)

The varying situational safety leadership, which is related to the safety performance level, has an opposite relation to the degree of transformational safety leadership that is applied to bring about safety changes. The degree to which transformational leadership is applied, impacts the level of a leader's safety relationships with workers, however these relationships are established over a period. The relationship with workers has a direct impact on the type of safety leadership behaviour which is displayed to influence workers, which in turn has a direct influence on the varying situational safety leadership that is displayed.

Effects of emotional intelligence

The degree to which transactional safety leadership is applied has an opposing relation to the level of emotional intelligence used by a leader to manage safety. A leader's emotional intelligence however has a direct influence on the level of transformational safety leadership that is applied as it would allow a leader to assess the workers emotion around safety and how to influence them.

5.6. Project safety culture theoretical description

There are a number of project management tools and techniques, which have been identified as factors which contribute towards project success (Turner, 2009). These areas have been related to specifically expand the theoretical models application to a project context.

Balance project safety loop (Project B1)

It is through Project Scope Management (PSM) that a project team is able to identify the safety concerns, analyse them and to consider the impact which they have on a project. The degree to which these are established provides indication of the values which the project holds towards safety.

These values mediates the extent to which the project team implement safety, through aspects of safety activity schedule planning and controlling, which fall under the area of Project Time Management (PTM) and is reflective of the extent to which a project is committed to safety. A projects commitment to safety in turn mediates continuous improvement in safety in which the process of planning, doing, checking and acting to ensure that safety is in place. This is managed through aspects of Project Quality Management (PQM).

This brings about safety performance in a project, relayed through safety trend analysis and safety performance reviews which are respectively elements of Project Communication Management (PCM). A projects safety performance levels however has an opposing effect on the degree to which the project would take measures and put measure in place in addressing project safety concerns which are applied in the Project Scope Management (PSM).

Reinforcing project safety loop (Project R1)

The project manager plays an important role in projects as he or she is responsible for the leading a project in meeting the organisations objectives (PMBOK, 2013). The extent to which a project manager displays safety leadership has an impact on the interpersonal relationships towards safety amongst the project team members. Similarly the extent to which Project Human Resource Management (PRM), through team building efforts towards safety, has a direct influence on the proactivity of the project team towards safety. The extent to which Project Risk Management (PRM) is applied in identifying, quantifying and planning for risk responses to safety is an indication of the proactivity towards safety in a project. This in turn influences the projects commitment to safety which is managed through project time management and facilitates the continuous improvement in safety through

project quality management in safety. The continuous improvements in safety has a direct impact on the level of safety performance in a project.

The details pertaining to safety leadership as described in the section above expands on the traits and competencies applicable to safety leadership in a project and are applicable in the project safety culture theoretical model too. For this reason the immediate transactional safety leadership response loop, safety transformational response loop and effect of emotional intelligence have been adopted. The loops B1 and B2 have however been remained to Project B2 and Project B3 respectively. The integrated theoretical account for the project safety culture model is illustrated in figure 22.

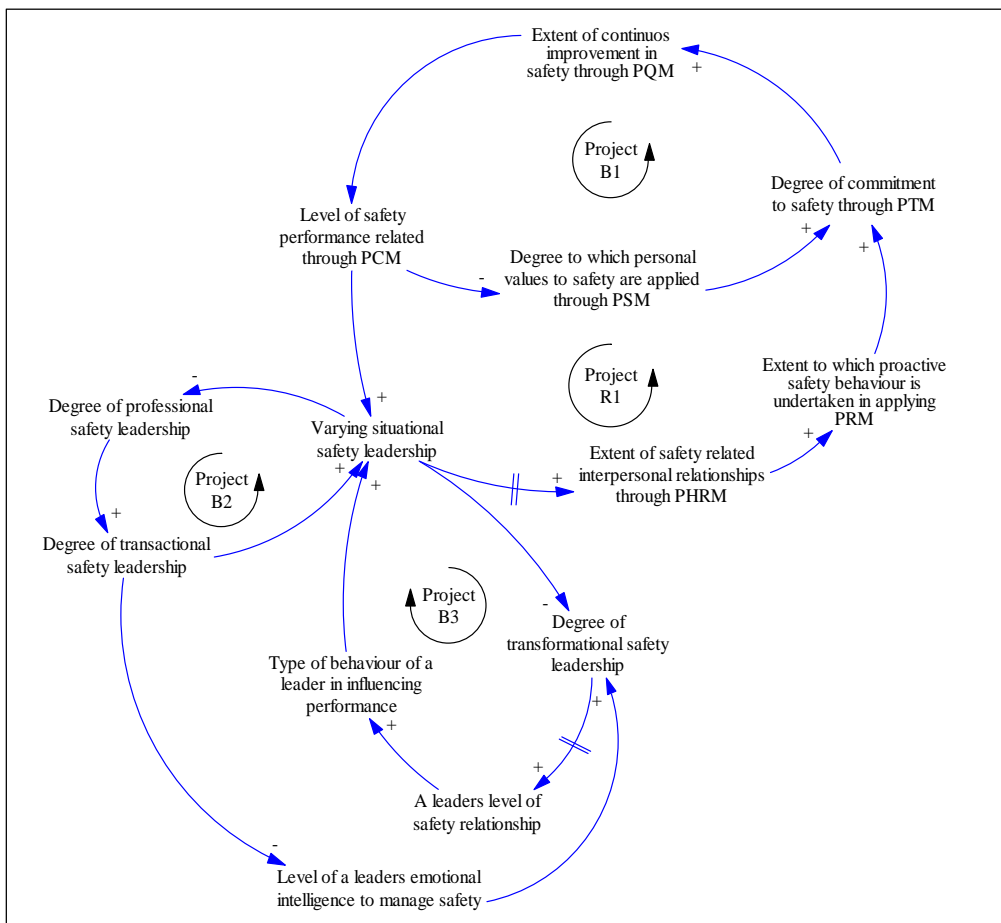


Figure 22: Project Safety Culture Theoretical model

Theoretical model unintended consequences

When safety incidents take place, immediate actions are taken to correct the safety performance in a project. These are reflective in the commitment and continuous improvement to safety, which would decrease the number of safety events. When the number of safety events are however low, there would be a lower focus on the human

relations aspects to safety which could bring about unintended safety events, related to human performance as the focus would be on other aspects of a project.

This unintended consequences would however be addressed through safety leadership, with a focus placed to build long term relationships which foster safety in a project.

5.7. Assessment of practical adequacy of the developed theory

The theoretical model that has been developed provides an integrative model of the respective elements which are related to safety culture. It is however important to consider whether the developed theory is practically adequate in providing an account of what is taking place in the real world and that it can be used to better manage situations in the real world (Sayer, 2000).

In assessing the practicality of the theory, the individual concepts were considered, with it found that they are present in the literature and they are similarly reflective of the real-world conditions, making it possible to assess the theory against the real-world context.

The theoretical model is also found to be related to organisational effectiveness through the concept of safety performance and to projects through the respective project management knowledge areas. The model is found to be balancing in nature allowing it to be used to control the level of safety performance in projects. It is also observed that the model is not limited to specific conditions and can be applied to several safety management conditions.

In reviewing the model, it is found that it can provide an explanation of real-world situations. As an example, the concern that a focus on production would decrease safety performance was noted in the initial research data. The theoretical model indicates that in emphasising on time aspect of a project, safety purpose would be influenced and that a transactional leadership style would focus on this target. This would reduce relations and commitment to safety which leads to lower project safety performance.

The assessment indicates that the theoretical model is adequate in relating what is taking place in the real world, however the possibility exists that the developed model could have been developed to indicate what would like to be seen rather than what is taking place. To overcome this threat, theoretical validity measures would need to be considered.

5.8. Theoretical validity

Steps have also been taken to ensure that the developed concepts are indeed applicable to the phenomenon and that the description of the relationship between the concepts reflects what is taking place. Extended fieldwork has been applied to allow an in-depth

understanding of the phenomenon to be gained. The multiple cycle approach used in the study allowed the respective categories to be developed, reflected on and be understood. As the research progressed through the respective cycles further insight was drawn with a deeper understanding gained.

In drawing the relationship between the respective categories, the process of concept analysis was used with the literature review on the respective concepts providing the attributes, outcomes and influencing factors. The outcomes of a concept were related to the input of another allowing the relations between the concepts. In this manner relationships were drawn in the existing literature, but these were also tested against the collected data for congruency. The use of analogy also allowed an applicable systems archetype to be selected which represented the interaction between the respective concepts. This has guided the development of the theoretical model allowing it to be in line with accepted models and in the process increasing theoretical validity.

Once the theoretical model had been developed, it was tested against data to identify whether the model would predict the outcome, with it being found that it illustrates the real-world outcomes. The model was tested against major accident events and a project case which replicated the outcomes of safety culture which enhanced theoretical validity.

5.9. Conclusion

The process of bringing the respective concepts into a cohesive framework in the form of a theoretical model is important as it provides a deeper understanding of safety culture and how it impacts project performance.

In developing a theory, a theoretical model process was established to provide guidance on the stages taken and how the key concepts related to each other. System dynamic generic archetypes were found to be appropriate in representing the dynamic interaction and relations between the concepts, with the analogy process allowing an appropriate system archetype to be applied. In following the theoretical modelling process, the fixes that fail systems archetype was found to represent the causal relationships of the safety culture core variables. The shifting the burden archetype was similarly found to be appropriate in representing the extent of safety leadership which is a core variable to safety culture. The integration of the respective archetypes allowed a theoretical account to be established which provided an understanding of what safety culture is and how it is influenced. This model was further developed using the project management areas of knowledge to develop a safety culture theoretical model for projects.

An assessment of the developed theory indicates that it provides an understanding of safety culture, which fits the real world. The nature of the structure of the model allows interventions to the core categories to be made. The model is also found to be applicable to a safety management context which reflects its generalisability. These all relate to the developed theoretical model for safety culture as being practical, applicable and implementable.

The prolonged exposure of the researcher, multiple cycles undertaken, literature review and the process of analogy has ensured the validity of the concepts, the relationship between the concepts and the applicable theoretical model structure respectively.

The developed model provides an understanding of safety culture however it would need to be reviewed to ensure that it meets the original research intent. The section that follows evaluates the theory against the initial set research objectives.

CHAPTER 6: Conclusion and evaluation

6.1. Introduction

The theoretical model developed to answer the research question provides an account of how safety culture influences projects. It is however important to assess whether this model indeed provides an understanding of the initial research query that was raised.

To ensure that the research findings and developed model adds value to the broad body of knowledge, the research and its findings would need to be evaluated to consider the impact which it has to the current field of concern. The research process would also be evaluated in reviewing the relevance of the theoretical model, and whether the model adequately explains the behaviour of safety culture in a project environment. Aspects of the researches validity and whether it has been performed ethical would also be covered.

The research process reveals additional areas of interest, which provides areas for further research.

6.2. Theoretical implication

Safety culture has been cited as being an important contributor in avoiding and reducing safety events (Fernández-Muñiz, et al., 2007). This research has sought to understand the social interaction that takes place amongst people in a project, how this interaction brings about a safety culture and how it affects projects. In using a grounded theory approach observations of safety culture from the real world were collected and its key attributes identified. The relationships and interactions of these attributes have been identified through a theoretical model which brought about a better understanding of the impact it has on the project and organisational environment.

6.2.1. Impact of Safety culture on projects

The theoretical model provides an illustration of safety culture and the elements which collectively interact to determine its state. What is important to note is that no single element acts on its own to influence safety culture. The project safety culture theoretical model demonstrates how safety is integrated into the project management areas of knowledge to bring about the required safety performance. Project organisations need to pay attention to all of these areas, to positively affect the organisations safety culture in project undertakings.

Safety performance has been identified as one of the elements within safety culture which in high-risk industries form part of projects performance objectives to attain project success.

Unexpected requirements or conditions can take place in projects however these would be managed through the safety culture model as it has the flexibility to address these needs through the values towards safety and continuous improvements.

6.2.2. Impact of safety culture elements on projects

The project safety culture model has provided an understanding of how the elements in it functions and in doing so highlighted the implications which it would have on a project and the organization.

6.2.2.1. Commitment to safety

The model highlights that without a commitment to safety there would be no improvements to safety and in safety performance. Commitment to safety in the project safety culture theoretical model has been illustrated through the safety activities being planned, executed and monitored through project time management. This in line with the work of Fernandez-Muniz et al. (2007) in which they noted workers commitment to safety through their involvement, provides a barrier to both personal and material damage.

6.2.2.2. Leadership

Within a project environment the project manager resumes the leadership role and would need to establish safety as a priority through the projects purpose and goals if safety performance were to be influenced. In focusing on a transactional leadership style, the immediate need to address safety concerns would be considered but in the long run this could reduce employee engagement and participation. Transformational leadership style would allow a project manager to engage with staff and inspire them to new heights in safety performance however this approach may not be addressing an immediate concern around non-conforming safety practices or actions. The model illustrates that a single leadership approach may not be enough in managing safety.

In drawing the impact of leadership in a project, this model highlights the need for different leadership approaches which would be represented by project managers competencies (Turner, 2009). The model also confirms the important and influential role which leadership has on workers and the resulting safety performance (Cox, et al., 1998; Fernández-Muñiz, et al., 2007).

6.2.2.3. Values

The model indicates the importance of the values to safety. It reflects that the values to safety in a project are identified through scope management, in which the project team defines the safety aspects for a project. These activities of safety are in turn planned,

executed and monitored through project time management. This interaction is in line with Newman et.al. (2008) work in which they found that workers values influence on their willingness to act safely. This has an impact on organizations which subcontract work in a project as they would need to ensure that workers from different organization hold a safety-oriented value. As values can be influenced by social interactions and social norms, the exposure of new workers or subcontractors to the risks or consequences of an accident and the way this can be prevented would influence their safety values.

6.2.2.4. Safety performance

Safety performance includes both safety compliance and safety participation which can be influenced by internal and external events. The ability of an organization in being open to capture and consider events internally and externally, big or small is what drives safety. Where a project fails to do so they are likely to reflect a false level of safety and encourage under reporting which would decrease the safety culture in that project.

6.2.2.5. Continuous improvement to safety

An organisation may establish safety processes and practices which address its safety objectives, however over time conditions change requiring improvements or the updating of practices. Continuous improvement to safety is central in facilitating these changes which is facilitated through the project quality management process. The use of the quality management process is in line with Granerud and Rocha (2011) observation that advance levels of continuous improvement in safety in an organisation cannot be reached through intrinsic characteristics but rather through an organisational process.

6.2.2.6. Proactivity to safety

The ability to proactively anticipate and manage safety events is a trait which is prevalent in many definitions in safety culture. The use of project risk management allows safety risks to be identified upfront and managed accordingly. Through the use of the Project Risk Ranking model (Baccarini & Archer, 2001) or the risk framework (SANS31000, 2009), safety risks in a project can be ranked, prioritised through risk management planning and continually monitored through risk monitoring.

This process allows high safety risks in a project to be identified with resources placed on them to manage and monitor them accordingly. It is also important that different organisations which form part of a project have a risk management programme that is aligned, to ensure that all organisations view and address the risks in a consistent manner.

6.2.2.7. Extent of safety related interpersonal relationships

The ability to share information of lessons learnt or incidents are important in preventing the reoccurrence of such events from taking place (Reason, 1998). Within a project and organisations, it is important that safety related information be shared amongst individuals and across different groups in a project. Erkutlus' (2012) research had found that where team members supported each other, that they were willing to share responsibility, cooperate and be committed to work towards a collective goal. This in turn influences a teams proactivity. The project safety culture model is in line with this work as it highlights that through the human relations management a teams interrelations towards safety is established which influences the proactivity in a project.

6.3. The relevance, utility, validity and ethics

6.3.1. Relevance

Major accident event that occurred across industries have cited a weak organisational safety culture as being a contributing factor to the occurrence of these events (Morrow, et al., 2014). The lack of safety culture displayed in the construction of the Olkiluoto 3 nuclear project was also seen as a factor which contributed to the challenges faced in this project which has resulted in substantial project delays (Ruuska, et al., 2009).

As nuclear power generation is part of the South African generation mix, the risk of a nuclear accident is applicable to Koeberg Nuclear Power station. Projects are however also undertaken at this station to bring about performance improvements and safety enhancements. Safety culture is seen as an applicable area to Koeberg Power Station and the projects which are undertaken within this organization.

The theoretical model which has been developed provides a better understanding of safety culture, its respective elements and how it contributes to projects and organisational performance.

6.3.2. Utility

In reviewing the developed theory, it was found that it provides an understanding of safety culture and how it could be influenced positively or negatively.

The model indicates that through the balancing loop of safety values and safety performance that a project can reach its set safety performance targets which is an indication of the organisations safety culture. The model illustrates that a projects application of safety values is dependent on the level of safety performance as it would react to threatening conditions.

These values influence their commitment to safety which in turn drives the measures that would be taken to rectify or improve safety conditions. The outcomes are reflected in project safety performance.

The model also notes the reinforcing role which leadership plays in either driving safety culture to higher levels or through the inappropriate styles or focus has a negative effect on the overall culture. It is through safety leadership that safety concerns are addressed and project team members participate in safety initiatives are influenced. Safety leadership also impacts workers welfare, in addressing immediate safety conditions or the concerns raised regarding safety in a project. These relationships influence the proactive measures taken towards safety, which impacts commitment to safety and in turn drives the measures taken to improve on safety. The outcome is a direct influence on the safety performance of a project.

6.3.3. Validity

An important aspect of the research was to ensure that the findings and the explanation thereof is truly reflective of what is taking place. To ensure this, strategies were put in place which facilitated the management of validity threats. In doing so data credibility, dependability and confirmability have all been achieved which all support the validity of the research and its findings.

6.3.3.1. Data credibility

The fundamental stage of the research was the collection of data which is reflective of the phenomenon being investigated. The credibility of this data was important as analysis which lead to the development of a theory was based on this information. The credibility of the data was ensured with the use of data triangulation to ensure consistency in data. Descriptive validity has also been used in which measures have been taken to accurately capture and record information. With the use of these techniques a credible set of data has been obtained which is available in the proposition logs in Appendix 1 and Appendix 5 of this research.

6.3.3.2. Dependability

The research was undertaken using a grounded theory approach to identify the respective concepts and how these concepts integrate to provide an explanation of the phenomenon. The collected data was broken down and analysed to identify the concepts that were reflective of it and the use of constant comparison of the concepts allowed similar and new concepts to be established. The repeated identification of the concepts led to them being grounded in the field. This process was in line with the interpretation validity measures and

was applied at the respective sampling stages of the research. This rigorous approach in combination with the member checking process ensured that a dependable set of categories were identified which served as the basis of the theoretical model. The use of a generic system archetype for the theoretical model allowed a dependable framework to be established which could be used to illustrate the relationship of the key categories in the research.

6.3.3.3. Confirmability

The development of the theoretical model has taken a structured process with the steps taken and collected data documented respectively, allowing for an independent assessment of the research and its findings to be made.

The use of person and methodology triangulation has allowed consistency and confirmation in findings to be established. The process used in performing grounded theory has been highlighted in this research and provides an understanding of how the theoretical model has been drawn from the field. The theoretical validity measures have also ensured that the developed theory has been tested, predicts and reflects what is taking place in the real world.

6.3.4. Ethics

The nature of qualitative research involves interaction with people with ethical measures taken to do good and in avoiding harm to the research participants (Orb, et al., 2000). As the research looks at safety and how it drives performance, the outcomes and use of the developed model primarily considers the safety and welfare of people.

The research had considered the dimensions of procedural ethics with permission gained both academically and managerially to perform the research and interview staff member respectively. The use of ethics in practice allowed ethical issues during the execution of the research to be considered. The ability to obtain information was also largely dependent on the participants' willingness to share information. The use of the ethical principles of autonomy, beneficence and justice was used when engaging with participants. This allowed information to be obtained and it is pointed out that none of the interviews were stopped due to emotional concerns. Unanticipated ethical issues had also arisen in the research however the use of the ethical principles had ensured the participants anonymity and prevented any possible abuse.

In an overview it is noted that the research has been performed in an ethical manner, with the outcome also looking at enhancing the safe welfare of people and the environment.

6.4. Further studies

The theoretical model that has been developed provided a framework for safety culture with applicable project management areas drawn upon to understand its impact on projects. Further research can be performed to test this model and to gather data to confirm or enhance the model that has been presented. The model can also be tested in other fields to allow the generalisability of the theory to be confirmed.

The model that has been developed has identified safety leadership as a key element which influences commitment to safety and in turn safety performance. In refining the initial model, field research was performed on this concept which provided valuable insight. In developing an in-depth understanding of the safety culture model further research can be performed on the other concepts involved in safety culture in projects to gain an understanding of the respective project management areas of knowledge and how the sub concepts within them contribute towards influencing safety culture.

One area of particular interest would be project risk management as the extent to which an industry would proactively identify and manage safety risk is through this discipline. This will provide a better understanding as to how safety risks are identified and managed and if high safety risk or low safety risks have an impact on the safety culture of a project.

The developed model has largely looked at established organisations which accommodates change. It was noted that organisations structure and culture would be different at different stages of their life cycle. This provides an interesting field of research in identifying if there is deviation if any on the developed safety culture model for organization that are in their entrepreneurial stage.

6.5. Conclusion

The data collection, analysis and theory building undertaken in this research has been consolidated to a theoretical model of safety culture in a project environment. It was found that this model has expanded on the understanding of the elements of safety culture and how they interacted to affect it.

In line with the safety culture model that has been identified the impact which it has on projects and organisational performance in high risk organizations has been identified. It was found that through safety culture an organisation's safety performance is affected, which has an impact on project and organisational performance. It is noted that the respective elements in safety culture collectively contribute towards this performance and that the model provides

flexibility in managing changing conditions. The impact that the respective elements which are related to the project management areas of knowledge has also been highlighted.

A healthy safety culture has been identified to prevent accidents in high- risk industries and similarly been an important factor for new nuclear build projects, which has highlighted the relevance of the developed model. The safety culture model, through its balancing and reinforcing loops has provided an adequate explanation of how safety culture is influenced in projects. The validity of the developed model has also been established through the demonstration of data credibility, dependability and credibility of the research and its findings. Closely link to the means in which the data has been obtained and the theory which has been developed is the aspect of ethics, with it being demonstrated that the research has not brought about any harm to the participants.

This dissertation has been concluded in identifying areas for further research with it being proposed that research be undertaken to confirm or enhance on these findings. It is also proposed that the remainder of the concepts in the project safety culture model also be investigated as per safety leadership to gain a deeper understand as to how they contribute towards safety culture. It has also been proposed that further research can be undertaken to observe if the safety culture model would be different for organisations that are in their entrepreneurial stage of their life cycle.

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Appendix 1: Data collection and data analysis for Cycle 1

	Ref	Data(observation, description passage)	Relevance (to Concern Variable) <i>(safety culture)</i>	Impact (on Concern Variable D/R)	Proposition Subject=Relevance Predicate =Impact	Category
1	1	But one of the most essential, elementary things about safety culture is that the leaders must “walk the talk.” If supervisors and foremen are telling employees that they must wear their PPE, lock and tag out equipment 100% of the time, and attend every single safety meeting, then guess what – they need to do that too. I have seen too many organizational safety initiatives lose months and months of hard work in a split second just because a supervisor decided that he/she was an exception to the rule. This immediately results in lost credibility and trust in whatever safety programs are in place.	leaders need to carry out the same safety criteria as the workers for safety culture/safety programme to be seen as credible	A leaders lack of commitment to safety compromises the credibility of a safety program – R	Supervisors commitment to safety ensures the credibility of the safety program	Commitment to safety culture
2	1	But one of the most essential, elementary things about safety culture is that the leaders must “walk the talk.” If supervisors and foremen are telling employees that they must wear their PPE, lock and tag out equipment 100% of the time, and attend every single safety meeting, then guess what – they need to do that too. I have seen too many organizational safety initiatives lose months and months of hard work in a split second just because a supervisor decided that he/she was an exception to the rule. This immediately results in lost credibility and trust in whatever safety programs are in place.	leaders need to carry out the same safety criteria as the workers for safety culture/safety programme to be seen as credible	A leaders lack of commitment to safety compromises the credibility of a safety program - R	Supervisors commitment to safety ensures the trust in the safety program.	Commitment to safety culture
3	1	Leaders at all levels must abide by all the safety policies, role model safe behavior, and actively participate in safety initiatives in order for safety culture to flourish. And based on their own SafetyDNA profile, some leaders will do this naturally while others will struggle. But luckily, it is something that can be coached and developed in leaders once they are aware of their tendencies and attitudes, and put behaviors in place that support the intended safety message. This will go a long way in helping them to demonstrate credibility, which will drive home the message that safety really is priority number one	The tendencies and attitude to support the intended safety message can be coached and trained to leaders.	Acting out and demonstrating the intended safety message will indicate to staff that safety is indeed a priority - D	Coaching/training of leaders to ensure that they demonstrate the behaviour of the intended safety message will ensure that safety is a priority.	Training reinforcing safety
4	2	Multiple studies have shown that exposing persons to words related to achievement (e.g. attain, win, achieve) increases a person's persistence and performance on a challenging task or goal. For example, one study used a charitable fund raising call center as a laboratory. At the start of shifts, all workers were given talking points to communicate to potential donors on their outbound solicitation calls. One group was given the talking points on a plain sheet of paper. The other group was provided identical talking points, but the information was printed on a sheet of paper that also had a picture of a runner winning a race. This group was primed with an image associated with achievement and perseverance. The primed group outperformed the control group by 60%. Maybe the makers of those inspirational posters hanging in corporate hallways are onto something! In a safety context, we can't quantify the benefit from hanging safety posters in the workplace. However, it requires little effort and may prime	exposing workers to safety posters would prime workers to work safer.	Workers primed to safety posters would work safer - D	Exposing workers to safety poster would lead to an increase of safety awareness and workers acting in a safer manner.	Exposure to safety culture

		your coworkers to work safer – go ahead and do it.				
5	2	Employees create their own safety phrase and the safety council chooses the winning phrase. The phrase gets placed on the marquee you see driving into the facility and the employee gets recognition and small prize. I've seen several companies that do something similar. I like this approach because it makes safety personal for their employees. Employees that write their own safety phrase are priming themselves to think and work safer. The words are personal, relevant, and therefore impactful. We can't yet determine how much these efforts impact workplace behavior, but I'm willing to wager a person won't violate their personal safety phrase when its visible to all coworkers.	workers who prime themselves through safety phrases (posters) to think and work safer are likely to work in this manner	Workers will most likely act out the personal safety phrases that they have drafted - D	Workers who are primed through their own safety phrase are likely to act out and abide by the safety phrase which they had drafted.	Self-primed to acting safely
6	3	Furthermore, you could sense the strong safety culture on the phone and during our training sessions. All meetings began with a personal safety moment, people regularly bring up non-work safety topics, and I heard frequent positive reinforcement statements for safe choices for things like designated driving	the manner in which workers address and share personal and non-work safety topics contribute towards safety culture.	the reinforcement of positive actions in non-worker or personnel safety increases the safety culture of workers – D	Reinforcing positive non-work and personal safety acts of workers enhances the safety culture of the working environment	Positive reinforcement of safety
7	3	He knew that lagging indicators don't tell the true story. A lack of injuries does not necessarily equate to being "safe." As most safety professionals understand, a reduction of injuries is certainly a goal and one of the outcomes of being safe. However, this company is doing so many other things to focus on leading indicators and proactive hazard mitigation. Near miss/hit events are taken very seriously and analyzed, and the company is now systematically looking at Serious Injury and Fatality (SIF) prevention.	Paying attention to leading factors to injuries and safety and putting mitigative measure and proactive measures are important to reduce injuries and to ensure safety.	Proactive and mitigative measures looks at ensuring safety and a reduction in injuries. – D	Paying attention to the leading factor of injuries and putting proactive and mitigate measures in place would look at the prevention of injuries.	Proactive measures in preventing harm
8	3	This is the speed with which a person can learn and be open to new ways of thinking. This includes how comfortable a person is in terms of quickly studying, analyzing and understanding new situations, and how well they learn from mistakes and experiences. High performing companies with a continuous improvement culture tend to have employees with high learning agility who are willing to try new things and learn from them. This is why some companies are a lot more innovative than others. There are important connections here to safety. We often talk about how "safety is a journey" and how we need to continuously get better in safety. Unless we improve at our learning agility, however, this will always be an uphill climb.	the speed at which workers learn and openness to new ways of thinking allows organisations to be innovative and improve on their safety performance.	learning agility has the ability to improve and look at new ways to make things safer. - D	workers agility to learning has a positive impact of safety culture as ways to improve performance is not seen as a limitation.	Learning agility influences safety
9	3	A company can have the greatest safety management systems and the latest high-tech PPE, but if it doesn't all come from a place of caring for people, then these efforts will have a limited impact on safety culture. Empathy means we understand, and can relate to, people's feelings and needs. If we cannot empathize with employees, we are unlikely to care deeply about their personal safety, or listen to their safety concerns, or ask questions to understand why they bypassed a safety policy. By empathizing, we can show people we care about them on a personal level, and we can also gain valuable information on hazards, unsafe situations, and other leading indicator information that can help us further improve safety	Showing empathy to employees would allow an organisation to understand and relate to peoples needs and feelings regarding to safety.	The ability to show a caring nature/empathy would allow employees to information to be gained to further improve safety. – D	Empathy allows an organisation to show personnel commitment and understanding to workers which allows workers to relay information on safety and directly impacts safety culture	Empathy encourages a culture of safety

10	4	Call it proactive, call it vigilance, call it whatever you want. I call it urgency, and world-class safety companies all display a high level of urgency when there are hazardous conditions or risks that could lead to harm. You can tell which companies display urgency around risk by how they react to near hits and whether they truly value incident report data.	Urgency is the proactive measures taken to remove or address hazardous conditions or risks which could lead to harm.	The urgency shown directly impacts safety culture as it indicates how an organisation values and deals in mitigating safety incidents. – D	The proactive measures taken to remove or address hazardous conditions or risks which could lead to harm directly impacts safety culture as it indicates how an organisation values and deals in mitigating safety incidents.	Proactive measures in preventing harm
11	4	Getting buy-in across the organization is the most vital element of building a safety culture. That's because individual engagement is a direct reflection of shared beliefs and attitudes, the very definition of culture.	Buy-in across the organisation allows for engagement of individuals across the organisation to on their shared beliefs and attitudes	the sharing of positive attributes and beliefs will enhance the safety culture of the organisation. – D	Buy-in across the organisation would allow positive beliefs and attitude to be shared which will enhance safety culture.	Buy-in to safety
12	4	Employee Training programs are a foundational component of your safety culture, ensuring everyone is on the same page and knows how to work safely. Again, it's all about showing genuine commitment. That means: ...Going beyond training on work procedures to include training on behavior-based safety. Teaching workers how to identify unsafe behaviors and give timely, appropriate feedback empowers them to take ownership of safety.	employee training programs allows employees to be on the same page and to know how to work safely.	Empowering workers through training allows workers to work safe and take ownership which create a positive safety culture in the organisation. – D	employee training programs allow workers to know how to work safe and allow them to take ownership in safety which positively improves safety culture in an organisation.	Training reinforcing safety
13	4	Remember, communication isn't all about giving corrections. It's also about recognizing and rewarding safe behaviors, as well as sharing lessons and best practices so everyone can improve. For example, many companies send safety alert emails describing lost-time incidents or near-misses, helping everyone learn from mistakes.	Communication allows feedback on safety behaviours, lessons learnt and best practices to be shared	Communicating on safety helps everyone in an organisation to learn from mistakes or good practices which enhances a positive culture. – D	Communication on safety behaviour, lessons and practices allows workers to learn from such information and in turn improves the awareness and safety culture of an organisation	Communication of safety
14	4	Creating a safety culture is a journey, not a destination. Companies usually start small, taking steps to build awareness by putting up safety posters and warning signs. Then they'll start addressing physical hazards, investing deeper in safety programs and training. Finally, organizations can shift the focus inward, working to eliminate unsafe behaviors and processes using Risk Management strategies. In short, there's a clear evolution from reactive, problem-based approaches to preventive, risk-based strategies. It can take years to get from one end of the spectrum to the other, but any company known for safety excellence will tell you the investment is returned many times over	A progressive process of safety measures and actions from reactive to proactive safety measure are required to develop safety culture.	A progressive process of safety measures from reactive to proactive measures leads to positive safety performance. – D	A progressive development of safety measure from reactive to proactive measure develops safety culture in a business which leads to a safety excellence.	Progressive developments of safety
15	5	So how do best-in-class manufacturers – defined as the top 20 percent – beat the competition in both productivity and safety? By implementing comprehensive safety programs that address three key areas: improving safety culture, implementing plant and engineering safety procedures, and using technologies that minimize downtime while helping to protect workers.	Safety culture is one of the factors which positively influences productivity and safety.	An increase in safety culture results in an increase in productivity and safety. – D	By improving safety culture both safety and productivity is improved on.	Safety influencing productivity
16	5	You can obey all of the rules and still get injured," Galloway said. "Culture is a by-product of leadership and influence, not just rules. It's focusing on mind-set, not simply the absence of injuries."	Leadership, influence and safety rule influences safety culture	the mind-set of people through culture injuries can be influenced. –D	Aspects of leadership, influence and safety rule has an impact on culture which in turn influence workers mind-	Leadership impacts safety

					set and can reduce injuries	
17	6	From our perspective, focusing on leading rather than lagging indicators has been a guiding force. If you know what things 'have to be going right' in an organization in order to deliver safety, it becomes much easier to make improvements – you are moving towards what you want, rather than always moving away from what you don't want.	Knowing what has to go right (leading factor) for safety allows improvement to be made	improves safety by pre-emptive actions - D	Knowing the leading factors for safety allows safety improvement to be made.	Leading factors to safety
18	7	Every organisation has a safety culture, it doesn't mean it is a good one. The safety culture may be one where it is acceptable to err on the wrong side of safety, where short cuts are encouraged, production is put before safety, and where safety becomes lip service and not lived.	taking short cuts, placing production before safety and paying lip to safety produces a bad safety culture.	bad safety behaviours have a negative impact on an organisations safety culture. - R	Taking short cuts, placing production first and paying lip service to safety produces a weak/bad safety culture.	Production focused impacts safety
19	7	In the words of Michael Henderson "Your {organisations} culture is a vehicle through which you deliver your brand promise. Brand is the promise, culture is the delivery." In high risk and high hazard industries we promise our teams and our customers that they can and will work in a safe environment, this is the 'safety brand' we promise. Is it then fair to say that having a true culture of safety is the delivery	safety is noted as a brand and culture is noted as the delivery vehicle.	a true culture of safety is able to deliver on the promise of safety performance - D.	To deliver a promise of safety (brand) a true culture of safety is required to deliver it.	Delivery of safety
20	7	Priorities change, we can justify why a priority may be put on the back burner 'just this one time'. However, values are our principles or standards of behaviour; our judgement of what is important in life. It is far less likely to compromise on a value. When safety is a value, it is reflected in our choices, actions and behaviours.	Considering safety as a value and not as a priority would allow appropriate choices, actions and behaviours to be made with regards to safety.	Safety as a priority would result in it being compromised whereas if it's a value it would not be compromised.	Considering safety as a values would ensure that when a decision has to be made on safety that it would not be compromised.	Safety as a value
21	8	According to OSHA's definition, in a strong safety culture, "everyone feels responsible for safety and pursues it on a daily basis; employees go beyond the "call of duty" to identify unsafe conditions and behaviors, and intervene to correct them." Great culture of safety proved to result in many benefits, including lower injury rates, increased ability to retain existing staff and attract new staff, as well as higher ROI. Dedication to safety and health does not only pertain to high hazard industries such as construction	Where everyone feels responsible for safety a strong safety culture is present	A strong safety culture leads to lower injury rates and higher return of investments (ROI)	Where everyone feels responsible for safety a strong safety culture is present which leads to lower injury rates and higher ROI.	Responsibility to safety
22	9	As we've learned in previous posts on this blog, safety in the oil and gas industry is a shared responsibility. It's a complicated combination of many factors, including organizational safety culture, the behaviours and attitudes of individual workers; process safety policies and practices; and much more. But if one person on a crew doesn't have his or her head in the game, they could pose a risk to everyone they work with.	The mental state of a worker would affect a workers compliance or commitment to safety.	Although safety is a shared responsibility a single person mental health can place all workers at risk.	A workers mental state of health would affect his/her compliance/commitment to safety which could place all workers on a site at risk.	Mental state impacting safety
23	9	Looking after your employees' safety and physical well-being is an important part of running a healthy organization. But taking care of their emotional well-being is just as important. It's important for every workplace to have someone who will monitor vulnerable employees, offering resources and help, and above all letting them know that they're not alone.	Monitoring and taking care of emotional well-being is important to a healthy organisation.	Monitoring and providing help and assistance to vulnerable employees would ensure that they do not pose a risk to other employees. - D	Monitoring and taking care of workers emotional health is important to running a healthy organisation which would not place all its workers at a safety risk.	Mental state impacting safety
24	10	In our experience, companies with a solid safety culture are less likely to find themselves in a situation where a worker feels they are being asked to engage in dangerous work. In those organizations, even the newest worker understands that safety is a top priority for everyone, from management down.	An organisation with a strong safety culture would lead to workers knowing that they would not engage in work that is dangerous.	Workers ability to understand that safety is a top priority and would lead to an understanding that they are not required to engage in dangerous work. – D	An organisation with a strong safety culture is more than likely to have safety as a top priority which would prevent workers in engaging in dangerous work.	Safety as a priority

25	11	The crane operator received no formal orientation in city protocols. Since the incident, the City of Victoria has changed many of their safety protocols, particularly around training and safety near power lines. "I was never really trained for any of that," said Richard. "I was just a young guy and I'd do anything they'd tell me to do."	Training of workers on safety protocols are essential in building workers knowledge of what to do and how to do it safely with understanding.	A lack of training on safety protocols has an impact on incidents that take place - R	Training of workers on safety protocols provides them with the knowledge and understanding of what to do under specific conditions which can prevent incidents from taking place.	Training reinforcing safety
26	12	In an operating plant, complacency is a major threat. Complacency opens the door to normalization of deviation and other gremlins that move performance toward the edge of the envelope. In the decommissioning phase, we believe loss of fear is a major threat. Loss of fear of dramatic, even catastrophic radiological consequences (because the fuel has been off-loaded and the plant will never operate again) can lead to losing focus, lack of attention to procedural details, short cuts and other behaviors that can have significant negative consequences such as industrial accidents or mishandling of radioactive materials.	Complacency can lead to poor safety performance.	Complacency can lead to a loss of fear, losing focus or lack of attention to procedural details which can lead to a significant industrial accident	Workers becoming complacent would result in a loss of fear, loss of focus and lack of attention to procedural details which could lead to a significant accident.	Complacency affects safety culture
27	13	whether he or she works at one of our manufacturing centers, an office environment or in the field at a nuclear plant site – serves as an advocate for a healthy nuclear safety culture with the responsibility of ingraining nuclear safety culture into every aspect of his or her job. I have the chance to regularly engage with our more than 11,000 global employees through regular communications vehicles, training and large-scale initiatives.	Safety culture is relevant across multi disciplines	Ensuring that safety culture is implemented in all parts of an organisation leads a healthy safety culture - D	Ensuring that safety culture is implemented across all aspects of a business would ensure a healthy safety culture.	Safety is cross divisional
28	12	Through initiatives such as SC training, it appears that at the macro level, DOE is (finally) communicating that minimally complying with basic regulations for how organizations should treat employees is not enough; establishing trust, mainly through showing respect for employees' efforts to raise safety questions and point out safety problems, is essential.	Establishing trust is essential a healthy safety culture.	By showing respect for employees effort to raise safety question to point out safety problems are essential for a good safety culture - D	By showing respect for employees effort in raising safety questions and in pointing out safety problems, trust can be established which is essential to a healthy safety culture.	Culture of safety fosters respect
29	12	The company is working on strengthening work processes to improve risk management but employees report processes are unchanged and no clear priorities are established, factors that may increase fatigue and decrease motivation, both of which challenge the development of NSC.	Worker motivation has an impact on nuclear Safety culture	The lack of clear priorities and relevant process, induces fatigue and decreases worker motivation which challenges Safety culture - R	A lack of clear priorities and relevant and applicable process impacts a workers motivation which has challenges safety culture	Safety as a priority
30	14	The report notes that both Japan and the U.S. have proffered statements that would seemingly signal a commitment to a strongly safety-oriented organizational culture, defined as a confluence of behavioral norms, shared attitudes and traditions. After the Fukushima disaster, however, it became apparent that in Japan there was a wide gulf between these statements and their implementation. "Open and transparent communication is an important component of the nuclear safety culture and essential to maintaining confidence in nuclear power," .	Open and transparent communication leads to a healthy nuclear safety cultures	Not reflecting and communicating what is actually takes place on a behavioural and attitudes a false pretence may be established which could leads to disastrous outcomes. - R	In not relaying open and transparent communication a weak safety culture would be established which could lead to a disastrous outcome.	Communication of safety
Cycle 1.2						
32	15	Improved communications across project interfaces and issue resolution tools are needed to support safety culture improvement	communication across project interfaces impacts safety culture	Improving the communication across projects improves safety culture	Improving the communication across project interface assist in improving safety culture	Communication of safety

33	16	In the medical world, for example, before beginning surgery, many hospitals have what's called a "five minute time out." During the "time out," everyone from the surgeons to the technical staff stops to ensure the right people are present, the right equipment is present, the right patient is on the table, and that everyone understands their role. This is a good example of safety culture at work.	Pre-assessment of conditions before performing work is a leading indications of a good safety culture	assessing and checking that the right conditions and people are in place before work is executed leads to a good safety culture.	Pre-assessment of working conditions before undertaking any work is a good manner to build and ensure a good safety culture.	Pre-checks indicative of a safety culture
34	16	In order to ensure that the NRC's safety rules are followed, you can't simply focus on qualifications and training. Those are essential, of course [but you also] need employees who have a safety focus and the dedication to consistently apply their skills to follow NRC requirements.	consistent application of safety focus has an impact on safety culture	Consistent safety focus leads to a good safety culture.	Worker qualification and training combined with their consistent safety focus leads to a good safety culture.	Focused approach to safety
35	17	But if you are an industrial company working in mining or energy sector, you might want to include managing project risks, meeting safety and security requirements in the success criteria.	safety can be a success criteria in a project	Meeting the safety requirement would allow a success criteria to be met.	Meeting the safety requirements of a project could lead to a success criteria for a project to be met.	Safety is success criteria
36	18	A colleague in the nuclear industry recently asked my opinion of the role "boss stress" plays in nuclear safety culture. Research (study after study indicates that the boss-subordinate relationship is the biggest variable in job satisfaction, turnover, etc.), experience, and common sense all indicate that authority relationships are one of if not the biggest variables in any human system. Yet authority dynamics are poorly understood, and almost randomly executed. An excellent and practical model of the systemic impact of authority relations is the 5 behavioral characteristics of "chronically anxious systems" detailed by systems thinking pioneer Edwin Friedman. He noted the following predictable behavioral symptoms in any organization where the leaders are more a source of unnecessary stress than they are a source of calm focused effort	Authority relationships have an influence on human systems.	Authority may introduce unnecessary stress which affects safety culture of an organisation	Authority relationship with workers may introduce unnecessary stress which would affect the safety culture of an organisation.	Worker stress affects safety culture
37	19	How bad is the chilled work environment at Watts Bar? The TVA OIG report indicates that 75% of the Employee Concerns Program (ECP) staff did not feel safe to raise concerns without fear of retaliation. ECP is supposed to be the organization that workers with safety concerns can go for help resolving them. When the helpers feel chilled, how can they truly help workers?	The ability to raise concerns impacts safety environment	The ability of workers to raise safety concerns without retaliation impacts the safety culture of an organisation	The ability of workers to raise safety concerns without retaliation impacts the safety environment.	Punitive measures impacts safety culture
38	19	Both reactors exhibited signs that reactor cooling water was leaking into containment. The indicated leak rates at both reactors were below regulatory limits, except for one anomalous indication at Wolf Creek. Managers at Davis-Besse opted to dismiss the warning signs and keep the reactor operating. Managers at Wolf Creek heeded the danger signs and shut down the reactor. It's not that they erred on the side of caution—putting nuclear safety first must never be considered an error. It's that they avoided making the Davis-Besse mistake of putting production ahead of safety.	placing production above safety places has an impact on safety culture	Placing production above safety could lead to catastrophic events.	Placing production above safety reduces safety focus and can lead to a catastrophic event	Production focused impacts safety
39	19	Davis-Besse chose production over safety but got neither. The reactor was shut down for over two years, generating no revenue but lots of costly repair bills. The reactor vessel head and other components inside the containment extensively damaged by boric acid corrosion were replaced. Many senior managers at the plant and in the corporate officers were also replaced. And the NRC fined the owner a record \$5,450,000 fine for	overriding safety for production	overriding safety for production could lead to major equipment damage and costly repairs	Overriding safety for production could lead to equipment damage and costly repairs.	Neglecting safety leads to rising cost

		numerous safety violations.				
40	20	I've seen the importance of a strong nuclear safety culture first hand as a longtime employee of Davis-Besse. In the early 2000s, I was an engineering supervisor at the site when we conducted an extended shutdown to address some significant equipment issues. Through a very honest, critical look at our performance, we identified the need to improve our process for challenging existing conditions and activities to ensure that every decision and action supported safe, error-free performance.	changing procedure for different condition	improving process for different conditions to support safety reduces error performance.	Adapting procedure to the situation reduces error performance	Situational assessment of safety measures
41	21	Actually, luck was not the differentiating factor. What we consistently found within these crews was a high level of sincere caring for each other. They simply cared for each other so much that they would not let each other get hurt, and they created a safe haven for their members to perform their best work. Interestingly enough, they went so far as to reject or eject crew members who did not demonstrate this same level of care toward their fellow crew members.	An environment of collective caring reduces injuries	Workers who care for each other in not getting hurt creates a safe haven.	A caring environment creates a safe haven amongst workers which reduces/prevents worker injuries.	Caring environment is part of a safety culture
42	22	Safety Leadership can be boiled down to: People: Engaging people in the work of the organization. Not just training them in rules and procedures, rather engaging them to look out for each other, building trust, improving the work process and more. People are not the problem; they are the key. (The scaffolding crew did not look out for each other, speak-up, or review the fatal hazard together prior to starting work. Sure, they did a Tool Box Talk that day, but clearly it was not effective.)	people are key in to safety	when workers engage in looking out for each other, injuries are prevented	People are key in looking out for each other and ensuring that colleagues are safe	Caring environment is part of a safety culture
43	22	Perspective: Recognizing that "what we accept" may not be "acceptable". Putting workers at risk without meaningful engagement is not acceptable. Companies routinely accept rote TBT's; boring classroom training that is not site-and task-specific; not done by their own company and often not in their native language.	perspective has an influence on safety	regarding something as safe when it is actually unsafe has can lead to injuries -R	A worker or organisations perspective of safety can lead them to regard an unsafe condition as being safe which could lead to injuries.	Perspective to safety
44	22	However, some managers recognize that "blame stops learning". To their credit, they are at work behind closed doors trying to convince their colleagues to forego the "punishment" in service of organizational learning. Those managers, and many of us reading this blog, understand that punishing people for honest mistakes at work doesn't make sense. People don't set out to get hurt, they want to get the job done.	blaming stops in learning	when organisation blame people for incidents people stop	An organisation that uses a blaming is most likely unable to learn from honest mistakes which results in future injuries.	Punitive measures impacts safety culture
45	23	Probably the most difficult area of improvement in terms of safety is establishing that safety culture. Under the continuous pressure to deliver to scope, cost and time commitments, this is where many companies see a material improvement needed. Bird's Safety Triangle shows that for every 3,000 near misses, there will be 300 injuries, and one fatality. This could be interpreted as 'if we delay a near miss by one day, we've delayed a fatality by 3,000 days, on average.	risky behaviour is reduced by safety culture	A reduction/delay in an incident leads to a delay in an injury	A reduction or delay in an incident due to a good safety culture results in a delay of an injury	Safety impacts a schedule
46	24	If there isn't internal support within a hospital or healthcare system for staff to notice and report safety concerns—without taking a punitive approach—that culture won't materialize.	platform to raise safety concerns impacts safety culture	A lack of a platform to raise safety concerns restricts the an organisations safety culture	A lack of a platform to raise safety concerns restrict a companies safety culture.	Platform to raise issues on safety
47	24	"I urge all health care leaders to make safety culture a top priority at their health care organization. Establishing and improving safety culture is just	Business performance is impacted by safety culture	A lack of safety culture has an impact on business outputs	Business performance would be impacted as a lack of	Safety influencing productivity

		as critical as the time and resources devoted to revenue and financial stability, system integration and productivity—because a lack of safety culture can have serious consequences for patients, staff and other stakeholders.”			safety would influence staff, stakeholders and productivity.	
48	25	So, I would suggest that project managers and other stakeholders forget about all those lists for now and concentrate on the one single ingredient common to the success of all projects: clear and shared common vision and objectives. This is the one project success factor 'list' that is universal and that I propose to follow. The remaining items are contextual and will vary from one project to another, so be prepared to do some analysis on your project to make it a success.	Having a common vision leads to project success	A clear and shared common vision leads to project success. - D	Having a clear a common shared vision of safety culture would lead to project success.	Safety is a success criteria
49	26	It is actually much easier to identify an organization that does not exhibit a culture of safety. These are organizations that have recurring injuries and down time along with increasing insurance rates and possible litigation issues.	Poor performance are indicator of no safety culture.	An organisation which has recurring injuries and down time is like to have a poor culture of safety.	Poor performance in line with recurring injuries and down time is likely linked to a poor culture of safety in an organisation.	Safety influencing productivity
50	27	Behaviourism, in vogue throughout the global construction industry, was basically abandoned by forward-looking psychologists 50 years ago. James Reason, perhaps the most influential thinker in modern safety management, de-bunked behaviour “as a cause of incidents” almost 20 years ago.	Worker behaviour impacts safety incidents	worker behaviour to safety influences incidents - D	Workers behaviour has an impact on safety culture and influences incidents.	Behaviour impacts safety
51	28	A lack of systematic integration of safety and design indicates a less than adequate safety construct and has itself negatively impacted the safety culture	Systematic integration of design and safety has an impact on safety culture	A lack of systematic integration of design and safety negatively impacts a safe construction -R	Systematic integration of the design and safety affects a safe construction which negatively influences the safety culture	Integration of safety
		Cycle 1.3				
52	29	But the stronger the commitment, and the more consistent the follow through, the fewer times injuries will occur, leading to greater productivity.	A commitment to safety leads to greater productivity	The fewer injuries that occur leads to greater productivity - D	A commitment to safety results in the occurrence of fewer injuries and leads to greater productivity.	Production focused impacts safety
53	29	A workforce that is dedicated to the habit of excellence in safety is dedicated to performing their jobs the right way.	Dedication to safety leads to the job being performed correctly.	A workforces dedicated habits of excellence in safety leads to a them performing their job the right way. - D	A dedication to safety leads the workforce to habits which ensures that they perform their jobs in the right way.	Production focused impacts safety
54	29	By stressing that safety is the most important value in the company, O'Neill laid the framework for what he called a “Habit of Excellence.” When the company rallied around safety as their priority, the habit of excellence followed suit in all other areas	Safety as a value leads to excellence in work.	Stressing safety as a value leads to a habit of excellence which is carried out in other areas of work. - D	Safety as a value leads to a habit of excellence which is carried out in other areas of work.	Production focused impacts safety
55	30	Businesses that cut corners to save time and speed up production can often seem productive and profitable. In the long term, these environments can also be unsafe, leading to increased downtime. While safety programs often require an initial investment, they also have a positive impact on employee health. Because healthy employees are more reliable and productive, they're also good for the bottom line.	Safety programmes lead to good bottom lines.	The implementation a safety programme leads to healthy employees who reliable and productive - D	The implementation of a safety programme leads to healthy employees who are reliable and productive leading to a good bottom line.	Production focused impacts safety
56	30	A key aspect of finding a balance between productivity and safety is with	The implementation of a safety	Safety interventions plant allow	The implementation of a safety	Production focused

		the enforcement of safety culture. A study by Lockheed Martin of their Paducah Plant found that by developing a safety culture, they were able to increase employee productivity by 24% and reduce factory costs by 20%. Lockheed Martin's study found that the major reason for this increase was their focus on reducing errors that lead to accidents. By implementing extensive training, improving pre-work preparation, and auditing all safety processes, plant personnel were able to increase safety while also reducing expenses.	culture increases productivity	personnel to work safely and reduced expenses. -D	culture allows workers to work safely and reduce operational expenses.	impacts safety
57	31	Another critical behavior that gets in the way of a positive safety cult is walking away. A leader who sees another person do an unsafe act and then walks away without stopping the individual and correcting the unsafe behavior actually is reinforcing the unsafe act. Silence is consent.	Leaders ignoring unsafe acts reinforces a bad safety culture	When leaders do not stop and correct unsafe behaviour they silently provide consent to these acts. - R	When leaders ignore unsafe acts they silent provide consent to a bad safety culture.	Leadership impacts safety
58	31	Whether it is as routine as thanking someone for wearing his safety glasses on a hot day or as major as recognizing an entire team for using their stop work authority in an unsafe environment, positive reinforcement from leaders who catch people doing the right things goes a long way to creating a positive safety cult.	Positive reinforcement of good safety by leaders leads to a positive safety cult"ure"	Leader who positively reinforce good safety acts create a positive safety cult"ure". - D	Positive reinforcement of good safety acts by leaders leads to a positive safety culture.	Leadership impacts safety
59	32	In order to fully integrate safety into the business core culture, leaders must actively promote and foster a culture where safety is expressed as a core value. This may only be done by demonstrating a strong, genuine, continuous and personal commitment to safety. The CEO or president sets the tone for the safety culture, which frames the level of importance of safety within the organization.	Leaders personell commitment to safety influences safety culture. - D	Leaders active promotion and demonstration of commitment to safety sets the tone for safety culture in an organisation. -D	Leaders personnell commitment to safety through active promotion and demonstrations sets a positive tone of safety culture.	Leadership impacts safety
60	33	Nothing affects an employee's engagement levels more than the supervisor or manager (including safety people). The example set by the supervisor, safety person or manager is key to establishing the tone and culture of safety at work. Overbearing, critical and negative-focused supervisors can take their toll on employees. And these supervisors and managers cause employees to lose their motivation.	The example set by a leader set the tone of safety culture	Critical or negative focus by supervisors cause employees to lose their motivation - R	A critical or negative focus placed by a leaders demotivates workers and has a negative impact on the organisations safety culture.	Leadership impacts safety
61	34	This model is based on research of the many behaviors that are necessary for successful safety leadership, and what it takes to truly change an organization's safety culture. When was the last time you sat in on a safety briefing or toolbox talk that was exciting and actually moved you? It's a rare thing. But successful safety leaders give their people a compelling and motivating vision for safety, and why they care about it. This recipe has 2 key ingredients: A. Be crystal clear – it is very clear to everyone what the leader is asking for B. Make it personal – the leader shares a reason for why safety is really personal to them	A leader clear vision of safety impacts safety culture	A leaders clear vision for safety, motivates staff to achieve it - D	A leaders ability to clearly relay his/her vision of safety would motivate staff in this aspect which in turn impacts the safety culture.	Proactive measures in preventing harm
62	35	Another challenge is the often reactive stance towards safety challenges. Far better to promote proactively desired behaviors that create a safe work environment. For example: Structure a strategic safety recognition program to encourage anyone to recognize others when they demonstrate critical behaviors in line with these values, leading to a safer work environment. For example, recognize	Proactive safety behaviour leads to an positive safety culture	Encouraging and recognising positive safety behaviour leads to the reinforcement of positive safety behaviour. - D	Encouraging proactive safety behaviour leads to the reinforcement of positive behaviour and a positive safety culture.	Proactive measures in preventing harm

		a colleague for "courage" when he chose to shut down a work site until an unsafe situation could be resolved.				
63	36	A proactive approach to safety. How often do you address safety in your company? In order to establish a positive safety culture, try to get out of the rut of "forgetting" to address safety to your employees. You must evaluate what works and motivates your workforce. From the minute a potential employee is interviewed, through his or her orientation process and on a regular basis thereafter, safety must remain at the forefront. Companies with a positive safety culture continuously address safety before accidents happen, and they reward employees who are working safely using verbal and public recognition, small prizes and other incentives.	Addressing safety before accident can occur are indications of a positive safety culture	Addressing meetings or engagements with safety creates a positive safety culture - D	In proactively addressing worker engagement with safety a positive safety culture is developed.	Proactive measures in preventing harm
64	36	A fair and consistent discipline system. If employees notice that their coworkers are getting away with not following safety policies and procedures, it will only breed a poor safety culture. Ensure that you are proactively assessing the workplace for hazards and disciplining for improper behavior.	Proactively assessing and addressing workplace hazards lead to a positive safety culture.	Addressing poor safety behaviour early prevents bad safety habits from becoming the norm. - D	Proactively assessing and addressing poor safety behaviour prevent bad habit from becoming the norm and a bad safety culture being developed.	Proactive measures in preventing harm
65	37	The workforce is characterized by good relationships at all levels. Trust is an essential component for an effective safety culture. As noted above, mistakes and errors, while unfortunate, provide invaluable learning. Employees who have good working relationships with management are more likely to speak openly and honestly about what is working, what is not and what still needs to change. They are also more engaged in other aspects of safety.	Good relationships lead to a positive safety culture	a good working relationship with management allows workers to openly speak about the changes that are required and safety. -D	Good relationships allows workers to openly talk about safety and changes required which establishes an effective safety culture.	Empathy encourages a culture of safety
66	37	The fear of discipline which drives under-reporting and stifles involvement has been driven out of the culture. Discipline has a place, but most safety issues can be effectively dealt with without discipline, which has side effects that work against building a culture of safety. When discipline is used disproportionately in relation to positive consequences it leads to lower morale, reduced trust, lower productivity, less teamwork and lack of engagement. Equally disturbing is that it suppresses reporting incidents which cripples the organizations ability to learn from mistakes and become more proactive.	The ill use of discipline to address safety has a negative impact on safety culture	Incorrect use of discipline on safety matters can lead to lower morale, trust and reporting of safety incidents. - R	The incorrect use of discipline on safety matters can lead to lower morale, mistrust and non reporting of safety issues which has a negative impact on safety culture.	Empathy encourages a culture of safety
67	38	Discretionary effort is that effort which employees can give at work, but don't have to. Discretionary effort is going above the basic requirements, and it rarely occurs in the context of poor employee-management relationships.... Truly exceptional safety requires that people don't just follow procedures, comply with OSHA standards, and wear personal protective equipment (PPE). Exceptional safety happens when people look for and report hazards, give peers feedback on safe and at-risk behavior, and most difficult of all, admit when they have made mistakes (report near misses) so lessons can be learned.	Discretionary effort leads to exceptional safety (culture)	Good employee-manager relationship build trust which leads to discretionary efforts of employees in safety.	Good employee-manager relationships builds trust in employees and leads to discretionary efforts which is a key driver for a positive safety culture	Empathy encourages a culture of safety
68	38	So what does discretionary effort and positive reinforcement have to do with relationships? Positive reinforcement is disabled by poor relationships. Not only are people less willing to use positive reinforcement within the context of a poor relationship, but when they do, that reinforcement is less	Good relationships impact positive reinforce which drive discretionary efforts and a positive safety culture.	poor relationship would result in positive reinforcement of safety not being effective. - R	Poor relationship has an impact on a managers positive reinforcements. This has an impact of discretionary efforts	Empathy encourages a culture of safety

		effective. If you tell someone they've done a good job and/or try to show concern for their safety, but they dislike you and therefore don't care what you think, your attempts at reinforcement are less likely to be effective.			which would affect safety culture.	
69	37	Successes are celebrated along the way. Pride shouldn't be focused solely on a company's safety record, but also in what is being done every day, all day to achieve that record	Consistent recognition of safety achievement builds up a positive safety culture	Celebrating safety success of each day and not only safety records reinforces safety - D	Celebrating safety successes of each day an not only safety reinforces safety and build a positive safety culture.	Progressive developments
70	37	The entire workforce relentlessly pursues the identification and remediation of hazards. Correcting hazards as quickly as possible and maintaining good communications around hazards will not only create a safer workplace, it will improve your employees' engagement. Frontline employees who believe management takes care of hazards are more willing to participate fully in safety initiatives.	Entire workforce commitment to safety improves positively drive safety participation.	Commitment of all workers to identifying and resolving safety drive safety participation. - D	Commitment by all workers to identify and resolve safety hazards leads a drive in safety participation and has a positive impact on safety culture.	Buy-in to safety
		Cycle 1.4				
71	38	It requires an investment of money and of time. It means that productivity temporarily will be impacted when a worker is hurt, because treatment, follow up, investigation of cause and job analysis will all be involved, every time.	time is required to develop a positive safety culture	stopping and assessing incidents to put better measures in place reinforces good safety - D	Taking time to assess incidents and make the required improvement leads a good safety culture	Progressive developments
72	39	Pick one simple behavior and see if you can help others to automate it by adjusting their working context. If you continue the experiment and create a stable working context that consistently encourages a range of critical safety behaviors, working safely will eventually become how people do things in your organization.	consistent reinforcement of good behaviour leads to a desired safety culture	Creating a context that encourages the desired safety behaviour leads a desired safety culture. -D	Installing and reinforcing the desired safety behaviours over time leads the a desired safety culture	Progressive developments
73	40	Change doesn't happen overnight Air accidents peaked in the 1940's, but have been on a steady decline since the 1980's. The desire to develop a transformation in the industry didn't occur overnight. Stakeholders were called in to refine and improve the current system, including unions, researchers, company officials, government officials and academics over a few years and many workshops. The aviation safety curriculum was supported by decades of research and ongoing reform. The decrease seen in aviation accidents provides a strong incentive to continue to use checklists.	Continues improvements over time leads to a strong safety culture	Getting all parties committed to address safety leads to a decrease accidents. -D	Continuous improvement over time through the involvement of all parties leads to an improvement in safety performance and ultimate safety culture.	Progressive developments
74	38	Truly exceptional safety requires that people don't just follow procedures, comply with OSHA standards, and wear personal protective equipment (PPE). Exceptional safety happens when people look for and report hazards, give peers feedback on safe and at-risk behavior, and most difficult of all, admit when they have made mistakes (report near misses) so lessons can be learned.	Workers commitment beyond the normal procedure is a sign of a healthy safety culture	Workers actively identify engage in improving safety exceptional safety can be achieved. - D	When worker actively engage in improving safety a positive level of safety culture is achieved.	Buy-in to safety
75	39	Beyond formal measures like this, organizations should encourage employee involvement in their safety programs. However, employees must be internally motivated to create the safest working environment possible, or the organization's efforts will be fruitless.... Employees can use any or all of these principles as personal safety phrases while they work to improve their Safety DNA, consequently increasing safety commitment and helping create a culture of effective safety performance.	Internal motivation towards safety is important for a safe working behaviour	Internal motivation or commitment to safety lead to effective safety. - D	A workers commitment to safety leads to an effective safety culture.	Buy-in to safety

76	41	Just as your corporate culture includes and affects all employees – from top management to the front line workers – so does a safety culture. Consider what your organization would look like if only top executives or only line employees practiced safe habits in the workplace. You would see inconsistencies in process, gaps in buy-in and more incidents and injuries. A safety culture can only grow when everyone in the company embraces safety as a key component in their everyday work. There are two basic elements to creating and sustaining a safety culture: Leadership and Employee Engagement. In Part 1 of this two-part series, we will examine the management factors that drive safety as a core value of the company culture.	commitment by all in an organisation is required for a good safety culture	A lack of commitment by workers or leaders to safety would result in inconsistency safety habits in the work place. - R	A lack of commitment by workers or leaders to safety would result in consistency in safety practice and a poor safety culture.	Buy-in to safety
77	42	Safety culture is about embracing the interactions between the working environment, equipment, systems and procedures, and the people in the organisation. It's a symbiotic process, each of these depending on each other in order to function accordingly. For a good safety culture to thrive you will need to have an in-depth understanding about where safety problems lie within your business, as well as embrace your responsibility as a leader to create customs, values and norms and monitor if they are adhered to.	An integration of people, systems and process is required for a safety culture	Understanding how safety is impacted amongst, people, process and systems allows for a better remedy of safety problems. - D	Understanding safety holistically in a system allows safety performance to be better addressed and for a positive culture to be developed.	Progressive developments
78	42	Even though not the norm, a poor safety culture tends to exist in companies that have poor processes and procedures and is often a reflection of how a business is run in the first place. The environment of such companies encourages unsafe working practices and considers them acceptable in order to produce results. However, quite often this comes back as poor product quality and poor financial control. To find out more about how much a poor health and safety system could cost your company, read our blog 'The Hidden Costs of Safety Failures'	Non compliance to process and procedure is an indication of a poor safety culture	Where unsafe work and practice is regarded as acceptable poor safety performance is the outcome. -R	Non compliance to process and procedures results in unsafe work and practices being regarded as the norm which leads to a poor safety culture	Safety as a value
79	42	'The problem with safety is that it's an invisible element. You can look at somebody's university degree and see what they've got, you can assess their performance, but with safety you're very much trying to measure something which doesn't happen.' Safety culture is built on prevention and you can't see prevention. 'You can see an accident, but you can't see the prevention of an accident.'	Preventative actions are key factors for a safety culture	Putting preventative measures in place would avoid an accident - D	Preventative measures are key in preventing accidents from taking place and are key in a safety culture	Progressive developments
80	43	In the statement, we define nuclear safety culture as "the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment."	A commitment to safety leads to greater productivity	a commitment in placing safety over competing goals ensure the protection of people and the environment. - D	a commitment of all to place safety over competing goals are indications of a good safety culture	Safety as a value
81	44	Do you have aligned standards of performance, Safety Culture behavioural expectations and ways of working across your supply chain so that their teams can achieve every day activities in a safe manner commensurate with your goals	alignment in behaviour leads to a healthy safety culture	Alignment of behaviour by everyone leads to safety goals being achieved - D	alignment of behaviour by everyone across the supply chain to safety goals being achieved leads to a healthy safety culture	Safety as a value
82	44	Instead you have maybe a number of legacy cultures, cultures that don't easily fit together and ultimately a culture born out of dominating behaviours from employees' previous organisations. What behaviour does the new hire emulate? And more importantly, who do you want them to emulate?	Installing the desired behaviour relates to a good safety culture	Demonstration of a strong safety behaviour leads to it being emulated throughout the business - D	Demonstrating a strong behaviour towards safety leads to it being emulated throughout the business resulting in a healthy safety	Safety as a value

					culture	
83	45	The United States Department of Labour acknowledges that a strong safety and health culture is the result of: Positive workplace attitudes - from the president to the newest hire... When these criteria are consistently and effectively aimed at accident reduction, a positive workplace safety and health culture is created.	Positive workplace attitude leads to a positive safety culture	A workplace attitude which looks to prevent accidents result in a positive workplace safety culture. - D	A workplace attitude towards accident prevention leads to a positive safety culture	Safety as a value
84	11	In a generic project environment where you find that the performance of a project is actual measured in terms of the schedule, which is the time the cost and also the quality or performance. In nuclear projects it's a little bit more than that because in a way where we would have the performance areas mentioned,... but in a nuclear environment one also has to factor in safety culture. There are instance that you find that a project might be stopped if there is anything that is perceived that is a compromise to safety culture	Nuclear safety culture is a project performance criteria	A project would be stopped if nuclear safety culture is compromised - R	Poor safety culture can result in the delay of in a project and impact a projects performance.	Production focused impacts safety
85	11	In a case like that one would say that we stop the project and it actually affects the schedule and the overall performance of the project is not as was planned. However if one has to actually factor in safety culture on the KPI's (key performance Index) of the project then one would actually see the gain, Comparing that to any incident or accident that would have happened due to not stopping the project at that particular time.	Safety culture is a project performance criteria	Project delay due to safety concerns could bring about project gains in the event of safety culture also being a project performance criteria – D	Where safety culture is a project performance criteria, project delays due to safety concerns can bring about overall project gains.	Production focused impacts safety
86	11	R2 – I would agree. When I have accepted programmes between the contractor and ourselves we always agree how we want to meet the activities and how we will meet the deadline. But in that schedule we have not catered for the difference in our processes. For you to work you may need a hot permit to work, Radiation Protection personal ... Some of the activities which are linked to nuclear safety are not linked to the project program.	Safety process has an impact on project performance	The exclusion of safety procedures and safety requirements can delay project – R	The exclusion of safety procedures (link to safety culture) impact a project performance.	Production focused impacts safety
87	11	Another thing that I think is missing is knowledge sharing. Why are we going through this each and every time we have a project. If someone has experience it, why are we accepting that the implementation of some "similar" programmes that would not meet the end date that we foresee in the first place. It means that we are not learning	Learning from experience impact safety culture	Not taking past experience into consideration affect the project delivery - R	Learning from past experience allows improvements to be made to safety culture/project performance	Progressive developments
88	11	Before you have an accepted program you should look at past experience, note what other activities you will need in line with nuclear specific safety requirements. Other power station do not have these activities whilst we do, but we don't include them in our programs making it difficult to meet the time lines which we set in the first place. So knowledge sharing is important in a project because it acceptable that you don't know everything, but if you have gained the experience and knowledge make sure that it does not happen to someone else.	Sharing of knowledge is important to a projects performance	Sharing knowledge of safety procedures and safety activities required in a nuclear environment, assist in the project meeting its time lines. - D	The sharing of knowledge on safety procedures and activities positively impacts project performance	Proactive measures in preventing harm
89	11	R2 – Safety culture should be the same, evens when you are at home. We apply it the same, we should not be different since you are in a nuclear power plant. Even when I am driving home I should be applying safety culture. It should be something we do apply in whatever we do. We should apply safety culture	Continuous awareness of safety is related to safety culture	Being constantly aware of safety all the time results in a good safety culture - D	Continuous awareness of safety any place any time results in a good safety culture	Buy-in to safety
90	11	R1 – I agree. It should be the same. We should also consider that in a nuclear plant, there is a high level drive on safety culture, and we note that	Complexity of your plant has an impact on the safety culture	The more complex your plant (organisation) the more process,	The more complex your plant the more safety process and	Proactive measures in preventing harm

		we have more process so that we factor in such as RP which are not required in a coal fired power station.	required	safety activities you may require – D	activities you will need which would affect you safety culture requirements	
91	11	I have worked in coal fired power stations and I have worked in a nuclear power plant. In nuclear we have work stoppages. And it becomes law. If something happens and there is a work stoppage, the project manager does not have a say. Sometime you find that it is a long work stoppage and that affects project performance at the end of the day. R2 – some of the work stoppages I find that they are unnecessary. I've worked in other place where we note that production is important. The fact that you stopping a project, you could be affecting cost, you could be affecting schedule. Sometime nuclear safety is important yes, but sometime I feel that we make it as an excuse. It used as an excuse that work does not go ahead. That is why our projects are costing even more.	Unnecessary safety stoppages has an impact on project performance	Stopping a project under the guise of nuclear safety impact a projects performance - R	Unnecessary safety stoppages due to safety culture concerns impacts project performance	Production focused impacts safety
92	11	If you submit something to the regulator, why must it take three months to review your design? Why can't it take a month? If you would like to install a pump, why should we wait for an outage, why do we not find other ways to implement the pump on line.	A restrictive safety mind set impact project performance	The restrictive safety mind set can limit innovation and impact project time, cost and quality	A restrictive safety mind set limits innovation and project performance	Progressive developments
93	11	Why is it that when you go for procurement that it takes eight months. It means that resources are tied up for this period. If you worked in other industries you know that eight months is to long. So we make it (safety culture) an excuse where it is not really necessary. Yes it should be an overriding priority but we have to find a way to gauge.	Safety culture can burden a project	The use of a thorough safety process can burden and restrict a projects performance – R	A over burden safety process/safety culture can restrict project performance	Production focused impacts safety
94	11	R1 – I would not say that it's the poor implementation or management of safety culture but I think that we might not be balancing everything. Sometimes we might be making decisions that are one sided. At the moment we are making a decision on nuclear safety culture without balancing everything else that is involved. Nuclear safety culture is embedded in all our processes	A balance safety culture result is win-win situation	Ensuring that safety culture is balance with production requirement results in the best performance - D	A balance safety culture approach which considers safety and production produces the best outcome.	Buy-in to safety
95	11	R2- When a project is initiated it is assigned a rating, but when we implement it we forget the rating and the need for the project. People become misaligned and things gets stopped. R1- I think also as an example when we apply to the regulator approval. We have been focusing on the execution part, but during the preparatory stages there is a whole lot of safety culture related processes that one has to go through in a project. By the time that you get to execution you are already running late which at the end of the day affects the projects performance.	A misalignment is safety culture across organisations impacts project performance	A misalignment of safety culture (through safety processes) can lead to the delays of approval. - R	A misalignment of safety culture across organisations has a negative impact of project performance	Safety as a value
96	11	R2 - If safety culture is not through the process and procedures are in not accounted for upfront in the project, then the project would not meet it time line. R1 – In the generic project management environment we look at cost, time and quality. But in the nuclear environment it is important that we include safety culture too as it overrides all of the aforementioned criteria	Safety culture is a key project performance criteria	Cost, quality and time in a nuclear environment can be overridden by safety culture. - R	As safety culture can override, cost, quality and time in a project is should be regarded as a key project performance indicator	Production focused impacts safety
97	11	Safety procedure are not a hindrance to project performance. R2- I agree safety procedure are not a hindrance. Safety culture should be the way we do things, its even applicable at home. So it is a way of doing	The way we do things is linked our safety culture	The natural way we address safety in our lives relays to safety culture. – D	The natural way we ensure our safety in our live relays to safety culture	Safety as a value

		thing. So if it is a way of doing things it can't be a hindrance. It is there to ensure that we are protecting the public and we are protecting ourselves as well, that it is safe for us to work here.				
98	I1	It seems like safety culture, evens contractors, is like a white elephant, no one know how to really do it. There are a lot of documents that talk about the safety culture but people always asked themselves how do you really measure I have implemented safety culture. You could do a lot of things, I could teach you, please wear your safety belt, but there are people that are choose to still not wearing their safety belt	Taking responsibility for safety enhances safety culture	People are important in implementing the safety document and procedures. – D	People are key in implementing the safety document and procedure which develop a good safety culture.	Empathy encourages a culture of safety
99	I1	So the implementation part and how you make sure that people are really doing it is as questionable, how do you measure that it is really there. How do we really know that there is safety culture.	Taking responsibility for safety enhances safety culture	Workers taking responsibility for their own safety is important as teaching and training may not bring about safe actions – D	Worker taking responsibility for their own safety is important as teaching may not bring about the required safety actions and safety culture	Safety as a value
100	I1	There was the Integrated Leak Rate Test project that I managed. The key to this project was that safety culture was imbedded right at the beginning of the project. What made it easy for us (the project) was that we were working with maintenance contractors that are use to working at Koeberg and they are fully conversant with nuclear safety culture and all that. It is actually key that it is embedded in the job from the beginning.	Safety culture is a combination of direct and indirectly objectives measurable	The lack of commitment (which cannot be measured) to safety would result in safety procedures and documents (which can be measured) being of no use. - R	A combination of commitment to safety and good safety procedures are indication of a good safety culture	Buy-in to safety
101	I1	Similar understanding of safety requirements (Safety culture) leads to project success.	Safety culture is a factor of project success	Ensuring that safety culture is embedded and acted on from the start of the project leads to good project results. - D	Safety culture which is part of a projects working from the start influence a projects success.	Proactive measures in preventing harm
102	I1	R2 – what I can think of is different to other power stations are that some of the processes and procedures, we have standardised. So if you are implementing a project in OCC, maintenance or Nuclear Project Management the expectations are the same, the output, what type of document are required afterwards. For me that is good safety culture because we are ensuring that even after we have installed something on the plant we have the correct paper work to go back to reference what is there. To me that is good safety culture.	A common safety process is indication of a good safety culture	Having a common processes which provides information which is reliable and traceable in terms of safety is indication of a good safety culture. - D	A common process which all workers carries out provides information which is true and reflective of the working conditions and is reflective of a good safety culture.	Progressive developments
103	I1	Bad safety culture, an example that I can think of is the corrective action process. Sometimes it looks like it's a "pimping" system. A policing tool. Its right that we have to raise concerns, but it is there to expose people that are not performing and we are missing the point of why it was created.	The miss use of system affects safety culture	The use of safety system to expose people working performance rather than safety concerns impacts the intent and authenticity of the information in the system. - R	The miss use of safety system impacts make the system questionable and impacts safety culture	Safety as a value
104	I1	Its like you would find a CR for someone driving "badly" on the R27 road and someone comes to report your driving. It's the right thing but have you discussed it with the person. The human nature, you don't just go and right something on the system. I'll come "oh I saw this, do you mind if I raise it so that other people can learn from it". So bring in the human nature into it, don't make it a policing thing.	Learning from mistakes enhances safety culture	Using a mistake as a means to learn from them would allow people to learn and improve safety. - D	Using mistakes as a means to learn and enhance safety reinforces a good safety culture	Progressive developments
105						

106	I1		Caring approach fosters safety culture	Using an open engaging approach rather than punitive approach allows safety to be fostered	Using an open engaging approach rather than punitive approach allows safety culture to be fostered.	Empathy encourages a culture of safety
107	I1	R1- When it comes to applying nuclear safety culture in projects, sometimes it becomes a challenge. For an example we have RD0034 requirements and depending on the kind of work there are certain classifications and you find that now that we have to meet the RD-0034 requirements we have contractors that are already on site, but now looking at the type of work that they are doing, they need to meet the requirements of RD-0034 level 1 or 2. To make sure that the contractors are actually at that level becomes a challenge because it was not initially a requirement when the project started.	Changing safety process requirement impacts project performance	When safety process changes during a project it impacts a project performance. - R	Changing safety process during project implementation has an impact on project performance.	Production focused impacts safety
108	I1	R2 – there are a lot of other companies that can perform the work, but because we have stringent safety culture linked activities, that means that people that can do the same work no are classified that they are not capable of. What are we doing to ensure that these companies also reach the same levels. What has resulted is that we are only giving contracts to three or four, same contractors, which is not fair.	Safety criteria limit project performance	Safety culture administrative process can limit contractor from qualifying for work - R	Safety culture administrative process can disqualify contractors from doing work.	Progressive developments
109	I1	R1 – That is also a complicated situation, because it is very costly to get a contractor to be a level 1 and level 2 classified. For the contractor to put every process that is required for them to be a classified. The concern is that the contractor would be saying “why would I spend so much money in being qualified for that? Maybe at the end of the day I may not get the contract.” So it a complication and at the same time we cannot expect the organisation to pay to get so many contractors qualified to RD0034 “level 1&2”.	There are cost associated with safety culture	To demonstrate a high level of safety awareness process and procedures needs to be put in place which has a high initial cost. – R	A high initial cost is incurred to demonstrate a high level of safety awareness related to safety culture through processes and procedures	Progressive developments
110	I1	R2- I've been in maintenance, I've been in projects and nuclear safety culture seems to be stopping alot of processes because you are there you want to do something, and they would say “No, nuclear safety, this and this”. Maybe its because we did not look at the risk prior, maybe we did not look at the processes prior, but if they all, they should be documented. Why are we learning as we go. How come I did not now up front that that activity was going to stop me, that I should have prepared for it. So it goes back to the thing of a program.	Cross functional feedback affects safety culture	Not providing input to other departments on the impact of safety affects work performance. - R	Corresponding departments feedback on safety affects work performance and the overall safety culture in an organisation	Proactive measures in preventing harm

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34	http://www.selectinternational.com/safety-blog/four-behaviors-of-safe-leaders-the-l.e.a.d.-model	29/05/2017
35	http://www.recognizethisblog.com/2013/09/5-steps-for-creating-a-proactive-safety-culture-in-any-company/	29/05/2017
36	http://www.peoriamagazines.com/ibi/2011/oct/establishing-positive-safety-culture	29/05/2017
37	http://aubreydaniels.com/blog/2013/01/23/7-keys-for-creating-a-safety-culture/	30/05/2017
	Cycle 1.4	
38	http://aubreydaniels.com/pmezine/why-relationships-matter-safety	30/05/2017
39	http://incident-prevention.com/ip-articles/shifting-your-organizational-safety-culture	31/05/2017
40	https://blog.safetyculture.com/checklist-best-practices/lessons-we-can-learn-from-aviation-checklists	31/05/2017
41	http://blog.nsc.org/creating-a-culture-of-safety-pt-1-leadership	31/05/2017
42	http://blog.hls.co/blog/creating-positive-safety-culture-at-work	31/05/2017
43	https://public-blog.nrc-gateway.gov/2011/09/13/what%E2%80%99s-all-the-buzz-about-safety-culture/	04/06/2017
44	http://pwc.blogs.com/energy_spotlight/2016/05/nuclear-new-build-6-practical-steps-to-build-a-safety-culture.html	04/06/2017
45	http://www.huffingtonpost.com/kurina-baksh/creating-a-positive-workp_b_9637800.html	04/06/2017

I1 – Combined interview with two participants (R1 and R2)

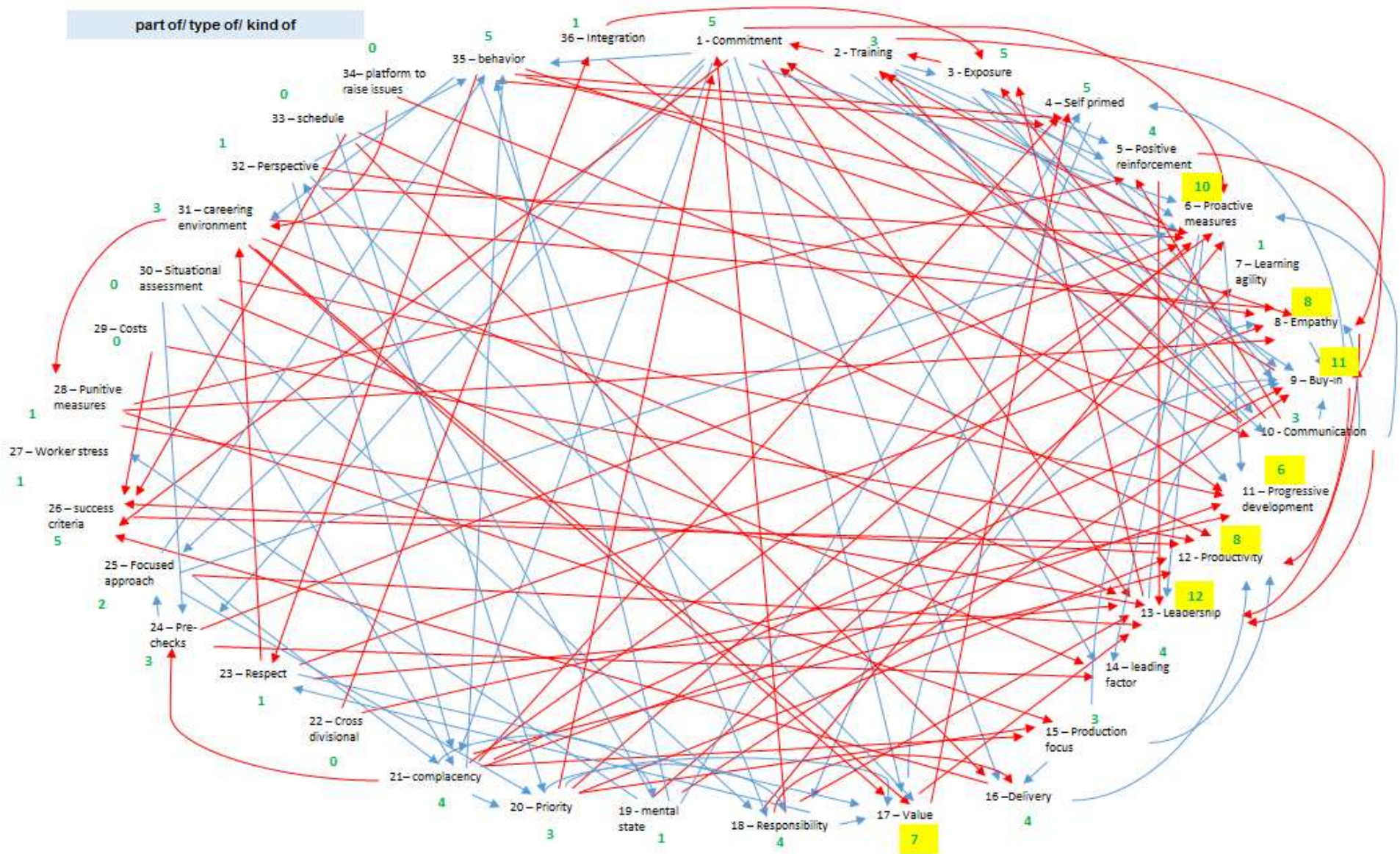
Appendix 2: Extensive category list developed during cycle 1

	Category	Memo	Proposition		
1	Commitment to safety culture	Demonstrating safety leads other to follow in the same manner	Supervisors commitment to safety ensures the credibility of the safety program	Supervisors commitment to safety ensures the trust in the safety program.	
2	Training reinforcing safety	Through training people know what to do to be safe and how to be safe	Coaching/training of leaders to ensure that they demonstrate the behaviour of the intended safety message will ensure that safety is a priority.	Employee training programs allow workers to know how to work safe and allow them to take ownership in safety which positively improves safety culture in an organisation.	Training of workers on safety protocols provides them with the knowledge and understanding of what to do under specific conditions which can prevent incidents from taking place.
3	Exposure to safety culture	Making people aware of safety through exposure influence their actions.	Exposing workers to safety poster would lead to an increase of safety awareness and workers acting in a safer manner.		
4	Self-primed to acting safety	Doing what you saying	Workers who are primed through their own safety phrase are likely to act out and abide by the safety phrase which they had drafted.		
5	Positive reinforcement of safety	Encouraging safety acts	Reinforcing positive no-work and personal safety acts of workers enhances the safety culture of the working environment		
6	Proactive measures in preventing harm	Putting measure in place before injuries occur	Paying attention to the leading factor of injuries and putting proactive and mitigative measures in place would look at the prevention of injuries.	The proactive measures taken to remove or address hazardous conditions or risks which could lead to harm directly impacts safety culture as it indicates how an organisation values and deals in mitigating safety incidents.	
7	Learning agility influences safety	Open to ways of being safe	workers agility to learning has a positive impact of safety culture as ways to improve performance is not seen as a limitation.		
8	Empathy encourages a culture of safety	Showing understanding allows people to be open on safety	Empathy allows an organisation to show personnel commitment and understanding to workers which allows workers to relay information on safety and directly impacts safety culture		
9	Buy-in to safety	Accepting or believing that safety is the right thing to do.	Buy-in across the organisation would allow positive beliefs and attitude to be shared which will enhance safety culture.		
10	Communication of safety	Communicating allows people to learn and know what to do.	Communication on safety behaviour, lessons and practices allows workers to learn from such information and in turn improves the awareness and safety culture of an organisation	In not relaying open and transparent communication a weak safety culture would be established which could lead to a disastrous outcome.	Improving the communication across project interface assist in improving safety culture
11	Progressive developments of safety	Continual improve leads to excellence in safety	A progressive development of safety measure from reactive to proactive measure develops safety culture in a business which leads to a safety excellence.		

12	Safety influencing productivity	Improving safety improves productivity	By improving safety culture both safety and productivity is improved on.	Business performance would be impacted as a lack of safety would influence staff, stakeholders and productivity.	Poor performance in line with recurring injuries and down time is likely linked to a poor culture of safety in an organisation.
13	Leadership impacts safety	Leadership influences safety	Aspects of leadership, influence and safety rule has an impact on culture which in turn influence workers mind-set and can reduce injuries		
14	Leading factors to safety	Knowing what has impact on safety	Knowing the leading factors for safety allows safety improvement to be made.		
15	Production focused impacts safety	Putting production first	Taking short cuts, placing production first and paying lip service to safety produces a weak/bad safety culture.	placing production above safety reduces safety focus and can lead to a catastrophic event	
16	Delivery of safety	Putting words into actions	To deliver a promise of safety (brand) a true culture of safety is required to deliver it.		
17	Safety as a value	Safety as a value would ensure that people act safely	Considering safety as a values would ensure that when a decision has to be made on safety that it would not be compromised.		
18	Responsibility to safety	Everyone is responsible for safety	Where everyone feels responsible for safety a strong safety culture is present which leads to lower injury rates and higher ROI.		
19	Mental state impacting safety	A persons state of mind impacts his approach to safety	A workers mental state of health would affect his/her compliance/commitment to safety which could place all workers on a site at risk.	Monitoring and taking care of workers emotional health is important to running a healthy organisation which would not place all its workers at a safety risk.	
20	Safety as a priority	Making sure that there are no conflicts in safety actions	An organisation with a strong safety culture is more than likely to have safety as a top priority which would prevent workers in engaging in dangerous work.	A lack of clear priorities and relevant and applicable process impacts a workers motivation which has challenges safety culture	
21	Complacency affects safety culture	Allowing safety to fall by the way has an impact on safety outcomes	Workers becoming complacent would result in a loss of fear, loss of focus and lack of attention to procedural details which could lead to a significant accident.		
22	Safety is cross divisional	Safety across the business	Ensuring that safety culture is implemented across all aspects of a business would ensure a healthy safety culture.		
23	Culture of safety fosters respect	Through a good safety culture people would look out and respect each other	By showing respect for employees effort in raising safety questions and in pointing out safety problems, trust can be established which is essential to a healthy safety culture.		
24	Pre-checks indicative of a safety culture	Checking to make sure things are safe	Pre-assessment of working conditions before undertaking any work is a good manner to build and ensure a good safety culture.		
25	Focused approach to safety	Ensuring that measures are in place will ensure that safety is achieved	Worker qualification and training combined with their consistent safety focus leads to a good safety culture.		
26	Safety is a success criteria	Safety is one of the criteria for project success	Meeting the safety requirements of a project could lead to a success criteria for a project to be met.	Having a clear a common shared vision of safety culture would lead to project success.	

27	Worker stress affects safety culture	High stress conditions would affect safety culture	Authority relationship with workers may introduce unnecessary stress which would affect the safety culture of an organisation.		
28	Punitive measures impacts safety culture	Punishment may restrict safety and safety culture	The ability of workers to raise safety concerns without retaliation impacts the safety environment.	An organisation that uses a blaming is most likely unable to learn from honest mistakes which results in future injuries.	
29	Neglecting safety leads to rising cost	Overlooking safety will result in increased cost	Overriding safety for production could lead to equipment damage and costly repairs.		
30	Situational assessment of safety measures	Ensuring measures are in line with the conditions	Adapting procedure to the situation reduces error performance		
31	Caring environment is part of a safety culture	Looking out for each other will prevent accidents	A caring environment creates a safe haven amongst workers which reduces/prevents worker injuries.	people are key in looking out for each other and ensuring that colleagues are safe	
32	Perspective to safety	The way people view safety would influence they approach safety.	A worker or organisations perspective of safety can lead them to regard an unsafe condition as being safe which could lead to injuries.		
33	Safety impacts a schedule	Safety events has an impact on schedule delays	A reduction or delay in an incident due to a good safety culture results in a delay of an injury		
34	Platform to raise issues on safety	Allowing people to raise their safety concerns	A lack of a platform to raise safety concerns restrict a companies safety culture.		
35	Behaviour impacts safety	Workers behaviour have an impact on accidents	Workers behaviour has an impact on safety culture and influences incidents.		
36	Integration of safety	Safety has to be considered in all areas	Systematic integration of the design and safety affects a safe construction which negatively influences the safety culture		

Appendix 3: Cycle 1 category reduction



Appendix 4: Core categories identified in Cycle 1

Initial proposition – “black”

Proposal re-categorised – “red”

Theoretical sampling categories (cycle 1.3) – “green”

Theoretical sampling categories (cycle 1.4) – “blue”

Theoretical sampling: Interview proposal /member checking (cycle 1.4) – “purple”

Initial Category	Core Category	Concept	Proposal					
Safety influencing productivity	Safety Culture influence on productivity	Safety Performance	By improving safety culture both safety and productivity is improved on.	Business performance would be impacted as a lack of safety would influence staff, stakeholders and productivity.	Poor performance in line with recurring injuries and down time is likely linked to a poor culture of safety in an organisation.	Taking short cuts, placing production first and paying lip service to safety produces a weak/bad safety culture.	Placing production above safety reduces safety focus and can lead to a catastrophic event	Overriding safety for production could lead to equipment damage and costly repairs.
			A reduction or delay in an incident due to a good safety culture results in a delay of an injury	Meeting the safety requirements of a project could lead to a success criteria for a project to be met.	Having a clear a common shared vision of safety culture would lead to project success.	A commitment to safety results in the occurrence of fewer injuries and leads to greater productivity.	A dedication to safety leads the workforce to habits which ensures that they perform their jobs in the right way.	Safety as a value leads to a habit of excellence which is carried out in other areas of work.
			The implementation of a safety programme leads to healthy employees who are reliable and productive leading to a good bottom line.	The implementation of a safety culture allows workers to work safely and reduce operational expenses.	Poor safety culture can result in the delay of in a project and impact a projects performance.	Where safety culture is a project performance criteria, project delays due to safety concerns can bring about overall project gains.	The exclusion of safety procedures (link to safety culture) impact a project performance.	Unnecessary safety stoppages due to safety culture concerns impacts project performance
			As safety culture can override, cost, quality and time in a project is should be regarded as a key project performance indicator	Changing safety process during project implementation has an impact on project performance.				
Buy-in to safety	Personnel commitment to safety culture	Commitment to safety	Buy-in across the organisation would allow positive beliefs and attitude to be shared which will enhance safety culture.	Exposing workers to safety poster would lead to an increase of safety awareness and workers acting in a safer manner.	A lack of clear priorities and relevant and applicable process impacts a workers motivation which has challenges safety culture	A workers mental state of health would affect his/her compliance/commitment to safety which could place all workers on a site at risk.	Workers who are primed through their own safety phrase are likely to act out and abide by the safety phrase which they had drafted.	Where everyone feels responsible for safety a strong safety culture is present which leads to lower injury rates and higher ROI.
			Commitment by all workers to identify and resolve safety hazards	When worker actively engage in improving safety a positive level of safety	A workers commitment to safety leads to an effective safety	A lack of commitment by workers or leaders to safety would result in	Continuous awareness of safety any place any time	A balance safety culture approach which considers safety and

Initial Category	Core Category	Concept	Proposal					
			leads a drive in safety participation and has a positive impact on safety culture.	culture is achieved.	culture.	consistency in safety practice and a poor safety culture.	results in a good safety culture	production produces the best outcome
			A combination of commitment to safety and good safety procedures are indication of a good safety culture					
Leadership impacts safety	Leadership influence on safety culture	Safety Leadership	Aspects of leadership, influence and safety rule has an impact on culture which in turn influence workers mindset and can reduce injuries	Supervisors commitment to safety ensures the credibility of the safety program	Supervisors commitment to safety ensures the trust in the safety program.	Coaching/training of leaders to ensure that they demonstrate the behaviour of the intended safety message will ensure that safety is a priority.	In not relaying open and transparent communication a weak safety culture would be established which could lead to a disastrous outcome.	Authority relationship with workers may introduce unecessary stress which would affect the safety culture of an organisation.
			Improving the communication across project interface assist in improving safety culture	When leaders ignore unsafe acts they silent provide consent to a bad safety culture.	Positive reinforcement of good safety acts by leaders leads to a positive safety culture.	leaders personnel commitment to safety through active promotion and demonstrations sets a positive tone of safety culture.	A critical or negative focus placed by a leaders demotivates workers and has a negative impact on the organisations safety culture.	
Proactive measures in preventing harm	Proactive approach to safety culture	Proactivity towards safety	Paying attention to the leading factor of injuries and putting proactive and mitigative measures in place would look at the prevention of injuries.	The proactive measures taken to remove or address hazardous conditions or risks which could lead to harm directly impacts safety culture as it indicates how an organisation values and deals in mitigating safety incidents.	Training of workers on safety protocols provides them with the knowledge and understanding of what to do under specific conditions which can prevent incidents from taking place.	Communication on safety behaviour, lessons and practices allows workers to learn from such information and in turn improves the awareness and safety culture of an organisation	Preassessment of working conditions before undertaking any work is a good manner to build and esnure a good safety culture.	Adapting procedure to the situation reduces error performance
			worker qualification and training combined with their consistent safety focus leads to a good safety culture.	A leaders ability to clearly relay his/her vision of safety would motivate staff in this aspect which in turn impacts the safety culture.	Encouraging proactive safety behaviour leads to the reinforcement of positive behaviour and a positive safety culture.	In proactively addressing worker engagement with safety a positive safety culture is developed.	Proactively assessing and addressing poor safety behaviour prevent bad habit from becoming the norm and a bad safety culture being developed.	The sharing of knowledge on safety procedures and activities positively impacts project performance
			The more complex your plant the more safety process and activities you will need which would affect you safety culture requirements	Safety culture which is part of a projects working from the start influence a projects success.	Corresponding departments feedback on safety affects work performance and the overall safety culture in an organisation			
Safety as a value	Personal values to safety culture	Safety values	Considering safety as a values would ensure that when a decision has to be made on safety	workers behaviour has an impact on safety culture and influences incidents.	Workers becoming complacent would result in a loss of fear, loss of focus and lack	people are key in looking out for each other and ensuring that colleagues are safe	An organisation with a strong safety culture is more than likely to have safety as a top	A worker or organisations perspective of safety can lead them to regard

Initial Category	Core Category	Concept	Proposal					
			that it would not be compromised.		of attention to procedural details which could lead to a significant accident.		priority which would prevent workers in engaging in dangerous work.	an unsafe condition as being safe which could lead to injuries.
			a commitment of all to place safety over competing goals are indications of a good safety culture	alignment of behaviour by everyone across the supply chain to the achievement of safety goals leads to a healthy safety culture	Demonstrating a strong behaviour towards safety leads to it being emulated throughout the business resulting in a healthy safety culture	A workplace attitude towards accident prevention leads to a positive safety culture	Non compliance to process and procedures results in unsafe work and practices being regarded as the norm which leads to a poor safety culture	A misalignment of safety culture across organisations has a negative impact of project performance
			The natural way we ensure our safety in our live relays to safety culture	Having the same consistent understanding and expectations of safety and safety culture leads to good project performance.	The miss use of safety system impacts make the system questionable and impacts safety culture	A restrictive safety mind set limits innovation and project performance	Worker taking responsibility for their own safety is important as teaching may not bring about the required safety	
Empathy encourages a culture of safety	Good relationship influence on safety culture	Interpersonal Safety Relationship	Empathy allows an organisation to show personnel commitment and understanding to workers which allows workers to relay information on safety and directly impacts safety culture	reinforcing positive no-work and personal safety acts of workers enhances the safety culture of the working environment	A caring environment creates a safe haven amongst workers which reduces/prevents worker injuries.	By showing respect for employees effort in raising safety questions and in pointing out safety problems, trust can be established which is essential to a healthy safety culture.	Monitoring and taking care of workers emotional health is important to running a healthy organisation which would not place all its workers at a safety risk.	An organisation that uses a blaming is most likely unable to learn from honest mistakes which results in future injuries.
			The ability of workers to raise safety concerns without retaliation impacts the safety environment.	Good relationships allows workers to openly talk about safety and changes required which establishes an effective safety culture.	The incorrect use of discipline on safety matters can lead lower morale, mistrust and non reporting of safety issues which has a negative impact on safety culture.	Good employee-manager relationships builds trust in employees and leads to discretionary efforts which is a key driver for a positive safety culture	Poor relationship has an impact on a managers positive reinforcements. This has an impact of discretionary efforts which would affect safety culture.	Using an open engaging approach rather than punitive approach allows safety culture to be fostered.
			People are key in implementing the safety document and procedure which develop a good safety culture.					
Progressive developments	Continual improvement towards safety culture	Continual improvement in safety	A progressive development of safety measure from reactive to proactive measure develops safety culture	Knowing the leading factors for safety allows safety improvement to be made.	Systematic integration of the design and safety affects a safe construction which influences the safety	A lack of a platform to raise safety concerns restrict a companies safety culture.	Ensuring that safety culture is implemented across all aspects of a business would ensure a healthy	Employee training programs allow workers to know how to work safe and allow them to take ownership in safety

Initial Category	Core Category	Concept	Proposal				
		in a business which leads to a safety excellence.		culture		safety culture.	which positively improves safety culture in an organisation.
		workers agility to learning has a positive impact of safety culture as ways to improve performance is not seen as a limitation.	To deliver a promise of safety (brand) a true culture of safety is required to deliver it.	Celebrating safety successes of each day an not only safety reinforces safety and build a positive safety culture.	Taking time to assess incidents and make the required improvement leads a good safety culture	Installing and reinforcing the desired safety behaviours over time leads the a desired safety culture	Continuous improvement over time through the involvement of all parties leads to an improvement in safety performance and ultimate safety culture.
		Understanding safety holistically in a system allows safety performance to be better addressed and for a positive culture to be developed.	Learning from past experience allows improvements to be made to safety culture/project performance	A common process which all workers carries out provides information which is true and reflective of the working conditions and is reflective of a good safety culture.	Using mistakes as a means to learn and enhance safety reinforces a good safety culture	Safety culture administrative process can disqualify contractors from doing work.	A high initial cost is incurred to demonstrate a high level of safety awareness related to safety culture through processes and procedures

Appendix 5: Data collection and data analysis for Cycle 2

	Ref	Data	Relevance	Impact	Proposition	Category (memo)
		(observation, description passage)	(to Concern Variable) <i>(safety leadership)</i>	(on Concern Variable D/R)	Subject-Relevance Predicate-Impact	
		Cycle 2.1				
1	1	It is important to develop management styles that suit different situations. Each leader has their own leadership styles and it is your job to inspire your employees to deliver at their peak performance. Your ability to organize the work and to supervise your staff effectively to get the job done on schedule and on budget is the key to getting the results for which you are responsible.	Different situations require different leadership styles.	Applying the appropriate leadership styles leads to the required performance results. - D	Different situation requires different leadership styles to bring about the required performance results	Situational applicable
2		It is important to develop management styles that suit different situations. Each leader has their own leadership styles and it is your job to inspire your employees to deliver at their peak performance. Your ability to organize the work and to supervise your staff effectively to get the job done on schedule and on budget is the key to getting the results for which you are responsible. The Best Management Styles According to numerous surveys of employees in the work world, the best bosses and supervisors possess three management styles: 1. Structure. Everyone knows exactly what needs to be done, why it is to be done, and to what standard. 2. Consideration. The boss makes employees feel that he or she really cares about them. 3. Freedom. Good bosses give their people freedom to perform. Once they have assigned a task, they try to stay out of the way, except to comment and to help when needed....	Having structure in leadership leads to increased productivity.	A structured leadership approach allows people to know what, why and how things need to be done. - D	Having structure in leadership allows people to know, what, why and how they need to do things which leads to increased productivity.	structure
3	1	By using and developing these techniques and leadership styles you will notice a change in your employees work. By practicing these management styles you will bring your team to great success, increase productivity in the workplace and inspire peak performance in your employees.	A leadership style which is considerate increases productivity	A leader who are considerate and make employees feel that they are cared inspire peak performance in employees - D	A leader style who shows consideration to workers, makes employees feel that they are cared for which inspires them to peak worker performance.	considerate
4	1	One of your jobs as the leader is to be a teacher. The reason you are in charge is because of your leadership styles and your superior level of knowledge and skill..... One of the most helpful things you do is to pass on your knowledge and skill to those who report to you. Teach other people how to do the job that you have already mastered. You multiply your output by teaching someone else how to do something that only you can do. And you increase their value to the business.	teaching others the leadership skills improves business performance	Teaching other the skills and knowledge increases their values to the business and increase business outputs. -D	Teaching others leadership skills increases their values to the business and improves business performance.	mentoring
5	1	Practice Golden Rule Management. Treat each person the way you would like to be treated if the situation were reversed. When you practice Golden Rule Management—you manage other people the way you	Treating others the way you'd like to be treated leads to peak performance	By treating other the way you'd like to people would respect the leader and be committed. -	When a leaders treats his workers as he would like to be treated then the workers respect him/her and	reciprocation

		would like to be managed—you will elicit peak performance from your employees more than in any other way.		D	are committed to their work, which would bring about higher performance.	
6	3	One commonality in successful leaders is they all have philosophies – a system of beliefs that they firmly stand by. Possessing a clear cut philosophy prevents ill-advised decisions from being made and irritating athletes or clients with ambiguity.	A leaders clear set of system beliefs contributes to performance objective being met.	A leaders lack of systems of beliefs could result in an ill advised decision being made, resulting in the irritation of clients - R	A leaders system of beliefs allows advised decisions to be made which would result in client satisfaction.	belief system
7	3	Based upon a behaviorist approach is the next dimension, positive feedback, also known as positive reinforcement (Zhang, 1997). Coaches and personal trainers will compliment or reward their athletes or clients on their successes, which maintains motivational level (Mageau, 2003; Zhang, 1997). The athlete [or client] will be rewarded for a good performance or effort (Zhang, 1997).	A positive feedback leadership style reinforces high performance	Leaders who compliment or reward success are likely to maintain motivational level. - D	Positive feedback from leadership is likely to maintain motivational level which would result in high performance.	positive reinforcement
8	3	In directing, leaders define the roles and tasks of the ‘follower’ defined by leaders. The followers are closely supervised and the leader makes all decisions. All communication is downstream, originating from the leader. Usually the individuals being directed possess low skill levels, but have a high level of commitment (Hersey, 1977). In sports, this style is employed with youth athletes and predominates with the novice personal training clientele in the fitness community.	A directing leadership style amongst low skilled highly motivated staff brings about the desired performance	A directing leadership style directs what needs to be done to brings about the required results - D	A directing leadership style directs amongst low skilled highly motivated people, what needs to be done which brings about results which affects the desired performance.	Directive
9	3	The next style, coaching, is best used when individuals have slightly higher competence levels, but aren’t as committed (Hersey, 1977). Coaching, according to the model is a behavior that is of high directive (roles and tasks of the ‘follower’ are defined by leaders) and of high support (the leader gathers ideas and input from the followers before making decisions) (Hersey, 1977; Mageau, 2003). This style is best used when the athlete or client makes some progress, but their motivation begins to wane.	A coaching leadership style can bring about the desired performance amongst semi skilled, less committed people	A coaching style directs task, but at the same time provides support which allows progress and motivation amongst people.	A coaching leadership style amongst semi-skilled and less committed staff, provides direction and support. This provides progress and motivation to people which allows the required performance to be obtained.	Coaching
10	3	The supporting style, embodies a high supportive behaviour, but is low directive as the follower has more control of decisions (Hersey, 1977). People that are led under this style have moderate to high levels of competence. This style is best used with intermediate athletes or clients, who need guidance to get to the next level.	A supportive leadership style amongst medium to high competency people leads to required performance.	A supportive leadership style provide guidance which allows people to attain a higher level of performance	A supportive leadership style amongst medium to high competency people, provides guidance in attaining the peoples next level of performance. This contributes to overall objective being met.	Supportive
11	3	the delegating style is of low directive and support, as its constituents are competent and highly motivated (Hersey, 1977). Leaders are still involved with decisions, but to a far lesser degree. Leader involvement is decided by the follower. This style is best used when you’re working with an advanced athlete who may already be near or at the pinnacle of their game or the client who has shattered their previous fitness goals. The improvements made under this coaching style are comparatively miniscule, but much harder to attain. A coaches or trainers expertise is called upon in these instances to address these relatively small deficiencies to improve performance.	A delegating leadership style amongst highly competent people allows peak performance to be achieved.	A delegating style provides guidance to people with small deficiencies which brings improvement in their performance.	A delegating leadership amongst highly competent people provides guidance to small deficiencies, which brings about performance improvement and organisational improvement	Delegative

12	3	Transactional Leadership which is based upon the exchange of valued outcomes and behaviours among followers and leaders. Literature has shown that not all outcomes are equally reciprocated (Lievens, 1997; Judge, 2004) and that low quality exchanges could be detrimental to the morale of followers (Judge, 2004). The downfall with transactional leadership is that it only develops the followers' extrinsic motivation largely due to the fact that it rewards them on outcomes.	Transactional leadership style can impact performance	Transactional leadership focuses on outcome values and rewards outcome which can be at the cost of worker the morale.	Transactional leadership styles focuses on rewarding outcomes but at the cost of worker morale which could affect performance.	transactional
13	3	transformational leadership improves stimulation and morale due to the four characteristics that it's comprised: charisma, inspirational motivation, intellectual stimulation, and individualized consideration (Lievens, 1997). Research has shown that transformational leadership results in higher job satisfaction rates and performance (Judge, 2004).	Transformational leadership style results in higher performance	The characteristics of charisma, inspirational motivation, intellectual stimulation and individual consideration brings about higher worker job satisfaction.	Transformational leadership styles bring about higher worker job satisfaction and performance.	transformational
14	4	You've probably heard the phrase: Behaviour breeds behaviour. This saying is illustrated by a simple model called the Betari Box. In a nutshell, the Betari Box helps us to understand how our attitudes and behaviours directly affect the attitudes and behaviours of others. When we're stuck in a cycle — mistrust, not taking responsibility, positive attitude and so on — it is up to the team leader to break the cycle and change attitudes. Inevitably this has a positive impact on those around us. When we take charge and change our behaviour our team is more likely to follow our lead.	Leadership behaviour influences performance	A leaders ability to demonstrate a positive attitude would result in the team to follow this behaviour.	A leaders ability to demonstrate a positive behaviour would result in the team members to demonstrate the same behaviour which would result in high performance.	behavioural
15	4	A hallmark of the high performance team is a high level of open, honest, robust and transparent communication. High performance teams increase trust by building a culture of partnership and shared values. This starts with open and honest communication. When honesty and transparency are lacking there can be no trust. Without trust teams fail to solve problems or make decisions. Without trust teams are crippled by conflict.	leaders who communicate transparently influence performance	Open and honest communicate results in trust amongst the team.	Leaders who communicate transparently are able to install trust amongst the team. This in turn allows problems to be solved and decisions to be made which affect high performance.	Open communication
16	4	High Performance teams meet regularly and discuss progress, concerns, and ideas for improvement. Likewise, the team leader meets the individual to talk about their objectives, development and performance. The high performance team supports its members by: accepting difference and diversity, encouraging each other's strengths, and supporting its members at times of personal or professional challenge.	A leader who installs a supportive environment is able to achieve high performance	A supportive environment allows progress, concerns and improvements to be identified.	A leader who installs a supportive environment is able to allow team members to identify progress, concerns and improvements which contribute to high performance.	Supportive
17	4	Motivation and positive attitude is more valuable to high performance teams than experience and negative character. The high performance team motivates and coaches the individual. It helps and develops the less experience colleague. Moreover, the team listens to everyone and creates a sense of belonging. The team understands what each player has to offer and how they help achieve shared business objectives.	A leader who motivates individuals in the team brings about high performance	Motivating individual members creates a sense of belonging and shared business objectives. - D	A leader who motivates the individuals in a team is able to create a sense of belonging and shared business objective which brings about high performance.	Motivational

18	5	...the most effective way to change the way an employee is acting and behaving is for the leader to change their style. That may mean overhauling the overall style used for leading the team or more specifically changing the style used to deal with that individual. The leader's style isn't solely responsible for performance levels – but it plays a very major role.	Changing leadership style can bring about better performance	A different leadership style change the manner in which a worker behaves. - D	A change in leadership style can bring about a change in employee behaviour which would influence performance levels.	Behavioural Influence
19	5	The leader's style isn't solely responsible for performance levels – but it plays a very major role... Coercive leadership style. When a leader uses this leadership style they give direction and expect their people to comply. Lead by telling. The emphasis is on pushing people towards the outcome. When this style is useful When there is a crisis With problem employees who haven't responded to other styles. Long term impact on climate if this is the leader's default style - Strongly negative.	A Coercive leadership style can hinder performance.	A coercive style can result in leaders giving direction and expecting people to comply which creates a strong negative climate amongst workers - R	A coercive leadership style expects people to comply which brings about a negative climate which hinders long term performance.	Coercive
20	5	The leader's style isn't solely responsible for performance levels – but it plays a very major role... Democratic leadership style. When a leader uses this leadership style they create consensus by encouraging participation in decision making. When this style is useful When input from the team is needed or would be valuable. When getting buy-in is critical. The long term impact on the climate is... positive- but mixed bag	A democratic leadership style can assist in high performance.	A democratic style looks at gaining worker participation and brings about a positive climate amongst workers. - D	A democratic leadership style looks at getting worker engagement and creates a positive climate which would bring about high performance.	Democratic
21	5	The leader's style isn't solely responsible for performance levels – but it plays a very major role... Coaching leadership style. When a leader uses this leadership style they focus on growing people and developing their strengths with an eye on creating a positive future. Ask rather than tell. When this style is useful To help an team member grow To improve performance To develop long term strengths The long term impact on the climate is... positive	A coaching leadership style can bring about high performance.	A coaching leadership style focuses on growing and developing people for the future bringing about strong positive climate. - D	A coaching leadership style focuses on growing and developing people for the future which brings about a strong positive climate and improved performance.	Coaching
22	5	The leader's style isn't solely responsible for performance levels – but it plays a very major role... Pacesetting leadership style. When a leader uses this leadership style they set high standards for performance and lead by example. Go hard and expect that others will follow. When this style is useful-When results are needed quickly, when mistakes can't be made, when the team is highly motivated and competent. Long term impact on the climate is ... strong negative	A pacesetting leadership style can have a negative influence on performance.	A pacesetting leadership style can have leaders set high expectations and go hard on people which could result in the long term can result in demotivation. - R	A pacesetting leadership style can set high expectation and be hard on people which in the long term result in a negative working climate and result in low performance.	Pacesetting
23	6	The good news is that your leadership style can build a winning team, or transform the one you have. Here are four leadership styles you can employ that can make or break your ability to succeed ...The goal is more important than the role. A team isn't supposed to be a bunch of people being used as a tool by one individual for his or her own selfish gain. Members of a team must have mutually beneficial shared goals. They must be motivated to work together, not manipulated by someone for individual glory. To employ this leadership style, think about a team you are currently part of (preferably one with a big goal). What kind of attitude do team	Leadership style which share the bigger picture is able to affect success.	A leader who is able to share the bigger picture is able to get a team to work towards these goals. - D	Leaders style which share the bigger picture is able to get the team to work towards this goal and reach the required results.	Vision

		<p>members have about the big picture? Are they team players who desire to do whatever it takes for the team to succeed? Or do they desire to benefit only themselves?</p> <p>Begin to foster a team mind set in others by modelling a willingness to serve the big picture, rather than yourself. Motivate people by painting the big picture. Publicly honouring team play, and give rewards to people who sacrifice for the good of the team.</p>				
24	6	<p>Every team has three groups of players. First, there are starters, who directly add value to the organization or who directly influence its course. Second, there are bench players, who add value to the organization indirectly or who support the starters who do. The third group is a core group within the starters that I call the inner circle members. These are the people that without whom, the team would fall apart. Your job is to make sure each group is continually developed so that bench players are able to step up to become starters, and starters are able to step up to become inner circle members. ... How can you lead, train, or inspire them in order to create a strong, deep bench? What value can they add from their position, and how can you create an environment for them to grow and succeed?</p> <p>Every team member is valuable in their own way. But it's important to figure out which group they're in. Moving in from bench to starter to inner circle member, you'll discover that each group becomes more and more important to the big picture vision for the team. Develop your bench, and you'll always have a pool of fantastic team players who can help the team win.</p>	<p>A leader who develops his workers is able to achieve high performance.</p>	<p>In set the environment for workers to grow and success a leader establishes a pool of people who can help in achieving the required results. - D</p>	<p>A leader who develops workers in setting the environment for them to grow an succeed he/she establishes a pool of people who would be able to help in achieving the required results.</p>	<p>Worker development</p>
25	6	<p>Leaders must also be good listeners. When leaders don't listen... They stop gaining wisdom. They stop "hearing" what isn't being said. Team members stop communicating. Their indifference begins to spread to other areas. Ultimately, poor listening leads to hostility, miscommunication, and a breakdown of team cohesion.</p>	<p>A leaders ability to have good listening skills affects worker performance.</p>	<p>An outcome of a leaders display of poor listening skill is hostility, miscommunication and a breakdown in team cohesion. - R</p>	<p>A leader who displays poor listening skill who establish hostility, miscommunication and a breakdown in team cohesion which affects team performance.</p>	<p>listening ability</p>
26	7	<p>The results your team produces are a direct result of the relationships and alignment you've fostered and the actions you and others have taken. Relationships + Actions = Results.</p>	<p>Leadership style and action influence the businesses results.</p>	<p>Leadership style and action has an impact on the relationships and alignment of workers. - D</p>	<p>A leader's style and action has a direct influence the worker/team relationships and alignment which has an impact on the business results being achieved.</p>	<p>Behavioural influence</p>
27	7	<p>Going further 'upstream,' the quality of your relationships and the effectiveness of your team's relationships and alignment are related to the actions you've taken. (They're also related to the actions of the other individuals, too, but you really can't control their actions, though you certainly can influence them.) Your actions, in turn, come from your priorities, thoughts, and emotions, which are rooted in your attitudes, values, beliefs, strengths and flaws, personal history and certainly not least, your will.</p>	<p>leaders internal make up has an influence on worker performance.</p>	<p>A leaders internal make-up (beliefs, attitude, strengths and flaws, ...) influences the actions which he/she make and these actions influence the relations between workers. - D</p>	<p>A leaders internal make-up influence the actions he/she makes which impact the relations with workers. The relations in turn has an influence on performance.</p>	<p>personnel attribute</p>

28	8	The hallmarks of the pacesetter leadership style sound admirable. The leader sets extremely high performance standards and exemplifies them himself. He is obsessive about doing things better and faster, and he asks the same of everyone around him. He quickly pinpoints poor performers and demands more from them. If they don't rise to the occasion, he replaces them with people who can. You would think such an approach would improve results, but it doesn't. In fact, the pacesetter style destroys climate. Many employees feel overwhelmed by the pacesetter's demands for excellence, and their morale drops.	A pacesetter leadership style set a negative working climate	A pacesetter leadership style can lead to the removal of flexibility and responsibility and reduction in commitment. - R	A pacesetter leadership can lead to the removal of flexibility and responsibility of workers and result in a reduction of commitment and a low working climate.	Pacesetter
29	9	Commanding - demands immediate compliance ("Do what I tell you") This style is used in crises situations where there will be serious consequences of not achieving a certain task. One example is safety. It can also be used with problem employees or employees you have been guiding over a period of time, however, there is still no progress. Be cautious when using this style as it is one of the most frequent styles used today within many organizations. Using this style often, or when it's not necessary could lead to low employee engagement and a higher turnover.	A commanding leadership style can result in low performance	A commanding leadership style can could lead to low employee engagement and high turnover.	A commanding leadership style can lead to low employee engagement and high turnover which would impact business performance.	Commanding
30	9	Visionary - mobilizes people toward a vision ("Come with me") This style is used when providing long-term goals or when a clear direction is needed. You can discuss the organization's strategic plan then work with staff to create performance goals based on the vision and measures of success. This style can be used when there is a change in the vision or with new employees.	A visionary leadership style when changes takes place in an organisation can bring about the required performance	A visionary leadership style allows a leader to share organisational plans to workers and allows them to input performance goals.	A visionary leadership style during times of organisational change allows employees to understand the organisational strategic plan and allows them to input the performance goals. This participation allows business objective to be attained.	Visionary
31	10	When employees aren't just engaged, but inspired, that's when organizations see real breakthroughs. Inspired employees are themselves far more productive and, in turn, inspire those around them to strive for greater heights... Instead, inspiring leaders are those who use their unique combination of strengths to motivate individuals and teams to take on bold missions – and hold them accountable for results. And they unlock higher performance through empowerment, not command and control.	An inspiring leadership brings about high performance	Inspiring leadership motivates workers to take on bold task and at the same time keeps them accountable for results.	An inspiring leadership motivates workers to take on bold task but at the same time keeps them accountable for result which allows high performance to be accomplished.	Inspirational
32	10	When employees aren't just engaged, but inspired, that's when organizations see real breakthroughs. Inspired employees are themselves far more productive and, in turn, inspire those around them to strive for greater heights...This gave us a list of 33 traits that help leaders in four areas: developing inner resources, connecting with others, setting the tone, and leading the team. Stress tolerance, self-regard, and optimism help leaders develop inner resources. Vitality, humility, and empathy help leaders connect. Openness, unselfishness, and responsibility help set the tone. Vision, focus, servanthood, and sponsorship help them lead. We found that people who inspire are incredibly diverse, which underscores the need to find inspirational leaders that are right for motivating your organization—there is no universal archetype. A corollary of this finding is that anyone can	Any person can be an inspirational leader and can bring about greater productivity	any person can focus on his/her strengths which can inspire workers.	Any person can be an inspirational leader in focusing on his/her strengths and bring about greater productivity.	personal strengths/attributes

		become an inspirational leader by focusing on his or her strengths.				
33	11	Leadership is a process of social influence, which maximizes the efforts of others, towards the achievement of a goal.	Leadership influences goal achievement.	Leadership has an influence on social behaviour which maximizes the efforts of others.	Leadership has an influence of social behaviour which maximizes the efforts of others to allow goals to be achieved.	Behavioural influence
34	12	<p>What are the signs of non-collaboration in the workplace? While "working together" seems like a very simple concept, we are often called on to help leaders whose teams are not working together. This surfaces as in-fighting, cliquishness, lower levels of productivity, apathy, lack of communication, resentment, withholding of information and ideas, and the silo effect...</p> <p>we have identified several causes of non-collaboration. They include the following: 1. Leadership. It has been said (and rightly so) that "everything rises and falls on leadership." If your team is not working together, it is ultimately a leadership issue. That is the bad news. But it also the good news, because if you as a leader are part of the problem, you can also be part of the solution. The key question to ask: Am I, as a leader, setting the example of working together with my team – or do I just come out of my office, pass out tasks, and revert to its elaborate confines?</p>	Leadership which contributes to non-collaboration can result in low productivity.	Leaders, who contribute to non-collaboration, pass on task and do not set an example of working together. - R	A leader contributes to non-collaboration when they do not set the example of working together and pass on tasks. This results in low productivity.	Team work
35	12	<p>What are the signs of non-collaboration in the workplace? While "working together" seems like a very simple concept, we are often called on to help leaders whose teams are not working together. This surfaces as in-fighting, cliquishness, lower levels of productivity, apathy, lack of communication, resentment, withholding of information and ideas, and the silo effect...</p> <p>we have identified several causes of non-collaboration. They include the following: 2. Communication. Very often, division begins with one point of communication that is either not delivered, not delivered well, or is misinterpreted. It is no accident that one of our most effective Presidents was also known as "The Great Communicator." We as leaders are quick to say what we think, but this is not communication. True communication is a cycle of listening, evaluating, and speaking. It is speaking with, not to our people. The key question to ask: Am I communicating, or am I just speaking?</p>	Leadership who contributes to collaboration through diversification can increase productivity.	Leaders contribute to collaboration when they listen, evaluate and respond accordingly. - D	Leaders contribute to collaboration when they listen, evaluate and then speak to the people. This engagement with people increase productivity.	Engagement
36	12	<p>3. Individuality There is much discussion in the news about the idea of unity, with many factions attempting to sway or even force others to adopt their values and views. The fact is, unity in any context does not mean everyone will agree on issues, processes, or viewpoints. What it does mean is that each individual brings the best of themselves to the table to reach common goals and vision. In the workplace, if everyone on your team thought exactly the same, you would be missing the value of perspective. If every person on your team is an extrovert, for example, details will be missed. Lawsuits,</p>	Leaders allows for collaboration through diversification can bring about company success.	Diversification allows different strengths to be brought together which allows success to be created. - D	Leaders allows for collaboration through diversification allows different strengths of people to be drawn to bring about company success.	diversification

		bankruptcies, and quality control issues have occurred with this level of exclusion. Conversely, if every person on your team is an introvert, you will have issues with growth and sales. We need the diversity of strengths working together to create successful companies. The key question to ask: What does my team strengths map look like?				
37	12	Expectations Clarity is key to any successful endeavour. You don't get on a plane without first deciding where you want to go, yet many leaders ask their people to get on the plane to nowhere quite frequently. As leaders, we must be very clear on the vision of our organization and on the path to get there. We must set clear expectations as determined with our people as to what is reasonable to accomplish. Lack of clarity or unrealistic expectations result in team frustrations. As deadlines cannot be met, blame starts getting assigned, and the team begins to divide. This can be avoided simply by being clear and realistic on expectations. In this vein, the team can reach its goals and celebrate the victories together. It turns the competition factor into a collaboration factor.	leaders who set clear expectation influence worker performance	When a leader sets a clear vision for the manner in achieving these goals workers are less likely to get frustrated and know what they working towards. - D	A leader who set clear expectations, by identifying the vision and manner in which to get to it, workers know what they working towards which influences their performance	expectations
38	13	The difference between a leader who gains commitment from employees and one who only gains compliance is coaching. The most effective leaders see themselves as being coaches and leaders rather than managers or supervisors... Overcome costly and time-consuming performance problems: many companies still rely on their annual performance to evaluate their employees' performance. By integrating coaching in your organization, you can identify performance problems easier and quicker, and take the appropriate measures to overcome these hurdles such as re-aligning the employees' objectives, or offering training/mentoring to help your employees succeed.	leaders who coach are able to get worker commitment which improves business performance.	When using coaching a leader is able to identify performance problems quicker as worker engagement is continuous.	Leaders who use a coaching approach engage with the workers more often and are able identify and rectify problem sooner which results in greater business performance.	Coaching
39	14	I believe that people of all temperaments, personality types, and personal/professional backgrounds can be great leaders, and that they can lead quite differently and still be successful. But to be trusted and followed as a leader, you must excel in three key areas: 1. Clarity of Thought and Communication Great leaders think and communicate clearly. They describe a vision of the future that people find compelling to work hard to achieve. If your employees are confused about your mission and strategy, or do not find it motivating or credible, they will not follow you with the focus and determination necessary to succeed	A leaders ability to communicate a clear vision can bring about success.	When a leader does not provide a credible clear mission, workers are likely not to be focused and determined on their work. - R	A leader who does not provide a clear and credible vision would most result in workers being unfocused and unmotivated, which would impact the ability to bring about the required success.	unclear expectations
40	14	Great leaders have exceptional personal integrity and commitment to their mission. Integrity means standing for something meaningful beyond oneself rather than being motivated by narrow personal interests. It means being able to admit when you have made a mistake rather than acting like you are always right and having the humility to receive critical feedback openly and work to improve. It means avoiding behaviour like favouritism, conflicts of interest, inappropriate language, inappropriate work relationships, etc., that erode trust. A useful test is to ask yourself: if your team had full transparency into your private communications and behaviour towards employees, would you be embarrassed by anything you have done or said? This is a high bar, but one that great leaders	A leader who shows integrity is likely to impact business performance	By showing integrity a leader is able to establish trust amongst workers. - D	A leader who shows integrity is able to establish trust amongst workers who would in turn be committed in achieving the required business performance.	integrity

		strive to meet.				
41	15	Ultimately it doesn't matter what your leadership style is. From the corporate to the charity sector, from the hospitality to publishing industries, every organisation has room for every type of leadership. Just not all at the same time. It would be of no benefit to your company for you to demonstrate great visionary leadership at a time when it needs a steady hand for a season. Or to micro-manage a department if what's needed is the freedom to innovate in order to expand. Good leadership is as much about your surroundings as it is about your strengths....Great leaders are aware of their strengths and weaknesses. They recognise where and when their skills are most useful. They are able to respond appropriately and with courage in order to face the next challenge.	A leader who assesses and act according to the situation is able to bring about better performance.	When assesses sing the situation leaders are able to identify which skill are most useful. - D	A leaders who can assess the situation is able to identify and implement the skill most useful to bring about better performance.	situational assessment
42	15	We want success but we may come to measure that success differently. What we need for enduring success is to build a foundation of good health, good relationships, and good living. In fact, learning how to lead ourselves well is the most important step towards leading others. It's an inevitable outcome: if you do your job well, you will enable others to do their job well, and very simply put, that is what leadership is all about.	A leader who is able to lead oneself is able to bring about success.	In leading oneself and do well, you would others to do their job well. - D	A leader who is able to lead himself well is able to allow others to do their job well, which would bring about the required results/performance.	internal leading
43	15	Leadership isn't short-term but it recognises how we do things today effects results tomorrow. It's harder work but ultimately more rewarding and productive. The side-effects of good leadership are fruitful and far-reaching, as opposed to management which is effective but limited to the present. Management is not about the future. If you're not going anywhere, you have nowhere to lead people to. Leadership isn't day-dreaming. It's always about what's next but it's sufficiently present to engage with people where they are at, in order to go with them to where they need to get to. Enabling each person to do what they do best. For the benefit of the team, project or organisation.	Leadership considers the actions which has a long term effects in bringing the required productivity.	When considering the actions which have long term effects, far reaching and fruitful and develops people for the benefit of the organisation or project. - D	When leaders considers actions in terms of their long term effect they consider, the far reaching and fruitful actions which would develop people and situation for the benefit of the project or organisation.	foresight
44	15	Leadership is about service – towards the organisation or mission – rather than about being served by those you lead which is counter-productive and potentially destructive. Service as a leadership skill might seem counter-intuitive. However over-dominant leadership generally causes people to resist and push back against it which becomes self-defeating.	An over dominant leadership can lower worker performance	An over-dominant style can be counter productive and destructive as people may resist and push back. - R	An over-dominant leadership style can lead to workers being resistant and push back which can be counter productive.	Over domination
45	16	The new report confirms that emotional self-awareness is the cornerstone of EI. Leaders strong in this competency are more likely to be strong in other EI competencies, use the positive leadership styles, and create positive climates at work. Several EI competencies predict leadership effectiveness, including conflict management, inspirational leadership, and empathy. Overall, leader emotional intelligence is a key predictor of employee effectiveness, engagement, and innovation.	A leader emotional intelligence helps in achieving positive results.	Emotional intelligence assists a leader in selecting the correct leadership style to create a positive working climate. - D	A leaders emotional intelligence assist in selecting the correct leadership style which creates a positive working climate. This in turn results in positive results.	emotional awareness

46	17	<p>The greatest responsibility of a leader is to connect with others and create a positive environment that promotes openness, growth and success. "That's the most important thing," he says, "and most overlook it." The key for creating that environment for Maddon is developing a connection with his coaches and each player on a personal level. Maddon's only agenda is to Connect. He does it by simply having a conversation. Maddon asks a lot of personal questions to get to know someone, their history, family situation, what makes them tick, what motivates them, how they think, what their interests are, what lights them up and what their dreams and aspirations are. He wants to find common ground so that he and each player can start to build trust with each other.</p> <p>In my work as a leadership coach, I often see executives focus on just tasks to get the results they need and ignore "the soft stuff;" the personal connections and relationships. Leaders who focus on only the results are limiting their leadership effectiveness. The great ones do both, get results and build relationships with others.</p>	A leader who is able to build positive relations and focuses on results are effective.	Establishing positive relations allows a environment that promotes openness, growth and success. - D	A leader who focuses on results and builds positive relations is able to promote openness, growth and success amongst people which leads to greater effectiveness.	relationship
47	17	<p>As Maddon builds trusting relationships with each player it enables him to be open and honest with them and to give them feedback that will improve their performance. He can be constructively critical and he knows they know he is not picking on them. He has their best interest at hand. If the player is upset he wants them to tell him. It works both ways. They can do this and move positively forward because of the connection and the trust they have with each other.</p>	A leader who has established trust is to improve on performance.	With trust a leader can provide and receive constructive feedback which would allow people and teams to move positively forward. - D	A leader who establishes trust can provide and receive constructive feedback which allows people to positively move forward and improve on performance.	trust
48	18	<p>In my work with leaders, I have frequently worked with executives who have a hard time saying NO! They work so hard to please others and eventually they get exhausted and worn out. They burn the midnight oil because they are doing too much themselves when they should be delegating, influencing others and focusing on their strategic priorities. They have stopped respecting and taking care of themselves. As a leader, it is virtually impossible to make others better if you are not taking care of yourself first. I always say, "to be a selfless leader you need to be selfish". You need to honor, respect and take care of yourself first.</p>	A leader who respects him/her self is able to look influence performance	In respecting oneself a leaders is able to look after themselves and focus on what needs to be done and to make other better. - D	A leader who respects him/herself is able to focus look after themselves, allowing them to focus on what needs to be done and to make others better which would influence performance.	self respect
49	19	<p>Maddon has no other rule because he believes rules inhibit people from reaching their full potential. Maddon believes in freedom and empowering members of his team. He does not believe in over managing or in micro-managing.</p> <p>His third principle is Freedom is Empowering. Think about it. The more you restrict freedom the more you restrict creativity in others. Maddon does not want to coach instinct out of his players. He creates an environment where his players are focused on their position and on the goal, but does it in a way that allows the player the creativity and instincts to achieve it.</p>	A leader who empowers his/her people allows them the freedom to reach the set goals	Empowering people provides them with freedom to use the natural instinct or capability to achieve the set goal. - D	A leader who empower his employees provide them with the freedom to use their natural capabilities and instinct to reach the set goal.	empowerment

50	19	<p>He micromanaged and over-managed his team. His behavior was classic micro and over managing. He told people what to do and to do it his way; he set unrealistic deadlines, he was constantly questioning his teams output, and he constantly was asking his team for updates on everything. His team was on pins and needles and they were worn out from his style. It was no wonder the employee engagement scores for his department were one of the lowest. It became apparent, after I interviewed his team, they felt powerless, frustrated and disengaged. His 360 results confirmed my qualitative interviews.</p> <p>Fortunately, over time, the leader began to see how his micromanaging behavior was impacting his performance and the performance of his team. He created a personal action plan to change his behavior to enable his team to flourish. Over the past 18 months, his team engagement scores were one of the highest in the company. His team not only felt more freedom, but were also empowered to get the results they were focused on.</p>	<p>A leader who over manage and micromanage his team is likely to achieve low to medium results.</p>	<p>Over and micro management leads to workers being worn out, frustrated and disengaged. -R</p>	<p>A leaders who over and micro manage their workers are likely to wear them out, cause them to be frustrated and disengaged which results in low to medium performance.</p>	<p>micro management</p>
51	20	<p>Create a culture of openness and honest feedback. Be clear what behaviors you are expecting your team to demonstrate and why. As a leader, you must spell out and demonstrate the behavior(s) of open, frank, honest, and real communications and feedback with each other. Create a trusting environment where your team feels comfortable sharing their perspectives and points of view with all present. Culture starts with you!</p>	<p>A leader who creates an open, honest environment is able improve performance</p>	<p>An open, honest environment allows workers to provide feedback and their perspective on what can be improved on. - D</p>	<p>A leader who creates an open, honest environment allows workers the platform to provide feedback and their perspective which can lead to performance improvement.</p>	<p>Honest environment</p>
52	20	<p>Be willing to humble yourself and be vulnerable. Leaders are put in their roles because of their track records. Leaders have egos and their egos can cause them to behave as if they know all the answers and have it all figured out. It is hard for a leader to say they don't know when asked a question. Check your ego and develop skills of actively listening, curiosity, and asking questions. These are humble attributes of effective leaders.</p>	<p>A leader who is willing to be humble is able to learn and improve in performance</p>	<p>Being humble allows a leader to learn from things which he was not aware of. - D</p>	<p>A leader who is willing to be humble is able to learn from workers on things that he/she is not aware of which can improve performance.</p>	<p>Humility</p>
53	21	<p>Alignment requires that as a leader you have a very clear vision and chosen focus. It also requires the vision and focus is understood by those you lead. However, this is only the first step in achieving true alignment. Alignment is not a function of what you declare; it's a function of what each team member chooses to get behind. Groups don't align with a vision, a plan, or even a decision; individuals do. Heads nodding in agreement, energizing conversations about the future your vision and focus makes possible, and satisfying work sessions planning what you will do are a start. The most important step in achieving alignment is bringing people to choice. True alignment requires individuals to choose to get behind the vision, taking ownership as though it were their vision. Alignment is not just a concept. It is a very personal choice that sometimes must be made more than once over time. Ultimately, the only way to know if any individual team member is truly aligned is to observe their conversations and their actions over time.</p>	<p>A leader who is able to align workers are business objectives to be met.</p>	<p>Alignment through clear vision and specific focus allows workers to be committed. - D</p>	<p>A leader who is able to align worker to his vision and specific focus is able to commitment to these which would lead to specific objective being met.</p>	<p>Alignment</p>

54	21	Accountability is one of the most often misused terms in business. It is all too often defined in terms of blame and consequences. As such it causes people to bristle at the mere mention of the word. Yet accountability is fundamental to any healthy organization, at least as I will define it here. Accountability is the consistency with which your actions and results match your commitments. Said another way, to be accountable, means to be committed to honoring your word. This includes commitments as big as the results a company promises to their shareholders or the service level they promise to their customers. It also applies to the promises individuals make to each other in the course of conducting their day-to-day business. I say "committed to" because there is not a person alive who has does everything they say they will do, when they will do it. We make mistakes, we forget, we are thrown off course by our commitments. We are, after all, human. Yet someone who is committed to honouring their word takes full responsibility for the implications and consequences when they do not or see they cannot.	A leader who is able to get the workers accountable is able to achieve required results.	when workers become accountable they are committed in meeting their word. - D	A leader who is able to gain accountability from his workers is able to get commitment from his workers in fore filling what the worker was suppose to do. This leads to required results being met.	Accountability
55	22	1. Focused - To lead a team to success, leaders must possess an extraordinary amount of focus. It's important to eliminate distractions from the work area and to hone in on the key issues at hand. While leaders are often pulled in numerous directions simultaneously, they must be able to retain clear minds and focus on the things that matter.	A leader who is focused is able to succeed in what needs to be achieved	being focused allows a leader to hone in on key issues at when many different distractions take place. - D	A leader who is focused is able to hone in on the key items when many different distraction are taking place, allowing success to be reached on what needs to be achieved.	Focused
56	22	Passionate It's possible to teach someone to be a leader, but truly effective leaders are already passionate about what they do. Your enthusiasm and level of commitment can inspire your team members and motivate them to do better work. Modelling the attitude you want each person to have is one of the most effective ways to lead your team toward a successful destination.	A leaders passion can inspire his team towards reaching successful objectives	A leaders passion for what he does can inspire and motivate others to. -D	A leader who demonstrate passion can inspire and motivate other workers in reaching the successful objective of the organisation.	Passionate
57	22	Assertive As a leader, you have requirements for your team and goals that must be fulfilled. When team members aren't meeting expectations, a leader must feel comfortable being assertive. Assertive leaders are firm and bold, unafraid to go after what they want. Such a level of certainty and confidence will serve both you and your team well as you tackle larger challenges and go after new goals.	A leader ability to be assertive allows challenges to be addressed when trying to achieve goals.	A leaders assertiveness allows him/her to be firm and bold in getting what they want. - D	A leaders ability to be assertive allows him/her to be firm and bold in getting what they want when trying to achieve their goals.	Assertive
58	22	Decisive Leaders are often called on to make big decisions, so it's also important for you to be decisive. Of course, a decisive leader should never be confused with an impulsive one. A decisive leader carefully weighs the potential effects of each option and chooses the opportunity that works best for his or her team. To be decisive, you must also feel comfortable taking responsibility for the results of your choice.	A leader should be decisive to allow effective results to be achieved.	A decisive approach allows a leader to weigh different options and to choice the appropriate one. - D	A leaders ability to be decisive allows him/her to weigh up different options and choice the one which would bring about the most effective results.	Decisive
59	22	Empowering Supporting your team is one of the best ways to encourage members to perform well. Empower each individual by making it clear that you trust his or her judgment. Give people the authority they need to do their jobs	A leader who empowers his workers would impact worker/business performance	In empowering workers a leader them with the authority they need to perform their job. -D	A leaders ability to empower his/her workers would provide them with the authority to perform their job and encourage them to	Empowerment

		well and show them an appropriate level of respect.			perform well. This in turn would allow the business the perform well.	
60	22	<p>Confident Successful leaders are confident in their own abilities and decisions. If you want other people to believe in your capability as a leader, you must first believe in yourself. While you should make sure your confidence isn't perceived as arrogance, there's nothing wrong with feeling a strong sense of certainty about your choices.</p>	A leader confidence influences workers and their motivation towards their work.	In demonstrating confidence by believing in his/her own capabilities a leaders is able to show a strong sense of choice which provides direction and guidance to his employees- D	A leader who is able to demonstrate confidence is able to provide a strong sense of choice which provide direction to his/her team. This in turn provides motivation to workers to achieve the required results.	Confidence
		Cycle 2.2				
61	22	<p>Honest Finally, effective leaders are honest. Be upfront with your team members and trust them enough to communicate openly and authentically together. It's important to build a level of mutual trust within your team so that each person feels comfortable addressing his or her concerns with you. All people in positions of authority might be able to call themselves leaders, but effective leaders are those individuals who seek to emulate these ten essential traits. If you're looking to improve the quality of your leadership style, choose a few key traits to focus on initially and watch as your impact shifts with time. Your team will achieve new levels of success as your leadership style evolves and becomes more well-defined.</p>	A leaders honesty have an influence worker behaviour and performance.	A leader honesty with his/her team builds a level of mutual trust and openness to address concerns. -D	A leader's honesty builds trust with his/her workers which in turn impacts worker behaviour and performance.	Honesty
62	23	<p>What leaders pay attention to, measure and control – What a leader systematically pays attention to communicates his/her major beliefs. It has a powerful influence on the culture if the leader is consistent in communicating the expected behaviours and application of the focus of attention</p>	A leaders ability to communicate can influence worker performance.	In communicating a leaders expectations he/she is able to influence worker behaviour and what needs to be focused on - D	A leaders ability to communicate allows him/her to influence peoples behaviour and align them to what needs to be focused on, which has an impact on worker performance.	Communicate
63	23	<p>How leaders react to critical incidents and organizational crises – Experiencing crisis situations often creates new norms, procedures, and reveals the important underlying assumptions of leaders. Leaders must be prepared to meet unforeseen challenges with flexibility, perseverance and a healthy questioning attitude.</p>	A leaders situational response would affect performance.	A leaders who is able to meet unforeseen challenges with flexibility, perseverance and a questioning attitude, create norms our conditions which people respond too. - D	A leaders situational response allows him to meet unforeseen challenges with flexibility, perseverance and a questioning attitude. These affect behaviour which influence performance.	Situational response
64	23	<p>Deliberate role modeling, teaching and coaching – In addition to written policies, leaders' every day attitudes and behaviors have a tremendous influence on the organization. From a leadership development perspective, senior leaders must ensure that the managers and supervisors have the opportunity to build the necessary skills that will allow them to model the desired behaviors and visibly demonstrate their adherence to the organization's policies, rules and procedures.</p>	A leader that develops his workers would allow the desired business performance to be obtained.	In developing workers a leader is able to allow the workers to gain the required skills and perform work as it should be done. - D	A leader that develops his workers allows them to gain the skill required to perform their work which has an impact on business performance.	Develops/Mentor

65	23	Observed criteria by which leaders allocate rewards and status – High reliability organizations, like nuclear power plants, operate under the constant challenges of managing time and resources in accomplishing their work. Employees, in turn, want their contributions and efforts to be acknowledged by those they work with on a day-to-day basis, including managers and peers. To have the greatest impact in the workplace, reward and recognition activities should reinforce and encourage work that advances employee, departmental and other organizational goals and values.	A leader that reinforces the desired goals, he/she would have an influence on business performance.	In recognising and rewarding workers for the desired behaviours, they are likely to bring about the required performance. - D	A leader, who reinforces the desired behaviour, by recognising and rewarding actions which are aligned to the values and goals of the business, will likely positively influence performance.	Reinforces behaviour
66	24	While recognizing that other positive attributes may exist, the presence of the following leadership and team effectiveness attributes is foundational for excellent performance...Promoting a Clear Vision and Strategy to Achieve Excellence. Leaders promote a clear and compelling vision and strategy to achieve organizational alignment, establish common priorities, and foster continuous improvement	A leader who promotes a clear vision and strategy would influence high performance.	In promoting a clear vision a leader would look at getting organisational alignment, common priorities and foster continuous improvement. -D	A leader who promotes a clear vision and strategy would look at getting organisational alignment, common priorities and foster continues improvement. This in return would influence a business's performance	alignment
67	24	While recognizing that other positive attributes may exist, the presence of the following leadership and team effectiveness attributes is foundational for excellent performance...Fostering a Learning Organization – Continuous Improvement. Leaders foster a learning organization that recognizes small signs of decline and uses appropriate methods for aggressively closing performance gaps.	A leader that foster continuous improvement would influence high performance	By fostering continual improvement a actions would be taken to close performance gaps. - D	A leader who fosters continual improvement would allow actions to be taken to close performance gaps, which would result in high performance.	Continual improvement
68	24	While recognizing that other positive attributes may exist, the presence of the following leadership and team effectiveness attributes is foundational for excellent performance... Developing an Aligned, Engaged Workforce Leaders develop an aligned and engaged workforce who understands their role in meeting organizational goals and is willing to strive for and sustain excellence.	A leader that get worker force engagement is able to influence performance	By engaging the workforce a worker would understand their roles and would strive in meeting the organisational goals	A leader who is able to get workforce engagement, would be able to get workers to understand their roles on meeting the organisations goals. This would in turn influence a worker to strive in meeting them and influence performance outcomes.	engagement
69	24	While recognizing that other positive attributes may exist, the presence of the following leadership and team effectiveness attributes is foundational for excellent performance...Inspiring, Motivating, and Communicating. Leaders, by commitment and example, create an environment where individuals are engaged, inspired, and motivated. a. Leaders create a positive environment where employees want to do their best. b. Leaders communicate important issues and key operational decisions in a clear, straightforward, and timely manner to all stakeholders. c. Leaders demonstrate resilience, positively motivating employees — especially during periods of plant challenges, significant events, or extended recovery periods. d. Leaders practice and develop the skills necessary to make decisions and to communicate effectively during periods of high stress. e. Leaders monitor for and correct working conditions that can inhibit	A leader who communicates effectively informs works allowing them to perform the required work to reach business objectives	In communicating effectively with workers a leader is able to provide clear and direct information which informs workers of what needs to be done. - D	A leader who communicates effectively is able to relay a clear and direct message which informs workers and in turn allows business objectives to be achieved.	communicate

		employees from achieving their best performance.				
70	24	While recognizing that other positive attributes may exist, the presence of the following leadership and team effectiveness attributes is foundational for excellent performance...Building and Sustaining Trust with Employees and External Stakeholders. Leaders build and sustain trusting relationships with employees and external stakeholders by listening, acting, and communicating with integrity while ensuring the purpose of goals and strategies is well understood.	A leader who establish positive relationships is able to able to influence performance	By listening, acting and communicating with integrity a leader is able to build trusting relationships - D	A leader who listens, acts and communicates with integrity establishes a positive relationship with workers which has an impact on business performance.	Integrity
71	24	Providing Effective Coaching and Feedback in an Environment of Healthy Accountability Leaders provide candid and timely feedback, reinforce positive behaviors, correct shortfalls, and nurture ownership — creating a culture of healthy accountability to improve performance. Coaching is used for motivation as well as for accountability.	A leader provides effective coaching is able to influence business performance	In coaching workers a leader is able to reinforcing positive behaviour and accountability. - D	A leader who provides effective coaching is able to reinforce positive behaviour and accountability which would influence business performance.	Coaching
72	25	...ineffective and inexperienced leadership are typically a concern of station management and a significant contributor to the problems and issues preventing the station from attaining the operating and economic performance levels it desired... There are no hard and fast rules for this, but the key to effective leadership is self knowledge. Studies on the subject show that all who are successful have these character traits:	A leader who has integrity is likely to effective and influence performance	by showing straightforwardness, no hidden agendas a leader is able to influence morale - D	A leader who demonstrates integrity in showing straightforwardness and no hidden agenda is able to influence worker morale which in turn would influence business performance.	Open and transparent
73	25	x Integrity (as in directness, straightforwardness, no hidden agendas) x Knowledge (of self, of subordinates, of the job accountabilities) x Courage (of your convictions, as in making hard choices and standing behind the people you've empowered)	A leader who demonstrates knowledge is likely to influence business performance	By illustrating knowledge of self, subordinates and job accountabilities and leader is able to influence worker morale, communication and people motivation. -D	A leader who demonstrates knowledge of his/herself, of workers and job accountabilities is able to influence worker morale, communication and worker motivation, which would result in better performance.	Knowledge

74	25	<ul style="list-style-type: none"> x Decisiveness (prepared well enough to make a decision so that waffling is avoided) x Loyalty (especially to your subordinates and the company) x Enthusiasm (a genuine interest in your people and the job) x Responsibility (taking and delegating) <p>Without effective leadership at all levels, an organization suffers from low morale, poor communication, unreliable people, processes and equipment, and general frustration and hopelessness.</p>	A leader who demonstrates courage would influence business performance	A leader who demonstrates courage in showing conviction, making hard choices and standing by the people he employs is able to influence workers reliability and their motivation. - D	A leader who demonstrates courage in showing conviction, making hard choices and standing by the his employees is able to influence worker reliability and their motivation which in turn would influence business performance.	Courageous
75	25		A leader who demonstrates loyalty would influence business performance	In demonstrating loyalty to workers and the organisation a leader is able to increase moral and worker reliability. - D	A leader who demonstrates loyalty to workers and the organisation is would increase worker morale and their commitment which in turn would influence business performance.	Loyalty
76	25		A leader who demonstrates enthusiasm would influence business performance	Demonstrating enthusiasm with a genuine interest in people and the job would influence workers morale and their commitment.	A leader who demonstrates enthusiasm with a genuine interest in people and the job would influence worker morale and commitment which in turn would influence business performance.	Enthusiasm
77	25	<p>People who are required to use leadership who can't or won't are usually very unhappy. And, they're often embarrassed or ashamed to admit this weakness. The frustration and fear they feel at thinking they're trapped in a job which they cannot do, they take out on those around them. Remember, it is not a character flaw not to be a good Leader nor want to be. Many, many fine people seek excellence in performance and contribution through other avenues. Helping that person find a role where they can become a contributor again is good for the person and good for the organization. This is an area of ongoing opportunity for the station and an area with has a tremendous and sustaining payoff for doing the right thing.</p>	A leader who is able to use the required style for a required situation is able to bring about the required performance.	A leader who is not able to use the required styles would most likely be unhappy in his job and influence worker performance. -R	A leader who is unable to use the required style would most likely become unhappy in his job and impact worker and business performance.	Situation response
78	26	<p>Early in the response to an event, clear strategies for core cooling and recovery actions should be developed and communicated to control room and ERC personnel. In addition, leaders should establish clear priorities and provide direction and oversight to enable the strategy to be implemented effectively. After the tsunami, several actions by station and corporate personnel were effective in maintaining core cooling and establishing heat removal capability</p>	A leaders ability to provide clear direction to ensure that required objective are achieved.	In providing clear direction employees are able to carry out the actions required to bring about the required objectives - D	A leader who provides clear directions allows workers to know what needs to be carried out to bring about the required objectives.	Communication
79	27	<p>...Leadership requires all those in control, at corporate and plant level, to determine the nuclear safety goals for operations and to establish and apply the corresponding priorities. I have frequently observed good examples of leadership, buttressed by on-going, transparent communication, both inside the company and with external players. Yet, I have also sometimes noticed major projects with no clear goals and over-complicated annual plans. Leadership also requires the regular on job presence of the front-line managers for their intentions to be enforced.</p>	A leader need to provide their presence to ensure objectives are met.	By being present on the floor a leader is able to re-enforce their expectations. - D	A leader who is present on the working floor is able to re-inforce his expectations which influences the business objectives	Presence/Interaction

80	28	The profession of a nuclear industry manager is an absorbing one that is difficult and demanding. It requires strong leadership, courage and tenacity, but also willingness to listen and ability to lead, conscious of the need to explain and to foster nuclear safety...Managers who remain in close contact with the field and their teams remain more confident than others. Willing to listen to the difficulties and the suggestions for improvement, they reflect the purposes behind the requirements. In their willingness to recognise efforts and by supporting initiatives but refusing the status quo as concerns the quality of nuclear safety, they inspire confidence and maintain serenity	A leaders who engages and support their workers are able to influence work performance	In engaging with workers by listening to difficulties and suggestions made they are able to inspire confidence. - D	A leader who engages with his workers by listening to their difficulties and their suggestion inspires confidence in them which influence work performance.	Engagement
81	29	At LGS a leader is one who sees a need and does something about it. A leader can be an hourly, salaried, supervisory or management employee. LGS understands that the root cause of equipment reliability is human reliability.	Any person can be leader and bring about the required performance	Any person who sees a need and does something about can bring about change - D	A leader can be any person who sees a need and does something about it to bring about the required performance	Personal drive
82	30	Leadership - Committed leadership actively promotes human performance improvement efforts. The leaders facilitate understanding and alignment within the organization of the business plans, processes, and behaviors necessary for long-term success. Leaders actively observe and reinforce behaviors to promote excellence in human performance. Effective leadership results in shared values and beliefs supportive of the stations vision.	A leaders commitment has an influence on business performance	In facilitating the alignment of workers with the business needs a leader is able to influence business performance - D	A leaders commitment in facilitating the alignment of workers to business objective influences the business performance	Commitment
83	30	The pressure on the project leadership can be tremendous. Change agents have to be able to operate during times of instability and uncertainty. They have to manage conflicting priorities, multiple constituencies and fast-approaching deadlines. They are responsible for guiding the organization through the numerous challenges of transition. Therefore, in order to survive, change agents must possess the ability to remain highly effective under intense pressure. In addition to being well organized and disciplined, change agents need strong analytical skills. Guessing won't do. Insight is nice, even useful and is sometimes mistaken for brilliance, but insight is often difficult to sell and almost impossible to defend	A leader's knowledge can direct the business in achieving the required performance.	In having the insight of what to do in situations allows objective to be accomplished under high pressure situations. -D	A leader's knowledge allows him to have the insight of what to do in situations allowing and influence business performance.	Knowledge
84	31	Participants were also asked to list the various components of successful performance improvement programs, and in that context, they were also asked what areas they trying to improve. Many of their comments, found in the body of this report, can be summarized: • There should be trust in the leadership and leadership should be honest. Symbolic management and symbolic action are important in shaping and sustaining the organizational and safety cultures.	A leader who is honest is able to influence business performance	A leaders honesty provides a symbolic actions of trust - D	A leader who demonstrates honesty provides symbolic actions of trust to workers which in turn influences business performance	Honesty
85	31	Participants were also asked to list the various components of successful performance improvement programs, and in that context, they were also asked what areas they trying to improve. Many of their comments, found in the body of this report, can be summarized: • There should be empowerment all the way down to the line to implement change and a system for relinquishing command (from one leader to another). People distributed in the field (not just a coordinator) should be able to understand and communicate to employees their personal value to the process and the benefits of their participation	A leader who empowers workers is able to influence performance	A leader who relinquishes command and allows workers to implement actions - D	A leader who empowers his workers allows them with the freedom to perform actions which can bring about better performance	Empowerment

86	32	In conducting an orchestra, it seems that covert leadership- to use Bramwell's own phrase-may be far more important than overt leadership. Leadership infuses everything that Bramwell did, however invisibly. His "doing", in other words, was influenced by all the interpersonal concerns in the back of his mind: players' sensitivities, union contracts, and so on. Perhaps we need a greater appreciation in all managerial work of this kind of covert leadership: not leadership actions in and of themselves-motivating, coaching and all that-but rather unobtrusive actions that infuse all the other things a manager does.	A leaders ability to be co-vert allows the required results to be achieved	In infusing his/her skills a leader is able to be aware of people needs, concerns and use the most appropriate method to influence them. - D	A leader that uses a covert approach is able take peoples, needs and concerns into consideration and use an infusing skills approach to bring about the required results.	Covert approach (assessing condition and using mix and appropriate style)
87	32	As already noted, leadership at the individual level is highly circumscribed. Empowerment is a silly notion here. Musician hardly need to be empowered by conductors. Inspired maybe-infused with feeling and energy – but not empowered. Leaders energize people by treating them not as detachable "human resources" (probably the most offensive term ever coined in management) but as respected members of a cohesive social system. When people are trusted, they do not have to be empowered.	A leader who establishes trust is able to achieve the required performance	By treating people with respect and part of a cohesive team, people would be energised - D	A leader who establishes trust, by treating people with respect is able to get them energised to perform to the required level of performance	Respectful (establishes trust and by doing so empowers)
88	32	He simply ensures that a group of talented people come together to make beautiful music. In that sense he is like a first-line supervisor, like a foreman in a factory or a head nurse od a hospital ward. Yet at the end of our day together, Bramwell also turned around to maintain personal relationships with key stakeholders of the organisation, the elite of the symphony's municipal society. In other words, the foreman acting on the factory floor by day becomes the statesman out networking in the Maestro's Circle-...-by night. Connecting to important outsiders –what is called linking	A leader has to apply the correct skill at the correct time to bring about the required performance	In applying the correct skill a leader would either coordinate or persuade people to reach a specific objective - D	A leader who is able to use the required skill is able to coordinate or persuade people to reach specific objectives which leads to the required performance	Situational (Applying the required skill in the required context)
89	32	The concrete floor, like the glass ceiling, is common in many of todays organisations, increasingly so as they grow bigger, as their hierarchies extend (despite so called delayering), and as their management becomes more "professional", that is more detached. Managing without an intimate understanding of what is being managed is an invitation to disharmony. External linking and dealing cannot be dissociated from internal leading and doing.	A leader who understands what is to be achieve is able to bring about the required performance	In understanding what is to be achieved a leader is able to make changes which is consistent with the business needs	A leader who understands what is to be achieved is able to make/influence changes which is in line with reaching the required business performance	Foresight(Understanding the changes required from top level to have the business run effectively at the lower level.)
90	33	And perhaps most important, the research indicates that leaders with the best results do not rely on only one leadership style; they use most of them in a given week—seamlessly and in different measure—depending on the business situation. Imagine the styles, then, as the array of clubs in a golf pro's bag. Over the course of a game, the pro picks and chooses clubs based on the demands of the shot. Sometimes he has to ponder his selection, but usually it is automatic. The pro senses the challenge ahead, swiftly pulls out the right tool, and elegantly puts it to work. That's how high-impact leaders operate, too.	A Leaders ability to use the appropriate style allows the best performance to be achieved.	In selecting the appropriate style based on the situation a leader is able to influence the situation – D	A leaders ability to select the appropriate style bases on the conditions allows him to best influence the situation leading to the required results.	situational

91	33	We found that all six leadership styles have a measurable effect on each aspect of climate... Further, when we looked at the impact of climate on financial results—such as return on sales, revenue growth, efficiency, and profitability—we found a direct correlation between the two. Leaders who used styles that positively affected the climate had decidedly better financial results than those who did not.	A leaders style has an influence on organisational performance	A leader who positively influence business climate is able to influence performance – D	A leaders who uses the applicable style to influence the business climate is able to impact business performance	Situational
92	33	It's easy to understand why of all the leadership styles, the coercive one is the least effective in most situations. Consider what the style does to an organization's climate. Flexibility is the hardest hit. The leader's extreme top-down decision making kills new ideas on the vine. People feel so disrespected that they think, "I won't even bring my ideas up—they'll only be shot down." Likewise, people's sense of responsibility evaporates: unable to act on their own initiative, they lose their sense of ownership and feel little accountability for their performance.	A long term coercive leadership style can lead to poor performance	A top down approach can lead to workers feeling disrespected and workers being disengaged - R	A long term coercive leadership style with a top down approach would result in workers feeling disrespected and worker becoming disengaged which would lead to poor performance	Long term break down
93	33	That said, the coercive style should be used only with extreme caution and in the few situations when it is absolutely imperative, such as during a turnaround or when a hostile takeover is looming. In those cases, the coercive style can break failed business habits and shock people into new ways of working. It is always appropriate during a genuine emergency, like in the aftermath of an earthquake or a fire. And it can work with problem employees with whom all else has failed.	A coercive style can bring about improved performance	A coercive style under short use can break bad habits and bring about new ways of working - D	A coercive approach applied in extreme situations can change bad habits and bring about new ways of working which can bring about improved performance	Dramatic change
94	33	Such leaders don't mechanically match their style to fit a checklist of situations—they are far more fluid. They are exquisitely sensitive to the impact they are having on others and seamlessly adjust their style to get the best results.	A leader who is situational aware is able to influence results	A leader who monitors the conditions and adjusts to accordingly is able to bring about the best results	A leader who is aware of the situation and adapts his style accordingly is able to achieve the best results	Situational awareness
95	34	Consciously and subconsciously, they were constantly testing themselves through real-world experiences and reframing their life stories to understand who they were at their core. In doing so, they discovered the purpose of their leadership and learned that being authentic made them more effective. These findings are extremely encouraging: You do not have to be born with specific characteristics or traits of a leader. You do not have to wait for a tap on the shoulder. You do not have to be at the top of your organization. Instead, you can discover your potential right now. As one of our interviewees, Young & Rubicam chairman and CEO Ann Fudge, said, "All of us have the spark of leadership in us, whether it is in business, in government, or as a nonprofit volunteer. The challenge is to understand ourselves well enough to discover where we can use our leadership gifts to serve others."	Understanding yourself is important being an effective leader	In understanding a person's core values a person is able to identify what which make them effective	In gaining an understanding of a person's inner core values a person is able to identify what make them able to be effective in leading others	Internal values that makes a person effective in leading. Self-awareness
96	34	I was in denial, as I didn't see myself as others saw me. I became a lightning rod for friction, but I had no idea how self-serving I looked to other people. Still, somewhere in my inner core the feedback resonated as true." Pottruck realized that he could not succeed unless he identified and overcame his	A leaders ability to listen allows him/her to improve himself and performance	In listening to the feedback provided a leaders is able to improve in their self-awareness	A leaders ability to listen allows him/her to improve on his/her self-awareness and in turn performance	Feedback on a person's blind spot leads to better self-awareness

		blind spots. Denial can be the greatest hurdle that leaders face in becoming self-aware. They all have egos that need to be stroked, insecurities that need to be smoothed, fears that need to be allayed. Authentic leaders realize that they have to be willing to listen to feedback—especially the kind they don't want to hear.				
97	34	Leadership principles are values translated into action. Having a solid base of values and testing them under fire enables you to develop the principles you will use in leading. For example, a value such as “concern for others” might be translated into a leadership principle such as “create a work environment where people are respected for their contributions, provided job security, and allowed to fulfil their potential.”	A leaders values influences results	A leaders internal values allows him/her to act lead according to these values.	A leaders internal values allows him/her to act and lead these values in bring about the required performance	Internal values allows for congruency in external actions.
98	34	There are two types of motivations—extrinsic and intrinsic. Although they are reluctant to admit it, many leaders are propelled to achieve by measuring their success against the outside world's parameters. They enjoy the recognition and status that come with promotions and financial rewards. Intrinsic motivations, on the other hand, are derived from their sense of the meaning of their life. They are closely linked to one's life story and the way one frames it. Examples include personal growth, helping other people develop, taking on social causes, and making a difference in the world. The key is to find a balance between your desires for external validation and the intrinsic motivations that provide fulfillment in your work.	A leader balance between internal and external motivation influence performance results	In balancing financial, social and environmental objectives leader is able to bring about holistic results	In balancing a leaders internal and external motivators he/she is able to focus on financial, social and environmental objective required for holistic performance achievement	
99	34	Authentic leaders recognize that leadership is not about their success or about getting loyal subordinates to follow them. They know the key to a successful organization is having empowered leaders at all levels, including those who have no direct reports. They not only inspire those around them, they empower those individuals to step up and lead.	A leader that empower other to lead allows organisational results to be achieved	In inspiring other to step up and lead organisational performance can be achieved - D	A leader that empowers other to lead by inspiring them to step up is able to bring about the required organisational performance	Allowing other to lead
100	35	The leader's mood and behaviours drive the moods and behaviour of everyone else. A cranky and ruthless boss creates a toxic organization filled with negative underachievers who ignore opportunities; an inspirational, inclusive leader spawns acolytes for whom any challenge is surmountable. The final link in the chain is performance: profit or loss.	A leaders moods and behaviours has an influence on performance	A leaders negative moods and behaviours has a negative effect on the people and the organisation - R	A leaders moods and behaviours influences people and the organisation which in turn has an effect on performance	Moods and behaviour. Emotional state
101	35	Everyone knows how much a leaders emotional state drive performance because everyone has had, at one time or another, the inspirational experience of working for an upbeat manger or the crushing experience of toiling for a sour-spirited boss. The former made everything feel possible, and as a result, stretch goals were achieved, competitors beaten and customers won.	A leader positive emotional state drives performance	A leaders positive state inspires people to achieve good results - D	A leaders positive emotional state inspires workers to achieve good results which drives performance	Positive emotional state influences motivation
102	35	His apparently harsh leadership style – baldly challenging employees to surpass their past performance – can be quite effective when employees are competent, motivated and need little direction	A leader who challenges workers can obtain results.	By challenging motivated, competent staff, they would strive to do better	A leader who challenges his motivated competent staff, would obtain better results	Challenging motivated staff

103	35	The most effective executives display moods and behaviour that match the situation at hand, with a healthy dose of optimism mixed in. They respect how other people are feeling—even if it glum or defeated—but they also model what it looks like to move forward with hope and humor.	A leaders who matches his moods and behaviour with the situation is able to influence performance	Being sensitive of peoples feelings but positive of the situation allows people to move forward	A leader who matches his moods and behaviour with the situation is able to be sensitive of peoples feeling but install a positive sense which influence working performance	Situation awareness. Matching behaviour and moods with situation to bring about best performance
104	36	The command-and-control approach to management has in recent years become less and less viable. Globalization, new technologies, and changes in how companies create value and interact with customers have sharply reduced the efficacy of a purely directive, top-down model of leadership.	A leader that uses a command-and control approach is unable to sustain performance	Command and control approach is unable to adapt to changing market condition - R	A leader that uses a command and control approach is unable to adapt to changing market conditions and is unable to sustain performance	Command and control. Not suitable for long term performance.
105	36	Smart leaders today, we have found, engage with employees in a way that resembles an ordinary person-to-person conversation more than it does a series of commands from on high. Furthermore, they initiate practices and foster cultural norms that instill a conversational sensibility throughout their organizations. Chief among the benefits of this approach is that it allows a large or growing company to function like a small one. By talking with employees, rather than simply issuing orders, leaders can retain or recapture some of the qualities—operational flexibility, high levels of employee engagement, tight strategic alignment—that enable start-ups to outperform better-established rivals.	A leader that personally communicates with his workers is able to influence business performance.	Personally communicating with workers allows for employee engagement –D	A leader that personally communicates with workers allows for employee engagement which influences business performance	Communication. (Has impact on employee engagement)
106	36		A leader that personally communicates with his workers is able to influence business performance.	Personally communicating with workers allows for operational flexibility - D	A leader that personally communicates with workers allows for greater operational flexibility which influences business performance	Communication (has impact on operational flexibility)
107	36		A leader that personally communicates with his workers is able to influence business performance.	Personally communicating with workers allows for strategic alignment - D	A leader that personally communicates with workers allows for strategic alignment which influences business performance	Communication (has impact on strategic alignment)
108	36	Where conversational intimacy prevails, those with decision-making authority seek and earn the trust (and hence the careful attention) of those who work under that authority. They do so by cultivating the art of listening to people at all levels of the organization and by learning to speak with employees directly and authentically... Through these discussions he gleaned information that might otherwise have escaped his attention.	A leader who listens well is able to influence performance.	By listening to workers a leader can gain their respect and trust. - D	A leader who listens to his workers can gain their respect and trust which in turn can influence business performance	Listening (communication- can lead to respect and trust)
109	37	A recent study at Whole Foods showed that employees understood the company's explicitly dual mission of earning profits and making the world a better place. Yet most people working in the stores identified with only one part of the mission—either the organization's profit focus or its social and environmental goals. When two ideas seem contradictory, choosing and championing just one can minimize cognitive dissonance. It's not surprising, then, that people often deal with paradoxical tensions by picking a side and consistently supporting it ... Tellingly, the Whole Foods research found that the employees most likely to move up through the leadership ranks were largely those who could effectively embrace both the financial imperatives and the social mission of the company.	A leader that is flexible is able to influence the required performance	In being flexible a leader is able to consider two competing objective and manage them accordingly - D	A leader that is flexible is able to consider competing objectives and manage them accordingly to reach the required performance	Flexibility (managing competing objective)

110	37	As CEO, what are you doing to manage the tensions? I try to bring them to the surface and make them explicit, so that they're right in front of people all the time—and that helps. It's important to talk about them not as a choice, where one or the other is more important, but as a balance we must continually strive to achieve ... It is much more powerful to talk about the "and" of focusing on both the short-term and the long-term objectives. By doing that, you start teaching the organization how to appreciate and deal with the inherent paradoxes.	A leader that openly discusses work objectives is able to influence performance	In discusses conflicting work objectives everyone is aware of them and can better deal with them - D	A leader that openly discusses conflicting objectives allows people to become aware of them and deal with them to reach the required performance	Open discussion (communication which leads to alignment)
111	37	In contrast, leaders who embrace paradox realize that resources, viewed in a different light, can be abundant and often generative. Rather than seeking to slice the pie thinner, people with this value-creating mindset pursue strategies to grow the pie, such as exploring collaborations with new partners, using alternative technologies, or adopting more-flexible time frames for shifting resources for better use. Over time, committing to multiple strategies can enable more resources for each. That was the case	A leader that explores options is able to influence performance	In exploring different options a leader is able to seek different opportunities to reach results - D	A leader that explores different options is able to seek different opportunities to achieve results which influence performance	Open minded/exploratory (looking at different ways to reach a solution. Similar to adaptive)
112	37	Leaders seek to reduce their followers' discomfort with uncertainty by asserting control— making decisions that minimize complexity and emphasize stability. This, too, is understandable: Traditional leadership and management theory was heavily influenced by studies of the military, which prizes regularity. Therefore, business managers have long been encouraged to build a common culture, where everyone is headed in the same direction, speaks the same language, and shares best practices.	A leader that creates structure is able to influence performance	In creating structure workers know what to do and expect which assists in performing their task - D	A leader that establish structure is able to provide workers with what to do and how to do it in reaching the required results.	Structure (road map in what to do)
113	37	Rather than seeking stability and certainty, paradoxical leadership depends on embracing dynamism and change. Leaders must be emotionally and cognitively open to the new, developing a management strategy of coping with, rather than controlling and minimizing, ambiguity. They must be humble, even vulnerable, admitting that they might not know what the future holds. This approach emphasizes the value of experimentation and failure, spurring critical feedback to enable learning and ongoing adjustments.	A leader that embraces dynamic change can impact performance	Embracing change allows a leader to learn and make the required business adjustments - D	A leader that is open to dynamic changes is able to make the required adjustment to improve performance	Adaptable (Openness to change allows for learning to take place)
114	37	Subordinates felt anxious and raised concerns about how their familiar practices, rules, and expectations would work in the new world. Rather than respond to these specific concerns, middle managers posed questions. They asked which parts of the current organizational approaches they should keep. They explored ways of meshing the existing world and the new one. Their questions opened up conversations that allowed both managers and subordinates to move away from seeking permanent solutions and instead develop temporary "workable certainties" that helped them move forward but were understood to be subject to future modification.	A leader that facilitates change is able to impact performance	In facilitating change leaders are able to get workers to transcend from an old condition to a new one without much resistance - D	A leader that facilitates change is able to get worker to transcend from an old condition to a new condition without much resistance and impact to performance	Facilitator (through discussion and openness to ideas)

115	38	Most organizations and leaders are poor at detecting ambiguous threats and opportunities on the periphery of their business... We worked with a CEO named Mike who had built his reputation as a turnaround wizard in heavy manufacturing businesses. He was terrific at reacting to crises and fixing them. After he'd worked his magic in one particular crisis, Mike's company enjoyed a bump in growth, fueled in part by an up cycle. But after the cycle had peaked, demand abruptly softened, catching Mike off guard. More of the same in a down market wasn't going to work. Mike needed to consider various scenarios and gather better information from diverse sources in order to anticipate where his industry was headed.	A leaders ability to anticipate changes allows him to maintain organisation performance	In anticipating changes through market changes allows measures to be put in place to compensate - D	A leaders ability to anticipate changes through market information allow him to put measure in place to compensate for them an maintain organisational performance	
116	38	They challenge their own and others' assumptions and encourage divergent points of view. Only after careful reflection and examination of a problem through many lenses do they take decisive action. This requires patience, courage, and an open mind ... When faced with a tough problem—for example, how to consolidate business units to streamline costs—he would gather all available information and retreat alone into his office. His solutions, although well thought out, were predictable and rarely innovative. In the consolidation case he focused entirely on two similar and underperforming businesses rather than considering a bolder reorganization that would streamline activities across the entire division. When he needed outside advice, he turned to a few seasoned consultants in one trusted firm who suggested tried-and-true solutions instead of questioning basic industry assumptions.	A leader who challenges assumptions and norms is able to influence performance	In sticking to the same methods, improvements may be hindered - R	A leader who does not challenge assumptions and norms by sticking to the same methods would restrict performance improvement	Open to different ideas (gather information to make informed decisions. Linked to being flexible)
117	38	Instead of reflexively seeing or hearing what you expect, you should synthesize all the input you have. You'll need to recognize patterns, push through ambiguity, and seek new insights. Finland's former president J. K. Paasikivi was fond of saying that wisdom begins by recognizing the facts and then "re-cognizing," or rethinking, them to expose their hidden implications. Some years ago Liz, a U.S. food company CMO, was developing a marketing plan for the company's low-carb cake line. At the time, the Atkins diet was popular, and every food company had a low-carb strategy. But Liz noticed that none of the consumers she listened to were avoiding the company's snacks because they were on a low-carb diet. Rather, a fast-growing segment—people with diabetes—shunned them because they contained sugar. Liz thought her company might achieve higher sales if it began to serve diabetics rather than fickle dieters. Her ability to connect the dots ultimately led to a profitable change in product mix from low-carb to sugar-free cakes.	A leader ability to recognise/identify patterns can influence performance	In recognising the patterns a leader is able to identify the changes that could bring about better performance	A leader that is able to recognise the pattern is able to identify changes that would bring about improved performance	Seeing trends
		Cycle 2.3				
118	11	Leadership is key and the driver in installing a positive culture and performance in an organisation. Leadership is key as they have to communicate what we are aiming to achieve and what the lower tier of the organisation has to implement. This is key in getting the individual areas of the business to reach the same objectives. Communication is the means in which leadership is able to relay what is expected.	A leader ability to communicate has an impact on business performance	In communicating effectively a leader is able to align different group to achieve the same objectives – D	A leaders ability to communicate effectively allows different departments to be aligned and work together to the same objective, to bring about the required performance	communication

119	I1	Leadership requires that you listen to workers so that you can hear what they have to say and ensure that there is alignment. In listening a leader hears the views of communities. Listening does not mean that a leader has to accept and perform what has been relayed, but it provides a reference for leader on what to consider when making improvements.	A leaders ability to listen effectively can bring about the required business performance	I listening a leader can hear what worker have to say and ensure that there is alignment in business objectives. – D	A leader who listens is able to hear what worker have to say and ensure that they are aligned to business objective, which in turn bring about the required business performance	Listening
120	I1	Different styles will help in the implementation of policies. You will also find that various styles are applicable to different situations.	A leaders ability to apply the different styles has an impact on business performance	Different styles applicable to a situation allows objective to be addressed appropriately – D	A leaders ability to apply different leadership styles allows different situation to be handled appropriately leading to better performance	Situational
121	I1	Time and place is of the essence and need you to portray an ethical stance, because if you don't it could result in your peers losing respect in your judgement. If you want the organisation to move along to an increased safety culture and improved performance you will need to gain the respect of your peers. Respect is also in the manner you would say something and how you would apply your moral ethics.	A leader ethical practice impacts performance	In behaving ethically a leader gains peoples respect an people would work collaboratively	A leaders ethical practice allows him/her to gain respect amongst people. This in turn would result in collaborative work which has positive impact of performance	Ethics/integrity
122	I1	Communication is key in achieving safety culture and performance since if we do not communicate what we need to achieve you would most likely to loose the people (workers). Communication is part of being proactive and is an important mechanism in relaying policy changes that takes place in an organisation.	A leaders ability to communicate effectively influences business performance	In communicating a leader is able to get worker engagement	A leader who is able to communicate is able to get worker engagement which in turn influences business productivity	Communication
123	I1	You need to understand that people are your asset and need to ensure that people are on top of your list of focus. A lack of trust can be the result of a leader not communicating, not adhering to what he says others must do and walking amiss from the organisation. This would result in people not believing in what a leader is saying.	A leaders who leads by example would influence performance	A leader who does not lead by example would loose the trust of his people - R	A leader who does not lead by example would loose the trust of his/her workers which would influence business performance	Leading by example
124	I2	The leader determines the performance that is required in terms of safety, quality and time. If they preach but do not practice then their actions would be adopted further down the organisation.	A leaders actions has an impact on performance	In not acting out what a leaders says, workers will similarly not follow the organisations required objectives - R	A leaders actions provides guidance to the manner in which workers would similarly act in carrying out the required objectives. This in turn affects performance.	Behaviour/Actions
125	I2	It is being able to lead the business at addressing current the current situation but also looking 10 to 15 years down the line planning for changes. The skill that is required, depends on the level at which the person finds himself. Direct leaders should know the business. The experience and wisdom, will give you foresight and vision to what to do for the future.	A leaders experience and wisdom has an impact on performance	A leader experience and wisdom allows him with the foresight and vision to plan the business future - D	A leaders experience and wisdom allows him with the foresight and vision to plan the business future which impacts business performance	Experience/wisdom (Has an impact on vision)
126	I2	The big thing about leadership is the handling of people. It's a skill of how you handle people. It's a skill one of our CEO had, in which he was able to rally people with him.	A leaders people skill has an impact on performance	People skill allows a leader to handle people and have them work with him. - D	A leader that has people skills is able to get workers to work with him to attain the required organisation performance	People skill (Ability to influence people)
127	I2	Hitler was a good leader in a specific context. Any person can be a leader depending on the context.	Any person can influence performance	Depending on the context a person can influence a situation to achieve an objective - D	Any person can influence a situation to achieve the objective of reaching a specific performance level	Situational (knowing the situation and influencing it to bring about change)

128	I2	Mandela and Mbeki were doing the same thing but who got more done? (Mandela). It is the way he came across and the belief in what he was driving. That is why he was able to change so much.	A leaders authentic belief has an influence on performance	A leaders belief in what he would want to achieve inspires and drives people - D	A leaders authentic belief can inspire and drive people which can influence performance	Authentic belief/drive
129	I2	A leader can put a team together that works for him. A dictator style can work when a leader is able to choose who he want to work for him.	A leader can formulate a team to bring about the required performance	A selecting specific team members a leader can attain specific results - D	A leader can select specific team members to bring about results which affects performance	Teamwork (short term or specialised teams)
130	I2	What are you (leadership) driving towards? If you want good then you will achieve good.	A leader internal values can drive performance	A leader who wants to achieve good would be able to drive and motivate people towards this. - D	A leaders internal values would allow him to motivate and drive workers towards achieving the goal which would in turn influence performance	Internal values (drive to reach safety/good will influence them to drive people)
131	I2	Incentives are not leadership. The ability to find deficiencies are plug them are. Not finding out what is are the deficiencies will not improve the situation. Finding out that people are not feeling worth and providing an incentive for to value them is a better means to value people.	A leaders ability to identify deficiencies impacts performance	The ability to identify what is wrong and put a solution in place - D	A leaders ability to identify deficiencies and correct them allows performance to be improved	Resolve problems
132	I2	Are there any aspects that relay to bad/in-effective leadership? When leaders don't see when there is a problem. Listening is an aspect to that. If you don't then you will not find the problem.	A leader that is closed minded has an effect in performance	A leader who is close minded as does listen is not able to identify problems - R	A leader who is closed minded and does not listen is not able to identify problem which is hindering performance	Closed minded (linked to not willing to listen or have a different perspective)
133	I2	The question is whether you would shut the unit down if a high level call (say the president) is made. The situation that we found ourselves during load shedding had us in the similar situation and if the unit could still be run but with there was a safety concern, the question as to whether our leadership would have shut the unit down is a tight one. My answer is that "I do not know" given the situation our country and leadership is in.	A leaders boldness can influence performance	A leaders ability to act or not act on a bad decision can influence the way workers perceive him - D	A leaders boldness in acting against or with a bad decision can influence the manner in which workers perceive him and in the manner in which their work performance.	Boldness (linked to internal belief and has impact on people perception and trust of the leader. Pressure that imposed from top)
134	I2	Dictators and micro managers push people to leave the company	A leader who dictates over the long run negatively impacts performance	In dictating and micromanaging people they eventually leave the company - R	A leader that dictates leads to people leaving the company over the long term and has an impact on performance	Dictating (has an impact on trust)
135	I2	People management skills are very good at developing you and not managing you. If you wrong, then you wrong but you can grow from the mistakes	A leader with people skills is able to foster better performance	In allowing workers to perform and correct them when they err, workers are able to perform better. - D	A leader with people skills is able to allow workers to perform and correct them they make mistakes. This allows them to grow and improve business performance	People skills (holding people accountable but guiding them also)
136	I2	No matter where you go groups will pick a leader. Ones that jump up are dictators not leaders. Groups with no constraints will select a leader or if not selected one that steps up to lead the situation. This is a bottom up approach. A top down approach is when an organisation selects a person to influence an organisation and its performance. The right person at the top would naturally drive what is good and would naturally. Its human nature to want to be led. In an organisation you will also have to pick a leader.	A leader initiates change	Through naturally selection or steps up to the task a leader is able to bring about the required change	A leader is naturally selected or steps up to a task and is able to lead a group to the required change	Natural direction (internal drive to bring about change or attributes noted by group that would lead them to desired condition)
137	I3	I think that leadership is about being visible and listening to workers. It is when leadership engages with workers that they become assessable.	A leaders accessibility has an impact on performance	In not being available does not make it possible for workers to	A leader that is not accessible has an impact on workers being able	Accessibility

		When you have issues and they are not assessable that it is hard to go to them for help.		gain help – R	to gain help when needed which impacts work performance	
138	I3	Leaders being open and transparent, whereby if we have a crisis, then just being open and informing people on time on what is happening. But when we find it (information) on the media then leaders are not being open. Remember, know we get people that are grumpy and work against leaders.	Leader who are not open and transparent negatively influence worker performance	When leaders withhold information and the information comes to light workers may become aggrieved and work against a leader- R	Leaders who are not open and transparent about information and the information's comes to light, would result in workers being aggrieved and working against them which would affect business performance	Communication (Providing people with information be it good or bad)
139	I3	He informed the staff that that it is a new department for him, but he wished to work collectively with them. He went around in the morning greeting people and to find out how they were doing. This created a positive vibe.	A caring leader is able to influence worker performance	A leader who greets his workers and enquire about their wellbeing is able to establish a positive work vibe - D	A leader who cares for his workers, by greeting and enquiring about their wellbeing is able to set a positive work environment which influence worker performance	Caring (Showing interest and setting a positive environment)
140	I3	People are resigning, with us hearing that strategies are being put in place to retain staff. Strategies have milestones, but as staff we are not made aware of these milestones. This has created mistrust as staff feel that their leaders are not being open with them	A leader who communicates with his staff is able to influence their performance	Not communicating leads to mistrust amongst workers and leaders - R	A leader who does not communicate with his staff, will create mistrust which effects worker performance	Communication (lack of communication leads to mistrust)
141	I3	Corruption would hinder performance. Negative publicity. We have to defend the organisation which is not our function. Currently condition that there is no trust at the top level which transcends down to the workers.	A leader who is corrupt has a negative impact on performance	A leader that is corrupt, causes distrust - R	A leader that is corrupt causes distrust in the organisation which affects the organisations performance	Corruption (dishonesty in the manner in which he act or carries out duties)
142	I3	Are there aspects of leadership that promotes organisational performance? When things are not possible and he would say it (it not possible) you would understand. Saying it as it is. When I leave the room we are both on the same page.	A leader that is open and honest has an impact of performance	Indicating if things are possible or not informs workers to a common understanding – D	A leader that is open and honest, in indicating what is possible and what is not allows workers to be gain a common understanding which has a positive impact on worker performance	Opens and honesty (brings common understanding)
143	I3	A leader that also looks at the growth of people. You have person A and B. A will have a structure that will develop people. Mentor, coach and finding out the progress of workers along the way. We have this in place but leader are not driving it	A leader that develops worker positively influence worker performance	Through coaching mentoring and personal follow-ups a leader is able to grow workers - D	A leader that develops worker through coaching, mentoring and personal follow-up is able to ensure their professional growth which influence worker performance.	Mentoring (mentoring, coaching and follow ups)
144	I3	Leaders that have knowledge from books and institutes and wisdom gained from feedback from people. Bring these together allows people to get to the solution. Leaders give short explanations and you are able to execute. Being able to simplify and make things easy to understand.	A leader with experience is able to influence worker performance	Experience allows for concise explanation/guidance which assist in the execution of work - D	A leaders experience allows him to provide concise guidance which assist workers in executing their work and in turn the performance.	Experience (being able to guide people is effective manner)
145	I3	One of the manger would look around the room and if he saw many new people he would explain the effects of a job. When the team left meeting everyone understood their job.	A leader mentoring approach influence business performance	Explaining the job and its implications bring the team to a common understanding - D	A leaders mentoring approach allows him to explain a job which bring everyone to a common understanding. This in turn influence business performance	Mentoring (linked to team work)
146	I3	Is the current leadership effective? No since it the same leadership that is leaving the organisation. So there is no trust.	Constant change in leadership affect worker performance	Constant change has an impact on worker trust	Constant change in leadership has an impact workers trust and the performance	Change (has impact on trust)

147	I4	It has a massive influence. We take our direction from leadership. We use what they portray as example ... But if you have bad leadership, the people that are on the 'right path' then you will not get the output that you require.	A leaders bad actions have an negative influence on performance	Bad actions may would not lead people to the required objectives - R	A leader with a bad actions would not be able to lead people to the required objectives resulting in the business objectives not being met	Action (negative actions or misguided intents will not lead to the required objectives)
148	I4	Are there any aspects that relay to good/effective leadership? One of the good leaders that I can talk, had a way of communicating and would share information. He showed allot of care to the staff and looked at their growth. When he was around it felt like growth and development was taking place even though there were limitations. He gave people opportunities that lead to confidence in them doing their work, and which also had people putting more than they needed to into their work. He paved the way for others and knew what to do next, skilling staff up and put them in place. He gave managers the confidence and ability to act and allowed people to take initiative.	A leaders ability to communicate influences business performance	In sharing information a leader would inform people and guide people – D	A leader that communicates with people by sharing information provides guidance to people which influence business performance	Communication (sharing and informing people of what is happening)
149	I4		A leader that care for peoples is able to influence performance	A leader that looks at peoples growth would nurture confidence in them - D	A leader that cares for workers in looking at their growth and development is able to nurture confidence in them which has a positive influence on performance	Caring (nurtures people to be able to perform
150	I4		A leader that develops staff is able to influence performance	By developing staff a leader provides them with the skill to perform the required tasks - D	A leader that develops staff in providing them with the skill to perform the required task is able to influence performance	Mentoring (skilling and providing exposure)
151	I4	When a specific department was part of our group, they use to be located in JHB and we were in CT. This was a messy relationship in as far as communication and output an willingness to work together, which lead to misunderstanding and difficulty in working together. This was as a result of a lack of dealing with the concerns of the people in JHB and a lack of business knowledge. What stood out was that there was an avoidance of addressing the situation and not investigating what was going wrong	A leader that avoid addressing problem would negatively influence performance	In avoiding addressing problems misunderstanding is created and a lack of willingness to work together is established - R	A leader that avoids dealing with problems creates a lack of willingness of staff to work together and misunderstanding is created which influence performance	Avoid dealing with problems (not addressing the source of problems)
152	I4		A leader that does not develop staff affect business performance	A lack of business and process knowledge lead to misunderstanding and difficulty in working with others - R	A leader that does not develop staff would lead to staff not having knowledge of business and its processes. This leads to difficulty in worker interaction and has a negative effect on performance	Mentoring (training and development of business)

153	14	Trust permeates the organisation for me stands out the most in the condition that the organisation finds itself in. I feel that in the current condition that the organisation denies specific information and sends out surveys. The perception we getting is that everything is not ok. When we talk about trust we want to know that if it is bad that they relay that it is bad. The organisation may feel sensitive but we are professionals and can manage. This causes a disconnect that we say that trust should permeate the organisation but it is not there. Trust builds loyalty and with loyalty people would dig down in situation that are difficult rather than excluding themselves	A leader open communication has an impact on performance	Open communication leads to trust, which in turn influences worker loyalty - D	A leader that openly communicates with people is able to establish trust, which leads to worker loyalty. This in turn influences business performance	Open communication (telling people what the actual conditions are. This leads to trust and then loyalty.
154	39	The companies we work with are concerned about uncertainty and instability stemming from public distrust of the businesses and institutions that serve them. We can't afford to assume someone else will guide us through today's uncertain outlook. It will take collective effort and will require those of us in positions of leadership to be more responsive and more responsible. That means leaders need to think more broadly and be much more aware of the impact our work can have on society – something that my colleagues across KPMG are energized to continue doing	A leader that is responsible is able to effect long term performance	A leader that is responsible and considers the impact of his decision is able to gain the peoples trust in the long run. - D	A leader that is responsible and considers the impact of his decisions is able to gain peoples trust in the long run which affects the performance of a business	Responsibility (consideration for the effects of decisions which relays to gaining trust of people)
155	39	With an increased drive for transparency, today's leaders will have unique opportunities to communicate to a captive public audience – an audience that, instead of being solely focused on what businesses are doing, want to know how and why. This process will lead businesses to consider the long-term impacts of their choices, whether it relates to the amount of taxes they pay, the jobs they create, or the investments they make.	A leaders transparency would influence sustainable performance	In openly communicating to people a leader will need to consider holistic information - D	A leaders transparency in communicating with people will require that he needs to consider holistic information which would determine business sustainable performance	Transparency (provide full information, links to alignment and direction)
156	40	This far-sighted approach took real leadership. It took the courage to break the mold to do something different. It also took vision to broker the compromises that led to the company's success. It's worth asking yourself: what are you working on now that you really believe in? Where do you or your company need to show more flexibility	A leader that is flexible is influence organisation performance	Being able to do try different ways to achieve something which lead to successful results – D	A leader that is flexible in trying different ways to achieve something can attain organisational successful	Flexibility (having the courage to try something different, adaptable may also be linked)
157	40	Amid so much uncertainty, defining your company's reason for being – its purpose – in a "big picture" narrative is crucial for instilling strategic clarity, motivating staff, driving innovation beyond the short term and creating a broader positive impact	A leader that establishes purpose has a positive impact on business performance	Providing the bigger picture to workers, provides clarity, motivation and innovation – D	A leader that establishes purpose by providing the bigger picture to workers is able to provide clarity and install motivation and innovation which would positively impact business performance	Purpose (linked to alignment. Knowing what is to be done and why)
158	40	To me, leadership is about being responsive and inclusive. It is about creating a business that thinks long-term for its clients, people and communities. It's about diversity of thought. That's how you get successful solutions to complex problems. And that's what is needed from all of us: leadership and courage.	A leader that is inclusive can positively influence performance	Gaining diversity in thoughts allows for the identification of solutions to complex problems - D	A leader that is inclusive is able to gather a diversity in thoughts in identifying solution to complex problems which would influence performance.	Inclusiveness (may be linked to listening but, also ability to have diversity)

159	41	To keep up, we all have to separate the long-term signal from the short-term noise ... In my view; there are three key actions for business leaders to consider... In today's world, strong communication skills are of the utmost importance. If you don't explain your strategy well, investors — and even your own people — won't understand why they should trust you.	A leaders ability to communicate effectively influence relations	A leaders ability to explain his strategy well allows trust to be established - D	A leaders ability to communicate well his strategy allows trust between workers and stakeholders which influences relations	Effective communication (links to clarity and trust being built)
160	41	In my view; there are three key actions for business leaders to consider... We're using technology to create more remote-working opportunities along with new tools to promote collaboration and teaming. We're opening ourselves up to a variety of work settings, and communicating our new emphases on trust, collaboration and results in the workplace. We expect these changes will make our people not just happier, but also more successful and productive.	A leader that is open to alternative options is able to influence performance	Being open to alternative option of work arrangements and collaboration can make workers happier and more productive - D	A leader that is open to alternative options such as collaboration and working arrangements is able to make workers happier and more productive	Open to alternative (consideration of alternative to achieve result but is based on trust)
161	42	Now more than ever before, leaders and the organizations they lead must be prepared to navigate uncertainty and embrace experimentation to thrive in an environment of intense, change-driven ambiguity... Tim Kobe, founder and CEO of Eight Inc., argues that it's time to think of the company as an organism rather than an organization. Like an organism, companies must have a number of receptors to sense their market environment.	A leaders ability to identify and react to change would have an influence on business performance	In identifying and monitoring change, uncertainty can better be handled - D	A leader ability to identify and react to change, would allow uncertainty to be better managed and in turn influence performance	Sense and react (looking at for changes and acting on them to bring about the desired outcome-disruption)
162	42	To effect the change that will allow them to thrive in uncertainty, they need to focus more on shifting mindsets and leadership principles to cultivate human capabilities. After all, what's disruptive is not just technology; it's having the imagination and creativity to connect the seemingly unconnected. Key to making these connections is fostering "productive collisions," interactive cross-functional conversations at scale within the company.	A leader that fosters human capabilities is able to influence business adaptability	In allowing workers to be imaginative and creative a company can adapt to market changes - D	A leader that foster human capability would allow workers to be creative and imaginative allowing a company to adapt to changing conditions	Human capability development (may be linked to mentoring)
163	42	Create open workspaces. Foster imagination. Make space for productive collisions. Put business thinkers and creative thinkers together to have productive conversations that move things forward. And continue to think about the human outcomes that we frame everything against. These are some of the actions leaders can take to make their organizations ready for the disruptions ahead.	A leader that promotes teamwork is able to influence changing market conditions	By getting different working teams to work together solution can be formulated to take a company forward - D	A leader that promotes teamwork by getting different working teams to work together is able to achieve solution which would influence changing market conditions	Team work (solutions to address changing conditions)

164	43	Purpose helps organizations navigate uncertainty. As Helena Norrman, Ericsson Chief Marketing Officer, told us, their purpose helps give her company a line of sight to the future. Although the scope of the change facing the Swedish telecommunications giant is so vast it is impossible for employees to be aware of all that is happening, a sense of common purpose helps keep them heading in the same direction	A leader who establishes purpose is able to affect long term objectives	During constant change a sense of common purpose helps workers to head in the same direction	A leader that establishes a purpose is able get worker to head in the same direction during constant changing conditions allowing long term objectives to be met.	Purpose (a sense of common direction and normal or changing conditions)
164	43	Purpose simplifies day-to-day management. By encouraging company leaders to focus on the horizon, purpose helps them consider their internal systems holistically — a habit that suits today's flatter, more diverse and intrapreneurial organizations.	A leader who establishes purpose is able to simplify business process	Purpose identifies what needs to be performed which allows other non-essential aspects to be ignored	A leader that establishes purpose, allows what needs to be performed to be identified, which simplifies work process	Purpose (affects simplification (focus) of what needs to be done)
166	44	In my current job, I'm responsible for a large group of people. I strongly believe in a motivational leadership style, which is similar to how I see my role as a mother... I don't take my staff by the hand either, and I give them a lot of space. At the same time, I'm in the driver's seat. And, as every mother learns at some point, you mustn't want to do it perfectly, and you take life as it comes with a smile.	A motivational leadership style allows workers to grow and work to be delivered	Setting out the requirements but providing staff with the space allows them to perform and grow - D	A motivational leader sets the work deliverable but allows staff the freedom to deliver and grow in the process	Motivational (linked to coaching style)
167	44	Telling CEOs these days that leadership drives performance is a bit like saying that oxygen is necessary to breathe... Operating with a strong results orientation. Leadership is about not only developing and communicating a vision and setting objectives but also following through to achieve results. Leaders with a strong results orientation tend to emphasize the importance of efficiency and productivity and to prioritize the highest-value work	A leader that is results oriented is able to influence business performance	Focusing on efficiency and productivity allows high value work to be prioritised - D	A leader that is results orientated in focusing on efficiency and productivity is able to prioritise high value work which increase business performance	Results oriented (focusing on important items to bring about objectives)
168	44	Telling CEOs these days that leadership drives performance is a bit like saying that oxygen is necessary to breathe... Seeking different perspectives. This trait is conspicuous in managers who monitor trends affecting organizations, grasp changes in the environment, encourage employees to contribute ideas that could improve performance, accurately differentiate between important and unimportant issues, and give the appropriate weight to stakeholder concerns. Leaders who do well on this dimension typically base their decisions on sound analysis and avoid the many biases to which decisions are prone	A leader that seeks multiple perspectives is able to influence performance	In monitoring trends, changes and getting new ideas better informed decisions can be made - D	A leader that seeks multiple perspectives, by monitoring trends, changes and getting new ideas allows him to make better informed decisions which influences performance	Multiple perspectives (being open to ideas and aware of changes and influence. Helps make better decisions)

169	44	Supporting others. Leaders who are supportive understand and sense how other people feel. By showing authenticity and a sincere interest in those around them, they build trust and inspire and help colleagues to overcome challenges. They intervene in group work to promote organizational efficiency, allaying unwarranted fears about external threats and preventing the energy of employees from dissipating into internal conflict	A supportive leader is able to influence worker performance	In being authentic and showing sincere interest a leader can establish trust and inspire people - D	A supportive leader who sincerely listens and is authentic can install trust and inspire people which in turn has an impact on worker performance	Supportive (understanding people and their needs and helping them)
170	45	Mobilizing horizontally means walking the halls, getting out of the office to share ideas with peers, listening to their concerns, and working jointly to attack strategic issues. In theory, leaders could do many of their interactions on video these days. But that's rarely inspiring. Instead, the best leaders connect directly with as many people as possible through town halls when they travel to local markets, and hunker down to help teams solve their biggest problems	A leader who is present of the floor is able to influence worker performance	In interacting with people a leader can connect with people - D	A leader that is direct present to people is able to interact and connect with them which influences there performance	Direct presence (has impact in connecting and engaging with people. This can lead to inspiring and influencing)
171	45	If you want to build a "movement" within the company, lead from the front with an inspiring story to win the hearts and minds of colleagues, including those who don't report to you, and with a clear action plan to deliver tangible results. That can initiate a virtuous circle of internal recognition by energizing a cadre of early followers among colleagues. Our research suggests that leading from the front and having a strong narrative together explained nearly 10 percent of business impact and about 20 percent of career success.	A leader that leads from the front is able to influence organisational performance	Providing people with an inspiration story and a clear plan to meet objective would result in buy-in. - D	A leader who leads from the front by providing people with an inspirational story and providing a clear plan to meet objectives are able to get peoples buy-in and in turn influence business performance	Leading (setting the direction through narrative and plan)
172	46	Bullying bosses impose costs on people and organizations that are manifold—and often hidden. Hundreds of experiments show that encounters with rude, insulting, and demeaning people undermine others' performance, including their decision-making skills, productivity, creativity, and willingness to work harder and help coworkers	A bullying leader has a negative influence on performance	Bullying has an effect on peoples creativity, willingness to work harder and help coworkers - R	A bullying leader has an effect on peoples creativity, willingness to work harder and help coworkers which influence business performance	Bullying (disrespecting people which leads to disengagement of people, may be linked to behaviour)
173	46	This CEO devoted big chunks of time to deflecting and arguing with the board bully to protect his team members. That bolstered their well-being and contributed to stronger company performance. What is your Achilles heel? The board member was part of the problem, but that CEO wasn't. He avoided falling prey to power poisoning, took it upon himself to shield his people from the director's antics, and treated them with respect. The earlier leaders can develop this perspective on power, the easier it is to sustain throughout their careers.	A leader that is respectful is able to attain greater work performance	In being respectful a leader is able to increase people's well-being and work contribution. - D	A leader that is respectful increases peoples well-being and work contribution which improves work performance	Respectful (treating people with kindness and decency)

174	46	The upshot is that being a respectful, civilized leader is a personal philosophy that can shape how you view life, the actions you take, and how you judge yourself—and provide a framework for leading your team and organization. If you want to be part of the solution rather than part of the problem, it helps to keep a few lessons in mind about how to live this philosophy despite the hubbub and hassles of executive life and in light of our all-too-human flaws and biases	A leaders values has an influence on performance	A leaders values directs his actions and the manner in which people are treated - D	A leaders values directs his actions and the manner in which people are treated which influences performance	Values (internal beliefs and experiences which has impact on actions)
175	46	The wild ride continued, but the team members tolerated the leader's sometimes rude humor because they had the confidence to throw it back. The give-and-take brought them closer and made the CEO mindful of how his words and deeds could bruise people's feelings.	A leader that is open to critique is able worker performance	Receiving feedback from workers makes a leader mindful of his actions and its influence on workers - D	A leader that is open to critique is willing to receive feedback which makes him mindful of his actions and its influence of workers and their performance	Open to critique (open to receive feedback. Has an impact on behaviour correction)
176	46	Beware of contagion. If you are around a-holes, you are likely to catch the disease because bad behavior is so contagious. Trevor Foulk and his colleagues have demonstrated how rudeness spreads like a common cold. Research subjects who encountered even one rude partner in simulated negotiations were prone to become carriers and to be rude during their next negotiation, even with a different partner	A leaders behaviour has an impact on other workers	Bad behaviour leads to bad behaviour by workers which influences – R	A leaders bad behaviour leads to workers who adopt the same behaviour which influences worker performance	Behaviour (manner is which a leader acts. Is likely to be adopted by others)
177	46	He added that when executives were out in the open, there were more casual exchanges and fewer barriers. Brown believed his job was "to get to know the people and how they work, and I can't learn much sitting in a private office." The lesson isn't that every executive should move out of his or her office. Rather, it's that finding ways to reduce the power distance between you and others decreases your employees' stress, increases their contributions,	A leader that is visible is able to influence worker performance	Being in the open allows people to approach and interact with leaders which reduces, stress and increases contributions – D	A leader that is visible allows people to interact with him allowing them to make contribution and reduce the stress in the environment. This in turn improves worker performance	Visibility (availability to talk and interact with people. Allow for listening to take place and trust to be established)
178	46	The CEO emphasizes that so long as employees aren't selfish or crazy, he doesn't mind when such conversations get heated. Problems are much easier to tackle when facts and associated feelings are put on the table—as long as there is mutual respect	A leader that is respectful is able to influence business performance	Allowing others to put forward their ideas an feelings in addressing problems - D	A leader that is respectful allows others to put forward their feelings and ideas in addressing problem which can influence business performance	Respect (has impact on allowing others to put their views, ideas and feeling forward)
179	46	Understand the risks of overload . . . and technology addiction. Being in a rush, having too much to do, and having too many distractions can turn even the most civilized person into a jerk—a CEO's workload makes him or her especially susceptible to this malady	A leader that is over occupied is likely to impact worker performance	Being distracted with many things leads to being distracted and behave inappropriately – R	A leader that is over occupied can be distracted and behave inappropriately which has a negative impact on worker performance	Over occupied (doing to much at the same time, impacts behaviour. Being focus is opposite case)
180	46	He became more empathetic, a better listener, a better leader, a better partner." Catmull says that the more thoughtful and caring Steve Jobs was the one who created the incredibly successful Apple. Jobs remained a notoriously tough negotiator, a challenging person to argue with, and a perfectionist.	A leader that is empathetic is able to influence business performance	A leader that is thoughtful and caring whilst being firm on the objectives is able to influence workers – D	A leader that is empathetic in being thoughtful and caring to worker, but firm on the objectives is able to influence workers and business performance	Empathetic (caring and being thoughtful. Good result when combined with objectives)

181	47	He's also heard the regrets: sometimes managers underestimated how critical their situation was—or they were looking at the wrong data. Others took advantage of easy access to cheap capital to stay the course in spite of poor performance, believing they could push through it. Still others got so caught up in the pressure for short-term returns that they neglected to ensure their company's long-term health—or even willfully sacrificed it	A leader that is holistic is able focus on the required performance	Focusing on short term results or the wrong data could lead to long term objectives not being met - R	A leader that is not holistic in viewing information and who focus on short term results may not achieve long term objective and the required performance of the business	Holistic (considering all factors)(this may be focused on business execution)
182	47	If you can tell that story in a paragraph or less, in a way that means something to the average guy on the front line, then people will get on board. In this case, employees wanted to have their children and their grandchildren work for this company in the same remote mining location, and the change story spurred them to action. The key was a simple message, not fancy metrics.	A leaders ability to tell a story influence worker performance	In telling a short concise story a leaders is able to spur people to take action - D	A leaders ability to tell a story in a concise manner is able to spur people to take action and influence worker performance	Story telling (relay motivating message in concise manner)
183	47	Managers need to use words like crisis and urgency from the first moment they recognize the need for a turnaround. A company that's in true crisis will be willing to try some things that it normally wouldn't consider, and it's those bold actions that change the trajectory of the company. Crisis drives people to action and opens managers up to consider a full range of options.	A leader that uses the appropriate style given a condition is able to influence performance	Using a crisis approach in a crisis drives people to take action and propose different options - D	A leader that uses the appropriate style during a crisis is able to get people to propose options and take action which would impact performance	Situational (using the correct style allows the correct response from people)
184	47	These are the fence-sitters, and they are tuned into action, not just talk. They see the changes going on, and if you proactively work with them, then 80 percent of the organization will be behind you. But if you don't give them a reason to stand up and be positive about the company, they'll go negative.	A leaders proactivity influences worker performance	In relaying a plan a leader is able to get workers to work with him - D	A leader that is proactive in relaying his plan is able to get people to work with him to influence performance	Plan (proactive engagement through what to do)
185	47	And more often than not, they are incapable of the shift in mind-set needed to make fundamental changes to the operating philosophy they've believed in for years. Whether they realize it or not, they block that change because they're bent on defending what they believe to be true.	A leader that cannot adapt will not improve performance	Being incapable of shifting a mind set required for change - R	A leader that cannot adapt is incapable of shifting his mind set required to change to improve performance	Adaptable (being able to do things or think in a different manner)
186	48	And some team members chosen weren't even direct reports but from the next level of management down, as the CEO recognized the importance of having the right expertise in the room, introducing new people with new ideas, and coaching the next generation of leaders.	A leader that promotes team work can influence performance	Developing teams allows for new ideas to be gathered	A leader that promotes team work allows new ideas to be gathered which influences business performance	Teamwork (getting ideas from collaboration)
187	49	... They were significantly less effective at implementing organizational strategies than ... We call these leaders Opportunists, a title that reflects their tendency to focus on personal wins and see the world and other people as opportunities to be exploited. Their approach to the outside world is largely determined by their perception of control—in other words, how they will react to an event depends primarily on whether or not they think they can direct the outcome. They treat other people as objects or as competitors who are also out for themselves.	An opportunist leader has a negative impact on performance	Looks at personal wins and people as opportunity to exploit. Treats people like objects. - R	A leader that is opportunist looks at person wins and people as opportunity to exploit. He treats people as object which in turn has a negative impact on long term business performance	Opportunist (looks at meeting own gains at expense of others)
188	49	Opportunists tend to regard their bad behaviour as legitimate in the cut and thrust of an eye-for-an-eye world. They reject feedback, externalize blame, and retaliate harshly.	An opportunist leader has a negative impact on performance	Justifies bad behaviour and rejects feedback - R	An opportunist leader justifies bad behaviour and rejects feedback which has a negative effect on business performance	Opportunist (associated with bad behaviour and rejects feedback)
189	49	Diplomats are much more problematic in top leadership roles because they try to ignore conflict. They tend to be overly polite and friendly and	A leader with a diplomat style has a limiting effect on	Overly politeness, avoidance of conflict makes it difficult to	A leader that is diplomatic is overly polite and avoids conflict which	Diplomatic (being polite, agreeing and

		find it virtually impossible to give challenging feedback to others. Initiating change, with its inevitable conflicts, represents a grave threat to the Diplomat, and he will avoid it if at all possible, even to the point of self-destruction.	performance improvement	provide challenging feedback - R	makes it difficult to provide challenging feedback required to improve business performance	avoiding difficult situations)
190	49	When subordinates talk about a my-way-or-the-highway type of boss, they are probably talking about someone operating from an Expert action logic. Experts tend to view collaboration as a waste of time ("Not all meetings are a waste of time—some are canceled!"), and they will frequently treat the opinion of people less expert than themselves with contempt. Emotional intelligence is neither desired nor appreciated.	A leader that uses an expert approach has a limiting effect on performance	An expert tends to have a single tracked thought with limited collaboration – R	A leader that uses an expert approach has a single tracked thought process and limits collaboration which limit performance enhancement	Expert (knowing the information and process well but does not work with others)
191	49	They know that creatively transforming or resolving clashes requires sensitivity to relationships and the ability to influence others in positive ways. Achievers can also reliably lead a team to implement new strategies over a one to three-year period, balancing immediate and long-term objectives.	A leader with an achiever style is able to positively influence	An achiever is sensitive to relationships and positively influence others. – D	A leader with an achiever style positively influence relations and is sensitive to relationship which are required to improve business performance.	Achiever (builds relations and implement strategies to bring about change)
192	49	For those who hope someday to work for a manager who both challenges and supports them and creates a positive team and interdepartmental atmosphere, the good news is that a large proportion, 30%, of the managers in our research measured as Achievers. While these leaders create a positive work environment and focus their efforts on deliverables, the downside is that their style often inhibits thinking outside the box.	A leader with an achiever style can bring about the required performance	An achiever creates a challenging environment, creates and supports teams and focuses on delivery. - D	A leader that has an achiever style, creates a challenging environment and creates, supports teams and focus on delivery. These bring about the required business performance.	Achiever (focus on results, through collaboration and challenging)
193	49	The Strategist is also adept at creating shared visions across different action logics—visions that encourage both personal and organizational transformations.	A strategist leader can influence business performance improvement	A strategist can create a shared vision that encourages transformation - D	A strategist leader can create a shared vision amongst people to encourage transformation and improved performance	Strategist (leading a way for change)
194	49	Strategists deal with conflict more comfortably than do those with other action logics, and they're better at handling people's instinctive resistance to change. As a result, Strategists are highly effective change agents	A strategist leader is able to influence a change in performance	A strategist is comfortable in dealing with conflict and peoples resistance to change - D	A strategist leader is comfortable in dealing with conflict and peoples resistance to change making him ideal in bringing about change in performance	Strategist (anticipates resistance and conflict and works around these to bring about change)
195	49	...the Alchemist has an extraordinary capacity to deal simultaneously with many situations at multiple levels. The Alchemist can talk with both kings and commoners. He can deal with immediate priorities yet never lose sight of long-term goals.	An Alchemist leader is able to affect long term performance	An alchemist is able to deal simultaneously manage different situations, manage immediate priorities and still be focus on long term goals - D	An Alchemist leader is able to simultaneously deal with multiple situations, manage immediate priorities and still focus on long term goals to positively effect performance	Alchemist (being able to manage multiple situations seamlessly)
196	49	Alchemists are typically charismatic and extremely aware individuals who live by high moral standards. They focus intensely on the truth. Perhaps most important, they're able to catch unique moments in the history of their organizations, creating symbols and metaphors that speak to people's hearts and minds.	An alchemist is able to affect performance	An alchemist have a high moral standard and focus extensively on the truth and with their charisma are able to speak to the hearts and minds of people - D	An alchemist has a high moral standard and focuses extensively on the truth and can speak to the hearts and with their charisma speak to the hearts and minds of people, allowing performance to be affected	Alchemist (focused on truth, moral driven with charisma)

197	50	It has a massive influence. We take our direction from leadership. We use what they portray as example. Some people may but be on the right path, but with good leadership strategy it allows people to follow and meet what is expected	Leadership actions have an impact on business performance	What leaders do and how they act provides direction to what people do in turn - D	A leader's action in terms of what he does and how he acts provides direction to people who in turn they do. This has a direct impact on business performance	Actions (doing what they say and setting the examples)
198	50	Developing a cohering purpose, such as community growth, poverty reduction or environmental friendliness at the core of business strategy influences decision-making, inspires employees and customers, and builds trust — an increasingly essential ingredient	A leader that establishes purpose would influence business performance	A in establishing purpose workers and customers are inspired and trust is built - D	A leader that establishes a purpose would inspire customers and worker and would build trust which would improve business performance	Purpose (People knowing what they working towards or for)
199	50	Operating a business with a strong sense of purpose should not only bring about change in the wider world, but also bring on board more trade and better talent. It should also highly motivate existing workforces, who will be prepared to go the extra mile because they know they are not just working for the shareholders' bottom line, but for something bigger than both themselves and the company.	A leader that creates a good purpose influences business performance	A purpose would motivate staff and bring about required change - D	A leader that creates a strong purpose would motivate staff and bring about change which would positively influence business performance	Purpose (can motivate staff to go the extra mile)
200	51	In a sample of 251 employees and their 78 managers, analyses revealed that the quality of relationships between leaders and employees mediated the influence of transformational leadership on employee task performance and OCB. We also found that change frequency moderated the positive association of relationship quality with task performance and OCB, such that associations were stronger when change frequency was high.	A leaders relationship with workers influences task performance	The quality of relationship between a leader and worker influence task performance - D	The quality of relationship between a leader workers influences worker task performance	Foster relationships (quality of relationships)
201	52	The findings validate not only the basic notion that transformational leadership influences salespeople to perform "above and beyond the call of duty"	A transformational leader has a positive impact on business performance	A transformational leadership style has worker put in extra effort in their work - D	A transformational leader influence workers in that they put extra effort into their work which increases business performance	Transformational (worker putting extra effort in)
202	52	Of course, this is not to say that sales managers should ignore the potential impact of transactional leadership behaviors. In the present study, we found that contingent reward behavior had positive effects on helping and sportsmanship, mediated by trust; contingent punishment behavior also had a positive effect on in-role sales performance, mediated by role ambiguity.	A transactional leader can positively influence business performance	In setting a reward behaviour with trust being present can lead to positive outcomes - D	A transactional leader who sets rewards for positive behaviour and trusts his workers can lead to positive outcomes and good business performance	Transactional (encourage/stimulate positive results. Trust is in place though)
203	53	It may be common for executives to have "what" but not "how" skills. For example, a technical specialist may perform complex tasks tenaciously and manage to produce business outputs, but may be ineffective at managing his or her subordinates, leading to staff turnover and underperforming. The results of this study show that EI may be useful in identifying who is and is not likely to deal effectively with colleagues and staff.	A leaders emotional intelligence has an impact on business performance	A leaders that has a low EI would not manage his workers which would result in staff turnover and underperformance - R	A leader emotional intelligence allows him to manage his workers effectively which has an impact on staff turnover and performance	Emotional intelligence (Being able to manage workers effectively)

204	54	In particular, we found management openness to be the leader behavior most consistently related to voice. We also found psychological safety to play a mediating role in the leader behavior-voice relationship and found the influence of leader behaviors on voice to be more pronounced for subordinates with high performance.	A leaders behaviour influences worker performance	A leaders behaviour has an effect on workers voicing their thoughts with workers being able to voice their thoughts achieving higher performance- D	A leaders behaviour has an effect on worker voicing their thoughts, with workers that can voice their thoughts achieving higher performance	Behaviour (worker feeling comfortable to voice their thought or concerns without retaliation)
205	55	The dynamic leader model and the dynamic leader inventory allow participants to identify their leadership situation and use the findings from it to draw conclusions on how to enhance their effectiveness as leaders. In addition to encouraging individuals to think about how they might change their behaviour in order to be more effective, it also has implications for organizations, in terms of the situation of leaders. It may be possible, for example, to adjust the role that leaders are given, or identify alternative leadership situations, to match the situation to the behaviour patterns characteristic of the individual, rather than change the individual to fit the situation.	A leader situational awareness allows him to be more effective	A leaders behaviour has an impact on the situation and his effectiveness – D	A leaders situational awareness allows him to apply the most appropriate behaviour for the situation which allows him to be effective	Situation (behaviour that best would address the situation)
206	56	They led from a dream inside each of them for a different tomorrow. They are distinctive in their leadership because of their clarity of purpose, their expression of passions and because in their respective areas they dared to explore and act on the possibilities that came from asking "What if (it were different)?"	A leaders purpose influence his desired outcome	A leader that would seek to gain clarity, expresses passion and explore for understanding	A leaders purpose would allow him to seek to gain clarity, express his passion and explore to gain an understanding which influences him in reaching his outcomes	Purpose (Internal expression, seeking clarity)
207	57	... a clear direction that is compelling is important in gaining employee cooperation in achieving organizational goals, and has been shown to enhance job satisfaction	A leader that establishes a purpose is able to business performance	In setting clear direction a worker cooperation would be achieved	A leader that establishes a purpose is able to set clear direct which allows workers to cooperating in achieving the required business performance goals	Purpose
208	58	One company that found out the hard way about the risks of being too busy for stakeholders was a paper manufacturer. It found itself besieged by a number of pressing issues: digital disruption, the need for capital investment to remain cost competitive, and growing demands from customers for products with stronger environmental credentials. With the company focused on these urgent concerns, its conversations with forest environmental groups suffered. This led to a string of unresolved issues, including a loss of trust in the communities from which it sourced its raw materials. This ultimately resulted in reduced access to the forests themselves.	A leaders engagement with stakeholders influences business performance	A leaders that does not engage with stakeholders may lose their trust and access to required resources - R	A leaders that does not engage with stakeholders may lose their trust and access to their resources which would affect business performance	Relationship (lack of engagement which leads to no trust)
209	58	Its earliest campaign had won the agency worldwide recognition for its impact and change of behavior. But when the agency broadened the range of health issues it addressed, it collided with other incumbent health bodies and would only collaborate on its own terms. This eventually undermined its own credibility and negatively impacted the stakeholder support it received.	A leaders that is dominating influences business performance	A leaders that over dominates and does not consider other views would undermine his own credibility and impact support he would receive - R	A leaders dominating and does not consider the alternative views of others would undermine his own credibility and would impact the support he would receive which would influence business performance.	Foster relationships (not listening to others which undermines the leaders and results in lack of support)
210	58	Internally, they consider themselves to be professional, hardworking experts. But, externally, they are seen as disconnected, narrow-minded and lacking in humility, because they fail to tap into the capabilities of their stakeholders. Organizations that are defensive, and that avoid	A narrow minded leader would restrict improvements on business performance	A leader that does not tap into engage with the stakeholder may not receive the full story - R	A leader that is narrow minded and does not engage with stakeholders would not get the full picture/story which is required to	Transactional (not willing to get the views of other to get a better understanding)

		stakeholders, usually underestimate the productive role stakeholders can play. Their stakeholders would tell them that true leaders take advice: they never have the full story.			improve business performance	
211	58	In extreme cases, they may break laws. But, more often, they communicate secretly or keep a low profile, securing their gain out of public view, leaving others worse off. The behavior of leaders of these organizations is followed by their peers and subordinates, all driven to meet their KPIs in order to secure rewards. But when these behaviors finally come to light, the community loses trust in the organization, and the organization's social license to operate is often withdrawn.	An opportunist leader limits business performance	A opportunist leader would withholds information to drive performance but when the information comes to light trust is loss - R	An opportunist leader who withholds information to drive performance would lose trust when the information comes to light which would limit business performance	Transactional (focus on rewards without informing workers can lead to distrust)
212	58	For example, one government enterprise was highly trusted until it was forced to reveal its high executive pay levels, boosted by significant incentives for meeting KPIs. Leaks from the organization then revealed that, in order to optimize their performance against KPIs, executives had understated key employee work safety statistics. The executives had gained at the expense of the public purse and, potentially, employee safety. The trust placed in the enterprise was significantly diluted.	A leaders dishonesty has an influence on worker performance	A leader may gain in ratings but being dishonest would dilute trust by workers and stakeholders -R	A leader that is dishonest may momentarily gain in results but would dilute trust by workers and stakeholders which negatively influences	Foster relations (being dishonest dilutes trust)
213	58	Organizations with healthy reputations tend to be well-connected to their stakeholders. They spend time getting to know stakeholder organizations, what they do and what their priorities are, meaning they understand the stakeholder's perspective. They have designated leaders to act as key points of contact with key stakeholders. And these leaders proactively communicate and maintain a dialogue. Their conversations are not always positive, but they are constructive, respectful and ongoing.	A leader that listen and engages with stakeholder influence their reputation	A leader that proactively communicate with stakeholders is able to build a healthy reputations - D	A leader that listens and proactively engages with stakeholder (workers) is able to build a healthy reputation	Foster relations (engaging openly and honestly builds a good reputation)
214	58	Organizations face many challenges with the potential to impact stakeholders. However, collaborative organizations don't wrestle with these challenges on their own. They use regular, constructive conversations to collaborate with stakeholders and believe in the capacity of partnerships to solve problems. One organization that took a collaborative approach to turn around its fortunes was an industry-innovation body with over 100 members. For many years, it had been a battleground between large members and the rest over the direction of R&D funds, with little innovation actually delivered. In an effort to listen and learn from its members, it launched a comprehensive program of in-depth interviews. These gave all members a voice and clearly identified their innovation appetite, capital and ambitions.	A leader that collaborate is able to influence business performance	A leader that discuss and partner with stakeholder are able to solve problems - D	A leader that collaborates with stakeholders in discussion and partnering with them are able to achieve collective solutions to improve business performance	Foster relations (collaboration that brings about solutions)
215	58	Organizations with effective key stakeholder relationships tend to place the best interest of the sector ahead of self-interest. These organizations recognize that their clients and stakeholders should represent valued partners over the long term... One organization that refocused itself on its clients to transform its reputation was a treasury agency responsible for lending and asset management with government agencies. It had been perceived to be too focused on its own interests ahead of those of its mandated clients.	A leader that places best interest first is able to impact business performance	A leader that considers stakeholder input is able to align it organisation - D	A leader that places best interest first by gaining input from stakeholders is able to align the business to deliver holistic sustainable business solutions	Purpose (Stakeholder involvement leads to holistic alignment)

216		This is also centred on change management. People would normally be made aware of changes that are to be made but would need to have the platform to voice their opinions and concerns. When there is a situation where people are not aware as to who the new manager (leader) would be then and how he may handle the situation, they may feel that their careers would be at threat. People may not know what will happen to them which could lead to distrust of the new leader.	A leader that engages with workers is able to influence workers performance	A leader that provides workers with the platform to raise their concerns and install trust amongst workers - D	A leader that engages with workers in providing them with a platform to raise their concerns is able to establish trust which influences worker performance	Foster relations (platform for listening to concerns, which builds trust)
217	15		A leader that engages worker in situation of uncertainty can influence their worker performance	In engaging with workers in changing situation a leader may alleviate workers feeling threatened or vulnerable - D	A leader that engages with staff during changing situations would alleviate their feeling of being threatened or vulnerability which would improve their work performance	Situational response (Addressing worker to overcome fears and vulnerability)
218	15	Independent opinion is very important. You may need to get an opinion from people or someone neutral as people may feel that you are not covering their concerns.	A leader who seek multiple perspective would influence performance	A leaders that gains independent opinions can get a complete understanding before making decisions - D	A leader who seek multiple perspectives would gain a complete understanding which would assist in making better decision to improve business performance	Emotional awareness (open to different opinions)
219	15	Clear objectives, accountability matrix, roles and responsibilities are important. How to manage rewards and recognition are also very important. Contracts have to be closely monitored and how we manage rewards and non-performance. When we have a transactional agreement, we look at outcomes of the individual and the company and put them together. When people excel then they are rewarded, but when they do not perform then there should be process in place to manage this. This in essence leads to accountability.	A leader that establishes accountability influence business performance	In clear objectives, setting roles, and responsibility worker provides workers with a accountability contract - D	A leader that establishes accountability in setting clear objective, roles and responsibilities provides with a accountability contract for worker to achieve the required performance	Transactional (accountability through roles and responsibilities)
220	15	A good leader would go to planning sessions and specific non-negotiable action would be given which he knows he will need to get buy in from his staff. His challenge would be to get buy in from his staff noting that its from the top down. But when presenting the action to his workers he will need to find a way to convince his workers that they can meet the goal together.	A leaders ability to influences workers leads to performance delivery	A leaders ability to convince workers that they can achieve goals together -D	A leader that is able to influence workers is able to convince them that they can achieve set goals together which leads to performance delivery	
221	15	When you manage people, you need to know what is happening in their lives. Knowing what is happening in their live and making brief notes of what was discussed, so that you can mention it at a later stage the worker feel that you pay attention to their live. This allows you to build relationships and show that you care.	A leader who show care for workers is able to impact worker performance	A leader that pays attention to what happens to workers personnel lives and follows up on them is able to build relations - D with them - D	A leader who shows that he cares by paying attention to what happens in workers personnel lives and follows up on them is able to build relations with them which has a positive influence on worker performance	Foster relations (noting what happens in personnel live and follows up)
222	15	Transparency in what you share is also very important. Providing feedback even when there is nothing to feedback is important. Managers diaries are very important as it provides their whereabouts from what date and to give indication of who is standing in for them. This allows people to know who to go to during this time period. In providing this information the leader provides some form of respect, which builds trust.	A leader that communicates openly has an impact on worker performance	A leader that keeps his workers informed evens of his absence is able to build trust with workers - D	A leader that communicates openly with his workers by keeping them informed of his absence is able to build trust which influence worker performance	Foster relations (open communication, evens of whereabouts)

223	16	As an example you go to a meeting and you have to take an action which is due in a short time. You have to ensure that your workers take the work on without complaints. The key is how you communicate the urgency of the situation. You cannot demand that the work is completed, but if you come across in a fair way then work would be taken on by the workers.	A leaders assertive is able influences worker performance	A leader that is asked that work is completed in a fair manner would get the work completed - D	A leader that is assertive in asking a worker in a fair manner to complete a task is able to get it completed which. This approach in turn influences worker performance	Transactional (asking in a fair manner)
224	16	Our alignment goes hand in hand with performance. Those things that does not meet the goals, the leaders need to have alignment discussions to ensure that they are reviewed and actions put in place to meet them	A leader that reinforces purpose is able to influence business performance	When goals are not met a leaders ability to discuss alignment and put measures in place which ensure that performance is improved - D	A leader that reinforces purpose in ensuring realignment is performed when goals are not met would impact on business performance	Purpose (taking action when goals are not met)
225	16	Creating the environment where you and leaders can engage and iron out differences if there are any. You feel free to give input and you would take ownership for what you put forward. If you running a project and your input is welcomed, you would put more effort into the project to make it a success	A leader that listens and acknowledge workers positively impacts worker performance	In listening and allowing workers to freely provide input, stimulate workers to take ownership and put effort in - D	A leader that listens and acknowledges worker input by allowing them to freely provide input, stimulates worker to take ownership and put all their effort in, which improve worker performance	Foster relations (allowing views to be given free, encourages ownership)
226	17	During the outage one of the leaders would speak positively to the staff and provided quality feedback about goals and performance of the project. He has a time to know individuals that normally formed into trust.	A leader that provides feedback is able to influence worker performance	In providing feedback on goals and performance trust is formed with workers - D	A leader that provides feedback on goals and performance is able to gain worker trust which improves worker performance	Foster relations (providing feedback)
227	17	If you are not felling ok to perform an activity due to personal reasons he informed your supervisor and support you so that you cannot be a risk to yourself and the company. He maintained regular contact with staff.	A leader that is considerate of workers is able to influence business performance	In checking how workers are and ensuring that they not a risk to themselves and the company - D	A leader that is considerate of workers and checks how they are doing will ensure that they not a risk to themselves and the company. This allows business performance to be maintained	Emotional (checking how people are so that they can perform activities at their best)
228	17	When you work you deal with different groups and different personnel. When you call a person (group leader) and the person does not know you, you may not get assistance. But if you asked someone who knew the person to call then you got assistance. This caused delays on the project and negativity and a lack of trust in the group as the leader did not assist someone he did not know	A leader that withholds response negatively influence worker performance	In selectively assisting workers a leader establishes a lack of trust amongst a group - R	A leader that withholds response by selectively assisting workers leads to a lack of trust in the group and lower worker performance	Behaviour (selective assistance)
229	59	A CEO should be aware that whenever we make an important decision, we invoke rationality and emotion at the same time. For instance, when we are affected by empathy, we are more capable of recognizing things that are hidden from us than if we try to use pure rationality. And, of course, understanding the motives and the feelings of other parties is crucial to engaging effectively in strategic and interactive situations.	A leader that is empathetic is able to influence worker performance	When using empathy a leader is able to recognise hidden items which are not visible when using rationality - D	A leader that is empathetic is able to recognised hidden items which are not normally visible when using rationality. This approach can influence worker performance	Emotional awareness (empathy makes a person aware of things that may not fall under rationality)
230	59	The main reason was that Continental recognized that there's an aspect to incentives which is not necessarily about money. In this case, shirking would mean that you lose your own bonus of \$65, but it would also mean that you will be in a situation in which you will feel you are causing damage to thousands of employees that didn't receive a bonus that month because you stalled. It was the understanding that incentives can be also social, emotional, and moral that made this mechanism design	A leader that uses emotion can influence performance	By setting a collective reward target workers would work collectively to achieve the target to ensure that they are not the reason for others not receiving the reward - D	A leader that uses emotion can set a collective target which drives workers to achieve it, to ensure that they are not the reason for the target not being met	Emotion (using social drive to achieve results)

		work perfectly.				
231	59	A related technique is to make employees shareholders in the company. You might think that in a very large company an individual employee's effect on the share price might be pretty small—but as Eyal said, there's an emotional impact too. An employee's identity is tied to this company in a way that it wouldn't be if she were receiving a straight salary. And empirical studies by the labor economist Richard Freeman and others show that even large companies making use of employee ownership have higher productivity.	A leader that gets people committed would be able to influence business performance	Getting worker to be part of a company/project make them emotionally attached and committed to it - D	A leader that gets people committed to a company/project would get them emotionally attached and committed to it, which would improve performance	Emotional awareness (getting people committed make them part of something)
232	59	There are interesting papers about team behavior, and we know that bonuses for combined individuals, or bonus schemes that combine some individual points with some collective points, or which depend on group behavior as a whole, often work much more effectively than individual bonuses alone. The balance between competition and cooperation is something that CEOs and managers have to think deeply about, by opting for the right mechanism	A leader that fosters collaboration would influence business performance	In setting collective bonuses rather than individual a leader can prevent internal competing and get people to work collectively to a goal - D	A leader that fosters collaboration by setting collective bonuses rather than individual can prevent internal competing and get people to work collectively to meet performance targets	Transformational (get people to work collectively to meet targets)
233	59	Collaboration is a powerful tool for speeding up innovation, because innovation is all about ideas. If you have an idea and I have an idea, then if we're collaborating we can develop the better idea and ignore the worse idea. But if we're working alone, then the worse idea doesn't get discarded, and that slows down innovation.	A leader that is open to collaborates would influence business performance	Collectively allowing the good and bad ideas to be shared and noting the best ideas - D	A leader that openly collaborates with workers collectively allows good and bad ideas to be put forward and with the best ideas being used to improve business performance	Transformational (getting all ideas place to select best ones going forward)
234	59	Now the overwhelming majority of such papers, probably 80 percent or more, are multi-authored. And there's a very good reason for that trend: in collaborative research, the whole is more than the sum of the parts because only the best ideas get used.	A leader that foster collaboration is able to influence performance	Getting people to work together allows the sum of the best parts to be put forward - D	A leader that foster collaboration allows the workers to put forward the sum of all of their best which would positively affect business performance	Fostering relations/ transformational (collaborations allows the best to be put forward)
235	59	If people work in an environment which is not open for taking risks, or alternatively in which they have to fight for survival within their organization, they will be much less prone to take the risks that will lead to innovation.	A leader that creates a secure environment is able to influence performance	In creating a secure environment workers are able to track risk which bring about innovation - D	A leader that creates a secure environment would allow workers to take risks to innovate which could improve business performance	Situational leadership (creating a secure environment in which innovation will take place)
236	60	To be sure, certain normative qualities, such as demonstrating a concern for people and offering a critical perspective, will always be part of what it takes to be a leader. But the importance of other elements, such as keeping groups on task and bringing out the best in others, vary in importance depending upon an organization's circumstances. Organizational health changes over time. Effective situational leadership adapts to these changes by identifying and marshaling the kinds of behavior needed to transition a company from its present state to a stronger, healthier one	A leader that can adapt to the situation is able to influence performance	Organisations change and a leaders ability to identify an apply the required behaviours would allow for the company to be taken from one state to the next – D	A leader that can adapt to situation as organisation go through change would need to identify and apply the required behaviours to best take the company from one state to the next state which is better.	Situational response (identifying condition and applying behaviours to bring about change)
237	60	For companies at every level above the truly dysfunctional, a set of threshold forms of behavior appears to be essential. We call them "baseline behavior." Others may also be called for, depending upon an organization's state of health, but the following practices are appropriate no matter what a company's health may be: effectiveness at facilitating group collaboration, demonstrating concern for people, championing	A leader that does not foster a healthy interaction would impact business performance	Absence of healthy interaction would bring about disorder - R	A leader that does not foster healthy interaction would bring about disorder and impact business performance	Foster relation (interaction is important)

238	60	desired change, and offering critical perspectives. The absence of such fundamentals of healthy interpersonal interaction invites disorder; shoring up these behaviors, on the other hand, serves to keep organizations from sliding backward into organizational trouble. But in themselves, they don't spell the difference between mediocre and top-tier organizational health.	A leader that establishes basic behaviour would be able to influence basic performance	The presence of group collaboration, being concerned for people, driving the required change and providing critical feedback are essential for business function - D	A leader that establishes basic behaviours such as collaboration, being concerned for his people, driving the required change and providing critical feedback is able to influence basic performance	Situation (having basic behaviour present for a business to be functional)
239	60	But under trying conditions, our research suggests, the most effective forms of leadership behavior are making fact-based decisions, solving problems effectively, and focusing positively on recovery. Ironically, these additional behaviors are often the opposite of what distressed organizations actually do. Leaders at too many fourth-quartile companies, in their urgency to act, seek quick top-down fixes (such as replacing senior executives one or more times) but forego granular, fact-based analyses or well-rooted strategies. Those missteps often mark a company in its death spiral.	A leader that effectively solve problem is able to influence performance	Under difficult conditions a leaders ability to identify the facts and resolve problems can bring about improvements - D	A leader that can effectively solve problem when a company is in difficult conditions by identify the fact and resolving the problems based on the fact is able to improve the business performance.	Situation (solving problem based on facts in difficult situations)
240	60	When Lou Gerstner, hired from the outside, took over as the new chairman and CEO of a then-deeply troubled IBM, he prioritized clear, fact-based problem solving. One measure of this mandate was his insistence that the executive team essentially abandon slide presentations and submit plans in jargon-free prose. He also refused to accept the idea that the company's decline, partition, or even liquidation was inevitable. The ability to see the facts clearly and to demonstrate resilience helped Gerstner and his team to break a long downward slide, reconsider a product category previously dismissed as obsolete, and turn what many had presumed to be an inevitable asset breakup into a new trajectory for growth	A leader that resolve problem based on facts is able to influence performance	Simplifying information to its essential facts allows solutions to be put forward which addresses the basic problems	A leader that resolve problems based on information is based on essential facts, is able put forward solutions that addresses the basic problems and improves business performance	Situation (solving problem based on essential facts in difficult situations)
241	60	To meet the challenges, the leaders implemented an integrated set of health and performance initiatives—for example, they developed clear standards and outcomes to clarify day-to-day tasks. The company made its objectives (and the consequences of not achieving them) transparent by articulating a forceful strategic vision marked by specific operating goals and milestones. The leadership also aimed to foster bottom-up, employee-driven solutions and actively encourage new perspectives.	A leader that establishes alignment is able to influence performance	By identifying the vision, goals and milestones and informing workers of them the business would be able to address the challenges it is faced - D	A leader that establishes alignment by communicating the vision, goals and milestones is able to better face the challenges that it is faced with an improve performance	Alignment (setting vision, goals and milestones)
242	60	Although many things went right for this company beyond its walls, these internal moves undoubtedly strengthened it, and the results were tangible. Within two years, it had achieved its topline objectives in health, performance, and leadership, and its stock price had increased by 250 percent.	A leader to foster participation and input is able to influence performance	A leaders that allows worker from the bottom to provide their perspective and solutions is able to get greater worker participation - D	A leader that fosters participation by allowing worker at the lower level to provide their perspective and solution allows for greater worker participation and improved business performance	Foster relations (allowing worker to provide input which increases their participation in commitment)
243	60	We observed one cautionary example at a joint venture that ended badly for a number of related health, performance, and leadership reasons. Its board installed a highly charismatic leader with an outsized focus on top quartile—style motivational behavior....The joint venture responded to missing its first-quarter targets by setting even more ambitious ones. It handed accountability to the executive responsible for sales and marketing, but no root-cause analyses were undertaken. When it discovered a cash crisis, it made no credible efforts to craft a practical response; instead, the top executive continued to trumpet his mission	A leader that uses the incorrect style can negatively influence performance	Using a the incorrect style may focus on a area of business that does not need the required focus - R	A leader that uses the incorrect style may not focus on the areas of business which needs the most attention which would impact business performance	Situation response (using the right style for the condition)

		throughout his global visits. But a “job for everyone” fell victim to the joint venture’s alarming cash position, which forced mass layoffs, and with them came the end of the leadership’s credibility. The venture was dissolved after just over a year of misguided operation.				
244	60	However much an executive may seem to have a leadership “it” factor, the organization’s health, not the claims of individuals, should come first when companies determine which kinds of behavior will be most effective for them. In short, they should spotlight different sets of actions in different situations. Fortunately for aspiring leaders, they don’t have to do everything at once.	A leaders style who fits the condition will bring about the required performance	A leaders different style would be required for different conditions	A leaders style would need to fit the business conditions as different style are required to bring about a required response and performance different conditions	Situational response (different styles for different conditions)
245	61	We adopt behavior and expect it to stick through force of will. Sadly, it won’t if we haven’t changed the underlying attitudes and beliefs that drove the old behavior in the first place. Making matters worse, our behavior affects other people’s mind-sets, which in turn affect their behavior. A leader’s failure to recognize and shift mind-sets can stall the change efforts of an entire organization. Indeed, because of the underlying power of a leader’s mind-sets to guide an entire organization toward positive change, any effort to become better leaders should start with ourselves, by recognizing the thoughts, feelings, and emotions that drive us	A leaders behaviour influence workers and their performance	A leaders behaviour affects peoples mind set and the behaviour of workers - D	A leaders behaviour affects the mind set of worker and in turn their behaviour and their work performance	Behaviour (affects peoples mind set)
246	61	To be sure, everyone has weaknesses to improve. But deliberately shifting to a focus on strengths is a far more inspiring approach; you’ll raise the odds of lighting up everyone around you and unleashing enormous energy for creativity and change. Fabrizio Freda, the CEO of Estée Lauder, told us: “You need supertalented people who know they need to do fantastically well. And when your leadership team takes the same attitude, you create a culture where each one can give his or her best. . . . In particular, you have to find the strengths of each individual and of the organization—and then you can create magic.”	A leader that focuses on his strengths would influence worker performance	A leader that focus on his strengths is able to inspire workers - D	A leader that focuses on his strengths is able to inspire others which in turn has an impact on worker and business performance	Behaviour (focusing on strengths)
247	61	With this recognition, he could begin to shift. When he felt this same tension rising, he practiced pausing, thinking about his intentions, and then constructively voicing his concerns or asking a question. His example prompted others on his team to do the same, opening the door for more learning-focused interactions—his initial goal.	A leader that is displays self-awareness is able to impact worker performance	In pausing and considering how a leader feels and then acts on what he would like to achieve a leader can make better constructive engagements	A leader that displays self-awareness is able to pause , consider how he feels and what he wants to relay. This would allow him to make better constructive engagements which influences worker performance	Behaviour (being aware of feelings before acting)
248	61	In fact, simply recognizing and embracing the differences in how people perceive trust can strengthen it. Once we are aware of our own—or others’—profiles, we tend to adjust our behavior subconsciously. When we do so deliberately as well, the results are quite powerful. After all, it’s our behavior that instills trust in others, not our intentions.	A leaders behaviour can influence worker performance	In understanding a leaders own understanding of trust and the understanding of other a leader can make adjustments accordingly to reflect trust	A leaders who demonstrates behaviour aligned to trust is able to influence worker behaviour	Behaviour (demonstrating actions of trust)
249	61	A plant manager we know used this approach to spark better ideas and improve accountability on the front line. He created a pack of cards that shop-floor supervisors could use with line workers in daily operational problem-solving sessions. On one side of the card, the problem-focused questions; on the other, a solution-focused translation. The supervisors quickly found that using both sides of the card brought markedly better	A leaders questioning approach influence performance	In asking solution driven questions workers a leader is able to install hope and get solutions from workers - D	A leader questioning approach can be solution driven which installs hope and allows workers to give solutions which in turn influences business performance	Behaviour (solution driven questioning approach)

		results than the traditional questions alone—and that the range and quality of solutions improved dramatically. The plant manager’s message was simple, yet powerful: look for problems and you’ll find them; look for solutions and people will offer them. By choosing our questions thoughtfully, we can shift our mind-set from “my organization is a problem to be solved” to “my organization holds solutions to be discovered.”				
250	62	Three fundamental behavior shifts are essential for leaders. The first is asking questions rather than giving answers. It reflects three foundations of lean management: that everyone, at every level, should build new capabilities; that the people closest to a problem generally understand it best; and that one of a leader’s primary responsibilities is to provide effective coaching to their teams. Yet leaders often see their main value to the organization as providing answers—indeed, some may think that’s what coaching means. Learning how to listen, reflect, and trust in the team on the ground takes practice and time, but ultimately some of the most successful leaders let go of the idea that they should be at the center of problem solving.	A leaders that enquires is able to influence performance	A leader that asks question rather than giving answers allows people closest to the problem to provide answers - D	A leader that enquires would ask questions allows people closest to the problem to provide answers which improves business performance	Transactional (coaching and listening)

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Interview 26 September 2017 (transcribed notes) – I1

Interview questions

- **How do you feel leadership influences organisational performance**

In my view leadership is a strong driver of the organisation and key in setting the direction the organisation has to follow. Leadership is key and the driver in installing a positive culture and performance in an organisation. Leadership is key as they have to communicate what we are aiming to achieve and what the lower tier of the organisation has to implement. This is key in getting the individual areas of the business to reach the same objectives. Communication is the means in which leadership is able to relay what is expected.

- **What is your understanding of leadership**

Leadership means where the organisation is and where it is going to and brings in a belief system to align the team in getting there. Leadership provides guidance and a sense of diplomacy. Leadership requires that you listen to workers so that you can hear what they have to say and ensure that there is alignment. In listening a leader hears the views of communities. Listening does not mean that a leader has to accept and perform what has been relayed, but it provides a reference for leader on what to consider when making improvements.

- **Is the role of leadership related to any person or is it related to a specific group**

Each functional area would need to adopt a specific leadership style and each leader would have a different leadership style. Different styles will help in the implementation of policies. You will also find that various styles are applicable to different situations. Not all leader should have the same leadership style.

- **Is the leadership time or place specific**

It is situational awareness. The situation would trigger the required leadership style. Time and place is of the essence and need you to portray an ethical stance, because if you don't it could result in your peers losing respect in your judgement. If you want the organisation to move along to an increased safety culture and improved performance you will need to gain the respect of your peers. Respect is also in the manner you would say something and how you would apply your moral ethics.

- **Are there any aspects that relay to good/effective leadership**

Yes. Communication is vital for good leadership. It is easy to create a fragmented organisation which is dominated by people who don't see where the organisation is going. The fragmentation of the result in a loss of respect at the lower tiers as they are not working to a common cause. Communication is key in achieving safety culture and performance since if we do not communicate what we need to achieve you would most likely to lose the people (workers). Communication is part of being proactive and is an important mechanism in relaying policy changes that takes place in an organisation.

- **Are there any aspects that relay to bad/in-effective leadership**

A leader in which there is no trust is indication of a bad leadership culture. You need to understand that people are your asset and need to ensure that people are on top of your list of focus. A lack of trust can be the result of a leader not communicating, not adhering to what he says others must do

and walking amiss from the organisation. This would result in people not believing in what a leader is saying.

- **Are there aspects of leadership that promotes organisational performance**

The current leadership that we have is a good indication that working together to achieve a common goal promotes organisation performance. When we look at the current performance we see that we did quite good. The key element was that we started to work in alignment which allowed us to understand what we had to deliver at all levels with us getting all our ducks in a row.

- **Are there aspect of leadership that hinder organisational performance**

There are lots. We set up a remuneration criteria based on performance, which we did not honour. This change in criteria was not communicated across all levels. We have rules that we apply which changed and has not been related to all that are affected. This creates disgruntled employers and loss of respect. Employees are assets and we have to ensure that employees are in the right mind so that they can perform their work. By not honouring what you say, you would not win over people. There is nothing that stops leaders from communicating. We have work stops which are due to incidents, so we need to priorities communication in line with informing people with information which impacts them too.

- **Does leadership bring about rapid change to organisational performance**

If you have the right leader in the position, then yes you will. If leadership is resistant then performance will not come across. If you get the right people in the right position place. You need to sample what you looking for and identify if there is a human element in the candidate. A leader that is into people, with a heart of a servant but does not compromise on the organisations objectives. The leader should have a heart of servant, not only focused on getting things done, yet still have the ability to focus on performance. There should be the ability to judge what needs to be done be it technical or administrative, given the circumstance. If the heart of the leader is lacking then the focus would mostly be on results.

Interview 09 October 2017 (transcribed notes) - I2

Interview questions

- **How do you feel leadership influences organisational performance**

It has a big impact. The leader determines the performance that is required in terms of safety, quality and time. If they preach but do not practice then their actions would be adopted further down the organisation.

- **Would you be able to provide examples of good leadership**

Aptitude, skill, experience, knowledge, wisdom, foresight and vision are aspects of good leadership. In this company it's a knee-jerk reaction. It is being able to lead the business at addressing current the current situation but also looking 10 to 15 years down the line planning for changes. The skill that is required, depends on the level at which the person finds himself. Direct leaders should know the business. The experience and wisdom, will give you foresight and vision to what to do for the future. At different levels of management the leadership required is different, with different wisdom being present at the different levels.

The big thing about leadership is the handling of people. It's a skill of how you handle people. It's a skill one of our CEO had, in which he was able to rally people with him. Hitler was a good leader in a specific context. Any person can be a leader depending on the context.

- **Would you be able to provide examples of bad leadership**

People (leaders) that do the opposite of what they tell you to do. When a leader is bad all aspects of performance goes down. Leadership is not a short term fix.

- **Is the leadership time or place specific**

As long as you report to someone then there is leadership. It is not only business context. That you take direction from someone means that you being led. The ability to understand people is important. How Hitler was able to influence people is a good example. Being able to harness what people want and to let people take you there. Leadership is strategic. He gets your support but does something on the side. One of our leaders had the charisma and had a way of doing things. Mandela and Mbeki were doing the same thing but who got more done? (Mandela). It is the way he came across and the belief in what he was driving. That is why he was able to change so much.

- **Are there any aspects that relay to good/effective leadership**

There are people that are not born to lead. Some people are born to be engineers but are put in management position and mess up the whole department.

A leader can put a team together that works for him. A dictator style can work when a leader is able to choose who he want to work for him. What are you (leadership) driving towards? If you want good then you will achieve good.

- **Are there aspects of leadership that promotes organisational performance**

Incentives are not leadership. The ability to find deficiencies are plug them are. Not finding out what is are the deficiencies will not improve the situation. Finding out that people are not feeling worth and providing an incentive for to value them is a better means to value people.

- **Are there any aspects that relay to bad/in-effective leadership**

When leaders don't see when there is a problem. Listening is an aspect to that. If you don't then you will not find the problem. Data is also an example not only verbal words. The ability of the leaders to

extrapolate useful information from all the noise. Bad leadership is persuading people in doing what you want to get done. Good leaders don't have to ask people to follow them . They will automatically support.

- **Does leadership bring about rapid change to organisational performance**

It depends on the change that you want to make. Change takes time to filter down in an organisation but also in the context of the organisation. Line manger to worker has a quick effect on leadership effect on performance. Senior manager to worker is much longer. It must be a very big problem when a leadership request comes directly to you and you would know it's a big problem then.

- **Is safety part of leadership**

Safety is part of the industry and is more pronounced. If you grow in this industry then it becomes part of you. The question is whether you would shut the unit down if a high level call (say the president) is made. The situation that we found ourselves during load shedding had us in the similar situation and if the unit could still be run but with there was a safety concern, the question as to whether our leadership would have shut the unit down is a tight one. My answer is that "I do not know" given the situation our country and leadership is in.

- **Is safety part of leadership**

The requirement for safety is part of the industry. It is something which is part of the engineering function and is something that is an inherent requirement. The skill of knowing what can go wrong and putting measures in place to prevent it from happening.

Some people (leaders) are dictators, or micro manage and other allow you to grow and perform. Dictators and micro managers push people to leave the company. People management skills are very good at developing you and not managing you. If you wrong, then you wrong but you can grow from the mistakes. Depending on your exposure very early in your career you would most likely adapt reflect this type of style.

It is easy for bad changes as appose to good things to get through to the organisation.

No matter where you go groups will pick a leader. Ones that jump up are dictators not leaders. Groups with no constraints will select a leader or if not selected one that steps up to lead the situation. This is a bottom up approach. A top down approach is when an organisation selects a person to influence an organisation and its performance. The right person at the top would naturally drive what is good and would naturally. Its human nature to want to be led. In an organisation you will also have to pick a leader.

Interview October 2017 (transcribed notes) – I3

Interview questions

- **How do you feel leadership influences organisational performance**

I think that leadership is about being visible and listening to workers. It is when leadership engages with workers that they become assessable. When you have issues and they are not assessable that it is hard to go to them for help. Example Dries, he was accessible so anytime you had a problem or needed help. The “performance challenge” was part of performance. If you don’t (as leadership) give feedback to workers you will have an impact on workers. Then being open and accessible would have been better for worker performance. Leaders being open and transparent, whereby if we have a crisis, then just being open and informing people on time on what is happening. But when we find it (information) on the media then leaders are not being open. Remember, know we get people that are grumpy and work against leaders. They will work to regain their loss of the performance challenge, which may we through reworks.

- **What is your understanding of leadership**

For me on leadership, I would say is a person that has knowledge, wisdom and has an impact on people. Especially when you are a father a child looks up to you and they will follow you.

- **Can you identify cases of good leadership**

When one of the new managers took over the OCC. He informed the staff that that it is a new department for him, but he wished to work collectively with them. He went around in the morning greeting people and to find out how they were doing. This created a positive vibe. With his energy he was vibrant and easily accessible. You can see a person that has ‘hum’ and others that don’t bring hum. Hum is like that feeling that you get when someone greets you can feel the sincerity. Someone can great you but they can still be cold.

Empathy is one trait that is missing. Whereby you put yourself in a persons position and understand his pain. There are certain things that might be missing in other peoples live and understanding this

- **Can you identify cases of bad leadership**

We can look at our current leadership. We have leadership changes but they do not sign off the lower structure. The organisation having many CEO has an effect on performance. . People are resigning, with us hearing that strategies are being put in place to retain staff. Strategies have milestones, but as staff we are not made aware of these milestones. This has created mistrust as staff feel that their leaders are not being open with them

- **Are there aspects of leadership that promotes organisational performance**

A leader with a warm character. It goes with the discipline and how we trust them. When things are not possible and he would say it (it not possible) you would understand. Saying it as it is. When I leave the room we are both on the same page. If you don’t know and I understand, it makes it easier for workers to approach. If a leader ‘knows’ everything then a barrier is then put in place.

A leader that also looks at the growth of people. You have person A and B. A will have a structure that will develop people. Mentor, coach and finding out the progress of workers along the way. We have this in place but leader are not driving it

Overtime. If you indicate that there is no money this year but my performance will be recorded. In the future when things are better and my performance score takes this into consideration and I'll be reimbursed. This is a manner to increase performance.

Leaders that have knowledge from books and institutes and wisdom gained from feedback from people. Bring these together allows people to get to the solution. Leaders give short explanations and you are able to execute. Being able to simplify and make things easy to understand. Telling workers to replace a valve and they would replace it without knowing the impact of doing something wrong. Informing the workers of the importance of the valve allows the workers to get the bigger picture.

One of the manger would look around the room and if he saw many new people he would explain the effects of a job. When the team left meeting everyone understood their job.

- **Are there any aspects that relay to bad/in-effective leadership**

Corruption would hinder performance. Negative publicity. We have to defend the organisation which is not our function.

Currently condition that there is no trust at the top level which transcends down to the workers.

- **Is the current leadership effective**

No since it the same leadership that is leaving the organisation. So there is no trust.

Interview 23 October 2017 (transcribed notes) – 14

Interview questions

- **How do you feel leadership influences organisational performance**

It has a massive influence. We take our direction from leadership. We use what they portray as example. Some people may be on the right path, but with good leadership strategy it allows people to follow and meet what is expected. But if you have bad leadership, the people that are on the 'right path' then you will not get the output that you require.

- **What is your understanding of leadership**

As a leader you in a way teach people and staff. People learn in different manners. People learn by example or by process or procedure s. Leaders should have a balance in what they say and do which has an impact on the outcome they want. A leader brings out the confidence in the staff. Staff are working at a professional level, but it is the esteem of leaders and that they know what they are doing, the plan that they have and the care that they have for the organisation and the people.

- **Are there any aspects that relay to good/effective leadership**

One of the good leaders that I can talk, had a way of communicating and would share information. He showed allot of care to the staff and looked at their growth. When he was around it felt like growth and development was taking place even though there were limitations. He gave people opportunities that lead to confidence in them doing their work, and which also had people putting more than they needed to into their work. He paved the way for others and knew what to do next, skilling staff up and put them in place. He gave managers the confidence and ability to act and allowed people to take initiative.

- **Are there any aspects that relay to bad/in-effective leadership**

When a specific department was part of our group, they use to be located in JHB and we were in CT. This was a messy relationship in as far as communication and output an willingness to work together, which lead to misunderstanding and difficulty in working together. This was as a result of a lack of dealing with the concerns of the people in JHB and a lack of business knowledge. What stood out was that there was an avoidance of addressing the situation and not investigating what was going wrong.

- **Do you have any thoughts about leadership and its influence on performance**

Trust permeates the organisation for me stands out the most in the condition that the organisation finds itself in. I feel that in the current condition that the organisation denies specific information and sends out surveys. The perception we getting is that everything is not ok. When we talk about trust we want to know that if it is bad that they relay that it is bad. The organisation may feel sensitive but we are professionals and can manage. This causes a disconnect that we say that trust should permeate the organisation but it is not there. Trust builds loyalty and with loyalty people would dig down in situation that are difficult rather than excluding themselves.

Interview 30 October 2017 (transcribed) – 15

Interview questions

- **In terms of the 7 identified categories is there anything that you feel that has been omitted?**

You may need to consider the divisional survey that was performed last year and compare the questions to the categories which you have identified. Aspects of leadership was included there and would have covered, giving clear direction, giving support, rewards and recognition and conflict resolution. Have a look and compare them to your categories.

- **Are there any additional aspects on that you feel can be added to these categories and if so how do they affect performance?**

Situational response – This is also centred on change management. People would normally be made aware of changes that are to be made but would need to have the platform to voice their opinions and concerns. When there is a situation where people are not aware as to who the new manager (leader) would be then and how he may handle the situation, they may feel that their careers would be at threat. People may not know what will happen to them which could lead to distrust of the new leader. For new manager (leader) who is taking over, it would be good to bring in some existing staff with him. There would be some resistance so it would be good that he has people that he can trust.

Transformation – Independent opinion is very important. You may need to get an opinion from people or someone neutral as people may feel that you are not covering their concerns. You may also need to get a relations management personnel in to cover sensitive items during the changes as they will occur.

Transactional – Clear objectives, accountability matrix, roles and responsibilities are important. How to manage rewards and recognition are also very important. Contracts have to be closely monitored and how we manage rewards and non-performance. When we have a transactional agreement, we look at outcomes of the individual and the company and put them together. When people excel then they are rewarded, but when they do not perform then there should be process in place to manage this. This in essence leads to accountability.

Behaviour – Two things come to mind, inclusive and dictative leaders. The behaviour in a company is centred around the CEO and the relationship as to how he tries to bring about change through the culture. A good leader would go to planning sessions and specific non-negotiable action would be given which he knows he will need to get buy in from his staff. His challenge would be to get buy in from his staff noting that its from the top down. But when presenting the action to his workers he will need to find a way to convince his workers that they can meet the goal together.

Fostering relationships – When you manage people, you need to know what is happening in their lives. Knowing what is happening in their live and making brief notes of what was discussed, so that you can mention it at a later stage the worker feel that you pay attention to their live. This allows you to build relationships and show that you care. Transparency in what you share is also very important. Providing feedback even when there is nothing to feedback is important. Managers diaries are very important as it provides their where abouts from what date and to give indication of who is standing in for them. This allows people to know who to go to during this time period. In providing this information the leader provides some form of respect, which builds trust.

Interview 30 October 2017 (transcribed) – 16

Interview questions

- **In terms of the 7 identified categories is there anything that you feel that has been omitted?**

The last three categories for me goes hand in hand.

- **Are there any additional aspects on that you feel can be added to these categories and if so how do they affect performance?**

Situational response – As an example you go to a meeting and you have to take an action which is due in a short time. You have to ensure that your workers take the work on without complaints. The key is how you communicate the urgency of the situation. You cannot demand that the work is completed, but if you come across in a fair way then work would be taken on by the workers.

Purpose/Alignment – Our alignment goes hand in hand with performance. Those things that does not meet the goals, the leaders need to have alignment discussions to ensure that they are reviewed and actions put in place to meet them.

Fostering relationships – Creating the environment where you and leaders can engage and iron out differences if there are any. You feel free to give input and you would take ownership for what you put forward. If you running a project and your input is welcomed, you would put more effort into the project to make it a success.

Interview 30 October 2017 (transcribed) – 17

- **In terms of the 7 identified categories is there anything that you feel that has been omitted?**

(None reported).

- **Are there any additional aspects on that you feel can be added to these categories and if so how do they affect performance?**

During the outage one of the leaders would speak positively to the staff and provided quality feedback about goals and performance of the project. He has a time to know individuals that normally formed into trust.

One of the leaders has listening skills and empathy. He listen intently to what individuals are saying and communicated 3 ways and explained clearly to what individuals is saying. If you are not felling ok to perform an activity due to personal reasons he informed your supervisor and support you so that you cannot be a risk to yourself and the company. He maintained regular contact with staff.

When you work you deal with different groups and different personnel. When you call a person (group leader) and the person does not know you, you may not get assistance. But if you asked someone who knew the person to call then you got assistance. This caused delays on the project and negativity and a lack of trust in the group as the leader did not assist someone he did not know.

Appendix 6: Extensive category list developed during cycle 2

	Category	Memo	Proposition				
1	Situational response	Monitoring a situation and using the required style to best address the situation. Constant change in leadership has impact on trust. Internal drive to bring about change or attributes noted by group that would lead them to desired condition	Different situation requires different leadership styles to bring about the required performance results.	A leaders who can assess the situation is able to identify and implement the skill most useful to bring about better performance.	A leader's situational response allows him to meet unforeseen challenges with flexibility, perseverance and a questioning attitude. These affect behaviour which influence performance.	A leader who is unable to use the required style would most likely become unhappy in his job and impact worker and business performance.	A leaders ability to apply different leadership styles allows different situation to be handled appropriately leading to better performance
			A leader who is flexible in approach is able to use an appropriate mix of styles to bring about the required organisational performance	A leader who is able to use the required skill is able to coordinate or persuade people to reach specific objectives which leads to the required performance	A leader's ability to select the appropriate style bases on the conditions allows him to best influence the situation leading to the required results.	A leaders who uses the applicable style to influence the business climate is able to impact business performance	A leader who is aware of the situation and adapts his style accordingly is able to achieve the best results
			A leader that uses a covert approach is able take peoples, needs and concerns into consideration and use an infusing skills approach to bring about the required results.	Any person can influence a situation to achieve the objective of reaching a specific performance level	A leader that uses the appropriate style during a crisis is able to get people to propose options and take action which would impact performance	Constant change in leadership has an impact workers trust and the performance	A leader is naturally selected or steps up to a task and is able to lead a group to the required change
2	Structure	Road map in how to get things done. setting the direction through narrative and plan	Having structure in leadership allows people to know, what, why and how they needs to do things which leads to increased productivity.	A leader that establish structure is able to provide workers with what to do and how to do it in reaching the required results.	A leader that is proactive in relaying his plan is able to get people to work with him to influence performance	A leader who leads from the front by providing people with an inspirational story and providing a clear plan to meet objectives are able to get peoples buy-in and in turn influence business performance	
3	Mentoring	Development of workers to perform activity, linked to team work, skilling and providing exposure	Teaching others leadership skills increases their values to the business and improves business performance.	A leader who develops workers in setting the environment for them to grow an succeed he/she establishes a pool of people who would be able to help in achieving the required results.	A leader that develops his workers allows them to gain the skill required to perform their work which has an impact on business performance.	A leader that develops worker through couching, mentoring and personal follow-up is able to ensure their professional growth which influence worker performance.	A leaders coaching approach allows him to explain a job which bring everyone to a common understanding. This in turn influence business performance
			A leader that cares for workers in looking at their growth and development is able to nurture confidence in them which has a positive influence on performance	A leader that develops staff in providing them with the skill to perform the required task is able to influence performance	A leader that does not develop staff would lead to staff not having knowledge of business and its processes. This leads to difficulty in worker interaction and has a negative effect on performance	A leader that foster human capability would allow workers to be creative and imaginative allowing a company to adapt to changing conditions	

	Category	Memo	Proposition				
4	Empathy	Treating people the way one would like to be treated. Caring and being thoughtful. Good result when combined with objectives	When a leaders treats his workers as he would like to be treated then the workers respect him/her and are committed to their work, which would bring about higher performance.	A leader that is empathetic in being thoughtful and caring to worker, but firm on the objectives is able to influence workers and business performance	A leader who shows consideration to workers, makes employees feel that they are cared for which inspires them to peak worker performance.		
5	Experience	A leaders experience allows to predict what could happen. Knowing the information and process well. May not work well with others	A leaders system of beliefs allows advised decisions to be made which would result in client satisfaction.	A leader's knowledge allows him to have the insight of what to do in situations allowing and influence business performance.	A leaders experience and wisdom allows him with the foresight and vision to plan the business future which impacts business performance	A leaders experience allows him to provide concise guidance which assist workers in executing their work and in turn the performance.	A leaders experience allows him to provide concise guidance which assist workers in executing their work and in turn the performance.
			A leader that uses an expert approach has a single tracked thought process and limits collaboration which limit performance enhancement				
6	Coaching	Allowing people to do the task on their own but informing them when they might be doing something wrong	A coaching leadership style amongst semi-skilled and less committed staff, provides direction and support. This provides progress and motivation to people which allows the required performance to be obtained.	A coaching leadership style focuses on growing and developing people for the future which brings about a strong positive climate and improved performance.	Leaders who use a coaching approach engage with the workers more often and are able identify and rectify problem sooner which results in greater business performance.	A leader who provides effective coaching is able to reinforce positive behaviour and accountability which would influence business performance.	A leader with people skills is able to allow workers to perform and correct them they make mistakes. This allows them to grow and improve business performance
			A motivational leader sets the work deliverable but allows staff the freedom to deliver and grow in the process				
7	Supportive	Supporting people in what they do. understanding people and their needs and helping them	A supportive leadership style amongst medium to high competency people, provides guidance in attaining the peoples next level of performance. This contributes to overall objective being met.	A leader who installs a supportive environment is able to allow team members to identify progress, concerns and improvements which contributes to high performance.	Positive feedback from leadership is likely to maintain motivational level which would result in high performance.	A supportive leader who sincerely listens and is authentic can install trust and inspire people which in turn has an impact on worker performance	
8	Transformational	Focused on complete change (achiever)builds relations and implement strategies to bring about change. focus on results, through collaboration and challenging.	A leader with an achiever style positively influence relations and is sensitive to relationship which are required to improve business performance.	A leader that has an achiever style, creates a challenging environment and creates, supports teams and focus on delivery. These bring about the required business performance.	A strategist leader can create a shared vision amongst people to encourage transformation and improved performance	A strategist leader is comfortable in dealing with conflict and peoples resistance to change making him ideal in bringing about change in performance	An Alchemist leader is able to simultaneously deal with multiple situations, manage immediate priorities and still focus on long term goals to positively effect performance

	Category	Memo	Proposition				
		(strategist)leading a way for change. anticipates resistance and conflict and works around these to bring about change. (alchemist)being able to manage multiple situations seamlessly. focused on truth, moral driven with charisma	An alchemist has a high moral standard and focuses extensively on the truth and can speak to the hearts and with their charisma speak to the hearts and minds of people, allowing performance to be affected	Transformational leadership styles bring about higher worker job satisfaction and performance.			
9	Transactional	Focused on outcomes (Opportunist) looks at meeting own gains at expense of others. Associated with bad behaviour and rejects feedback.	Transactional leadership styles focuses on rewarding outcomes but at the cost of worker morale which could affect performance.	A leader that is opportunist looks at person wins and people as opportunity to exploit. He treats people as object which in turn has a negative impact on long term business performance	An opportunist leader justifies bad behaviour and rejects feedback which has a negative effect on business performance	A democratic leadership style looks at getting worker engagement and creates a positive climate which would bring about high performance.	A leader that is inclusive is able to gather a diversity in thoughts in identifying solution to complex problems which would influence performance.
		(Democratic/Diplomatic) Allowing everyone to put their views or thoughts across, ability to diversify, linked to listening. being polite, agreeing and avoiding difficult situations (Pacesetting) Leading by example and expecting that others follows	A leader that is diplomatic is overly polite and avoids conflict which makes it difficult to provide challenging feedback required to improve business performance	A pacesetting leadership style can set high expectation and be hard on people which in the long term result in a negative working climate and result in low performance.	A pacesetting leadership can lead to the removal of flexibility and responsibility of workers and result in a reduction of commitment and a low working climate.	A leader who does not lead by example would lose the trust of his/her workers which would influence business performance	A delegating leadership approach amongst highly competent people provides guidance to small deficiencies, which brings about performance improvement and organisational improvement
	(Delegative) Passing on task to people to do. This could provide them with opportunity to gain skill (Directive/Coercive)Telling/dictating what and how people should work. Brings about quick results but non sustainable Enforcing a person wants/thoughts on others	A directing leadership style directs amongst low skilled highly motivated people, what needs to be done which brings about results which affects the desired performance.	A leader that dictates leads to people leaving the company over the long term and has an impact on performance	A commanding leadership style can lead to low employee engagement and high turnover which would impact business performance.	A long term coercive leadership style with a top down approach would result in workers feeling disrespected and worker becoming disengaged which would lead to poor performance	A coercive approach applied in extreme situations can change bad habits and bring about new ways of working which can bring about improved performance	
		A coercive leadership style expects people to comply which brings about a negative climate which hinders long term performance.	An over-dominant leadership style can lead to workers being resistant and push back which can be counterproductive.	A leaders who over and micro manage their workers are likely to wear them out, cause them to be frustrated and disengaged which results in low to medium performance.	A leader that uses a command and control approach is unable to adapt to changing market conditions and is unable to sustain performance		

	Category	Memo	Proposition				
10	Behavioural and moods	Behaviour and moods set the tone and influence people motivation. disrespecting people which leads to disengagement of people, manner is which a leader acts. Is likely to be adopted by others. negative actions or misguided intents will not lead to the required objectives	A leaders ability to demonstrate a positive behaviour would result in the team members to demonstrate the same behaviour which would result in high performance.	A change in leadership style can bring about a change in employee behaviour which would influence performance levels.	A leaders style and action has a direct influence the worker/team relationships and alignment which has an impact on the business results being achieved.	Leadership has an influence of social behaviour which maximizes the efforts of others to allow goals to be achieved.	A leader who reinforces the desired behaviour, by recognising and rewarding actions which are aligned to the values and goals of the business, will likely positively influence performance.
			A leaders moods and behaviours influences people and the organisation which in turn has an effect on performance	A leaders positive emotional state inspires workers to achieve good results which drives performance	A leader who matches his moods and behaviour with the situation is able to be sensitive of peoples feeling but install a positive sense which influence working performance	A leaders actions provides guidance to the manner in which workers would similarly act in carrying out the required objectives. This in turn affects performance.	A bullying leader has an effect on peoples creativity, willingness to work harder and help coworkers which influence business performance
			A leaders bad behaviour leads to workers who adopt the same behaviour which influences worker performance	A leader's action in terms of what he does and how he acts provides direction to people who in turn they do. This has a direct impact on business performance	A leader with a bad actions would not be able to lead people to the required objectives resulting in the business objectives not being met		
11	Motivational	Driving people to reach a goal. Setting higher goals	A leader who motivates the individuals in a team is able to create a sense of belonging and shared business objective which brings about high performance.	A leader who demonstrate passion can inspire and motivate other workers in reaching the successful objective of the organisation.	A leader who challenges his motivated competent staff, would obtain better results	An inspiring leadership motivates workers to take on bold task but at the same time keeps them accountable for result which allows high performance to be accomplished.	
12	Alignment/ Purpose	Setting and having the same vision and goal. Knowing what is to be done and why, common direction	Leaders style which share the bigger picture is able to get the team to work towards this goal and reach the required results.	A leader who set clear exactions, by identifying the vision and manner in which to get to it, workers know what they working towards which influences their performance	A leader who is able to align worker to his vision and specific focus is able to commitment to these which would lead to specific objective being met.	A leader who promotes a clear vision and strategy would look at getting organisational alignment, common priorities and foster continues improvement. This in return would influence a business's performance	A leader that establishes purpose by providing the bigger picture to workers is able to provide clarity and install motivation and innovation which would positively impact business performance
			A leader who does not provide a clear and credible vision would most result in workers being unfocused and unmotivated, which would impact the ability to bring about the required success.	A visionary leadership style during times of organisational change allows employees to understand the organisational strategic plan and allows them to input the performance goals. This	A leaders commitment in facilitating the alignment of workers to business objective influences the business performance	A leader that establishes a purpose is able get worker to head in the same direction during constant changing conditions allowing long term objectives to be met.	A leader that establishes purpose, allows what needs to be performed to be identified, which simplifies work process

	Category	Memo	Proposition				
				participation allows business objective to be attained.			
			A leader that creates a strong purpose would motivate staff and bring about change which would positively influence business performance	A leader that establishes a purpose would inspire customers and worker and would build trust which would improve business performance			
13	Communication	Has an impact on worker engagement, operational flexibility and alignment. It has impact on trust relations and clarity. Sharing and informing people of what is happening. Telling people what the actual conditions are. This leads to trust and then loyalty	Leaders who communicate transparently are able to install trust amongst the team. This in turn allows problems to be solved and decisions to be made which affect high performance.	A leaders ability to communicate allows him/her to influence people's behaviour and align them to what needs to be focused on, which has an impact on worker performance.	A leader who communicates effectively is able to relay a clear and direct message which informs workers and in turn allows business objectives to be achieved.	A leader who is able to communicate is able to get worker engagement which in turn influences business productivity	A leader who does not communicate conditions which affects the people would lose their respect which in turn would impact performance
			A leader who provides clear directions allows workers to know what needs to be carried out to bring about the required objectives.	A leader who is present on the working floor is able to re-inforce his expectations which influences the business objectives	A leaders ability to communicate effectively allows different departments to be aligned and work together to the same objective, to bring about the required performance	A leader that personally communicates with workers allows for employee engagement which influences business performance	A leader that personally communicates with workers allows for greater operational flexibility which influences business performance
			A leader that personally communicates with workers allows for greater operational flexibility which influences business performance	A leader that openly discusses conflicting objectives allows people to become aware of them and deal with them to reach the required performance	Leaders who are not open and transparent about information and the information's comes to light, would result in workers being aggrieved and working against them which would affect business performance	A leader who does not communicate with his workers would create mistrust which effects worker performance	A leaders transparency in communicating with people will require that he needs to consider holistic information which would determine business sustainable performance
			A leaders ability to communicate well his strategy allows trust between workers and stakeholders which influences relations	A leader that communicates with people by sharing information provides guidance to people which influence business performance	A leader that openly communicates with people is able to establish trust, which leads to worker loyalty. This in turn influences business performance		
14	Empowerment	Providing with the freedom and tools to make things happen. Does not restrict	A leader who empower his employees provide them with the freedom to use their natural capabilities and instinct to reach the set goal.	A leaders ability to empower his/her workers would provide them with the authority to perform their job and encourage them to perform well. This in turn would allow the business to perform well.	A leader who empowers his workers allows them with the freedom to perform actions which can bring about better performance	A leader that empowers other to lead by inspiring them to step up is able to bring about the required organisational performance	
15	Team work	Getting people to work together to address	A leaders contributes to non-collaboration when they do not	Leaders allows for collaboration through	A leader who is able to get workforce engagement, would	A leader who promotes collaboration is able to get	A leader can select specific team members to

	Category	Memo	Proposition				
		something	set the example of working together and pass on tasks. This results in low productivity.	diversification allows different strengths of people to be drawn to bring about company success.	be able to get workers to understand their roles on meeting the organisations goals. This would in turn influence a worker to strive in meeting them and influence performance outcomes.	teams to work together and bring about the required organisational results	bring about results which affects performance
			A leader that promotes teamwork by getting different working teams to work together is able to achieve solution which would influence changing market conditions	A leader that promotes team work allows new ideas to be gathered which influences business performance			
16	Integrity	Saying something and doing what is said. Dishonesty in the manner in which he act or carries out duties. Brings common understanding	A leaders who show integrity is able to establish trust amongst workers who would in turn be committed in achieving the required business performance.	A leaders honesty builds trust with his/her workers which in turn impacts worker behaviour and performance.	A leader who listens, acts and communicates with integrity establishes a positive relationship with workers which has an impact on business performance.	A leader who demonstrates integrity in showing straightforwardness and no hidden agenda is able to influence worker morale which in turn would influence business performance.	A leader who demonstrates honesty provides symbolic actions of trust to workers which in turn influences business performance
			A leader's ethical practice allows him/her to gain respect amongst people. This in turn would result in collaborative work which has positive impact of performance	A leader that is corrupt causes distrust in the organisation which affects the organisations performance	A leader that is open and honest, in indicating what is possible and what is not allows workers to be gain a common understanding which has a positive impact on worker performance		
17	Self-leading	Knowing where one is going	A leader who is able to lead himself well is able to allow others to do their job well, which would bring about the required results/performance.	A leader who respects him/herself is able to focus look after themselves, allowing them to focus on what needs to be done and to make others better which would influence performance.			
18	Foresight	Seeing the end in mind, the obstacles ahead and put measures in place to overcome them. considering all factors)(this may be focused on business execution	When leaders considers actions in terms of their long term effect they consider, the far reaching and fruitful actions which would develop people and situation for the benefit of the project or organisation.	A leader who understands what is to be achieved is able to make/influence changes which is in line with reaching the required business performance	A leaders ability to anticipate changes through market information allow him to put measure in place to compensate for them an maintain organisational performance	A leader that is not holistic in viewing information and who focus on short term results may not achieve long term objective and the required performance of the business	A leader who fosters continual improvement would allow actions to be taken to close performance gaps, which would result in high performance.

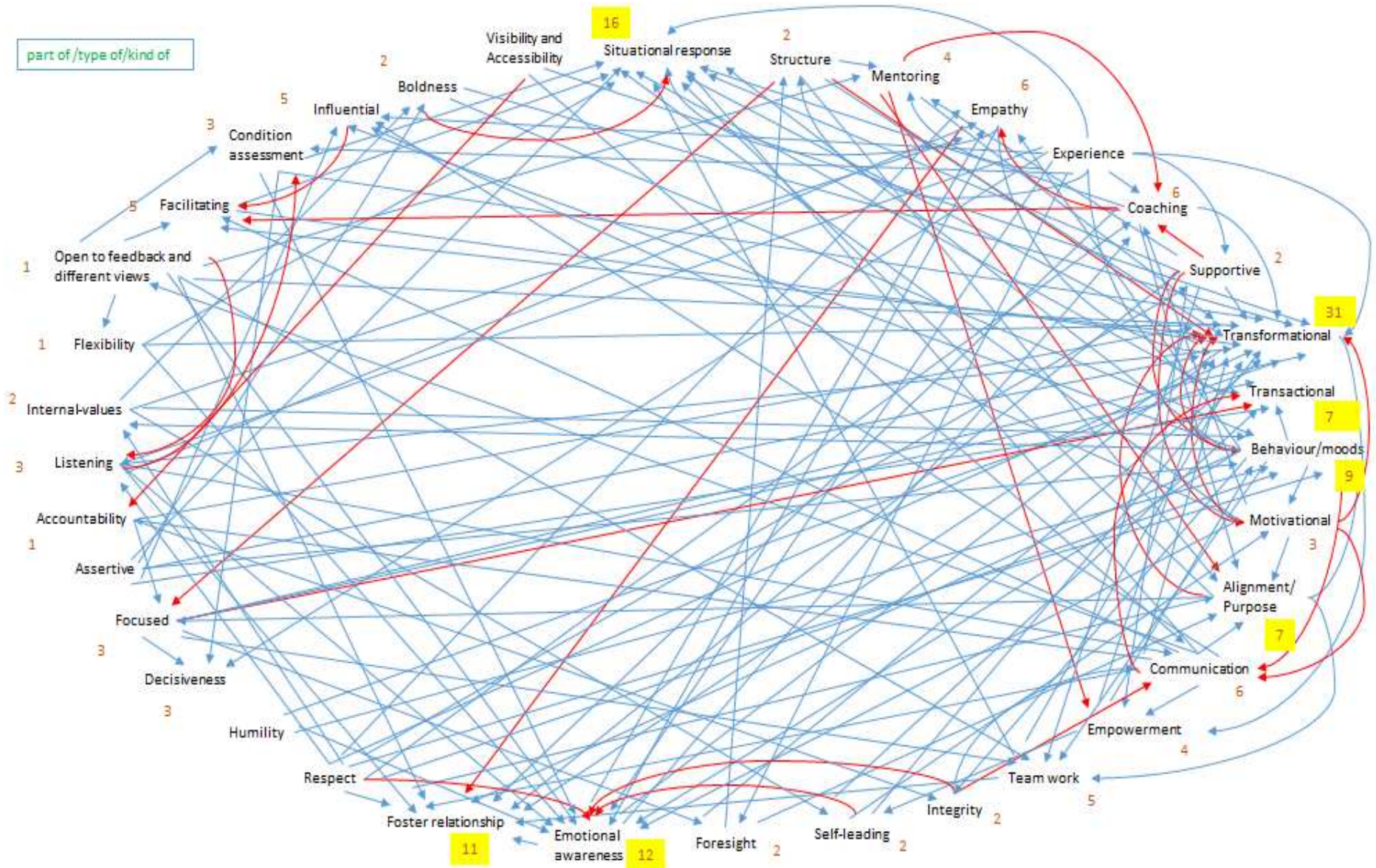
	Category	Memo	Proposition				
19	Emotional awareness	Knowing how one feels and the feelings of others and what is making a person feel in that manner. Knowing and understanding inner emotions.	A leader's emotional intelligence assist in selecting the correct leadership style which creates a positive working climate. This in turn results in positive results.	A leader who demonstrates knowledge of his/herself, of workers and job accountabilities is able to influence worker morale, communication and worker motivation, which would result in better performance.			
20	Foster relationship	Showing interest and setting a positive environment. (loyalty)Committed to the company and the people.	A leader who focuses on results and builds positive relations is able to promote openness, growth and success amongst people which leads to greater effectiveness.	A leader who establishes trust can provide and receive constructive feedback which allows people to positively move forward and improve on performance.	A leader who creates an open, honest environment allows workers the platform to provide feedback and their perspective which can lead to performance improvement.	A leader who demonstrates enthusiasm with a genuine interest in people and the job would influence worker morale and commitment which in turn would influence business performance.	A leader that has human skills is able to understand what is required to motivate people to achieve the required results
			A leader who cares for his workers, by greeting and enquiring how they are doing is able to set a positive work environment which influence worker performance	A leader who establishes trust, by treating people with respect is able to get them energised to perform to the required level of performance	A leader who demonstrates loyalty to workers and the organisation is would increase worker morale and their commitment which in turn would influence business performance.		
21	Respect	Treating people with kindness	A leader that is respectful increases peoples well-being and work contribution which improves work performance	A leader that is respectful allows others to put forward their feelings and ideas in addressing problem which can influence business performance			
22	Humility	Willing to listen, learn from others. Does not show authority or superiority	A leader who is willing to be humble is able to learn from workers on things that he/she is not aware of which can improve performance.				
23	Decisiveness	Making a decision under pressure or in uncertainty. Opposite - not addressing the source of problems	A leader's ability to be decisive allows him/her to weigh up different options and choose the one which would bring about the most effective results.	A leader who demonstrates courage in showing conviction, making hard choices and standing by his employees is able to influence worker reliability and their motivation which in turn would influence business performance.	A leader that avoids dealing with problems creates a lack of willingness of staff to work together and misunderstanding is created which influence performance		
24	Focused	Looking at completing task or goal, focusing on important items to bring about objectives. Doing too	A leader who is focused is able to hone in on the key items when many different distractions are taking place, allowing	A leader that is results orientated in focusing on efficiency and productivity is able to prioritise high value	A leader that is over occupied can be distracted and behave inappropriately which has a negative impact on worker		

	Category	Memo	Proposition				
		much at the same time, impacts behaviour. Being focus is opposite case	success to be reached on what needs to be achieved.	work which increase business performance	performance		
25	Assertive	Being firm but fair	A leaders ability to be assertive allows him/her to be firm and bold in getting what they want when trying to achieve their goals.	A leader who is able to demonstrate confidence is able to provide a strong sense of choice which provide direction to his/her team. This in turn provides motivation to workers to achieve the required results.			
26	Accountability	Being responsible for actions, consideration for effect of decisions	A leader who is able to gain accountability from his workers is able to get commitment from his workers in fore filling what the worker was suppose to do. This leads to required results being met.	A leader that is responsible and considers the impact of his decisions is able to gain peoples trust in the long run which affects the performance of a business			
27	Continuous improvement	Driving better performance, human capability		A leader that foster human capability would allow workers to be creative and imaginative allowing a company to adapt to changing conditions			
28	Listening	In listening a leader gains further insight which he may not have had and builds trust and respect with people	A leader who displays poor listening skill who establish hostility, miscommunication and a breakdown in team cohesion which affects team performance.	Leaders contribute to collaboration when they listen, evaluate and then speak to the people. This engagement with people increase productivity.	A leader who engages with his workers by listening to their difficulties and their suggestion inspires confidence in them which influence work performance.	A leader who listens is able to hear what worker have to say and ensure that they are aligned to business objective, which in turn bring about the required business performance	A leader who listens to his workers can gain their respect and trust which in turn can influence business performance
29	Internal-values	Knowing what drive a person internally and make you do, act the way you do. internal beliefs and experiences which has impact on actions. Balancing material and social goals	In gaining an understanding of a person's inner core values a person is able to identify what make them able to be effective in leading others	A leaders internal values allows him/her to act and lead these values in bring about the required performance	A leaders authentic belief can inspire and drive people which can influence performance	A leaders internal values would allow him to motivate and drive workers towards achieving the goal which would in turn influence performance	A leaders values directs his actions and the manner in which people are treated which influences performance
			A leader's internal make-up influence the actions he/she makes which impact the relations with workers. The relations in turn has an influence on performance.	Any person can be an inspirational leader in focusing on his/her strengths and bring about greater productivity.	A leader can be any person who sees a need and does something about it to bring about the required performance.	In balancing a leaders internal and external motivators he/she is able to focus on financial, social and environmental objective required for holistic performance achievement	

	Category	Memo	Proposition				
30	Flexibility	Ability to look and handle competing and changing elements. courage to try something different	A leader that is flexible is able to consider competing objectives and manage them accordingly to reach the required performance	A leader that is open to dynamic changes is able to make the required adjustment to improve performance	A leader that is flexible in trying different ways to achieve something can attain organisational successful	A leader that cannot adapt is incapable of shifting his mind set required to change to improve performance	
31	Open to feedback and different views	Ability to consider and think different on things. May be linked to flexibility, adaptive. Being open to ideas and aware of changes and influence. Helps make better decisions. Feedback on a person's blind spot leads to better self-awareness. Open to receive feedback. Has an impact on behaviour correction	A leader that explores different options is able to seek different opportunities to achieve results which influence performance	A leader who does not challenge assumptions and norms by sticking to the same methods would restrict performance improvement	A leader that is open to alternative options such as collaboration and working arrangements is able to make workers happier and more productive	A leader that seeks multiple perspectives, by monitoring trends, changes and getting new ideas allows him to make better informed decisions which influences performance	A leader who is closed minded and does not listen is not able to identify problem which is hindering performance
			A leader that is open to critique is willing to receive feedback which makes him mindful of his actions and its influence of workers and their performance	A leader's ability to listen allows him/her to improve on his/her self-awareness and in turn performance			
32	Facilitating	Helps and guide people through transition from one condition to another. Input and openness from discussion	A leader that facilitates change is able to get worker to transcend from an old condition to a new condition without much resistance and impact to performance				
33	Condition assessment	Seeing how things are unfolding or heading towards.	A leader that is able to recognise the pattern is able to identify changes that would bring about improved performance	A leader's ability to identify deficiencies and correct them allows performance to be improved	A leader's ability to identify and react to change, would allow uncertainty to be better managed and in turn influence performance		
34	Influential	Able to understand and influence people. relay motivating message in concise manner	A leader that has people skills is able to get workers to work with him to attain the required organisation performance	A leader's ability to tell a story in a concise manner is able to spur people to take action and influence worker performance			
35	Boldness	To stand up for or against some.	A leader's boldness in acting against or with a bad decision can influence the manner in which workers perceive him and in the manner in which their work performance.				

	Category	Memo	Proposition				
36	Visibility and Accessibility	Ability for people to approach and speak to a leader. Has impact in connecting and engaging with people. This can lead to inspiring and influencing. Availability to talk and interact with people. Allow for listening to take place and trust to be established	A leader that is not accessible has an impact on workers being able to gain help when needed which impacts work performance	A leader that is direct present to people is able to interact and connect with them which influences there performance	A leader that is visible allows people to interact with him allowing them to make contribution and reduce the stress in the environment. This in turn improves worker performance		

Appendix 7: Cycle 2 category reduction



Appendix 8: Core categories identified in Cycle 2

Concept	Safety situational conditions	Transformational safety leadership	Transactional safety leadership	Behaviour leadership	Safety purpose	Emotional intelligence	Safety relations
Concept memo	The organisational situations due to internal and external conditions such rising cost or internal safety accident)	Varying levels of change required in an organisation, such as incremental or drastic	Transactions looks at process to ensure goals are met and rewards are provided in line with these processes	The type of behaviour used to address a situation.	Degree of alignment in the mission, goals and vision	Level of emotional awareness when dealing with people	Relationships which looks to foster safety
Core Category	Situation safety leadership	Transformational safety leadership	Transactional safety leadership	Leaders safety behaviours	Leader safety purpose	Leader safety emotional intelligence	Leaders fostering safety relationships
Category Memo	Monitoring a situation and using the required style to best address the situation. Factors which drive change or attributes noted by group that would lead them to desired condition.	A leader that looks at bringing change, focused on results and builds relations. A leader that manages the different conditions seamlessly and is focused on truth, is morally driven and has charisma	Uses different approached to achieve outcomes. Brings about quick results and may be enforcing	Behaviour and moods set the tone and influence people motivation and engagement. The set behaviour is adopted by others. Monitoring behaviour influences outcomes. Behaviour in an appropriate manner leads to trust. The approach used can foster solution	Setting and having the same vision and goal. Knowing what is to be done and why, common direction	Knowing how one feels and the feelings of others and what is making a person feel in that manner. Knowing and understanding emotions.	Showing interest in others which leads to commitment and engagement. This also allows for collaborations.
Theoretical Category	Leader situational response to safety	Transformational leadership to safety	Transactional leadership to safety	Leader behaviour and Moods to safety	Leader safety alignment/purpose	Leaders emotional awareness in safety	Leaders foster safety relationships
	Monitoring a situation and using the required style to best address the situation. Constant change in leadership has impact on trust. Internal drive to bring about change or attributes noted by group that would lead them to desired condition	A leader that is focused on complete change (achiever) builds relations and implements strategies to bring about change. A leader that is focus on results, through collaboration and is challenging. (strategist) leading a way for change. Anticipates resistance and conflict and works around these to bring about change. (alchemist) being able to manage multiple situations seamlessly. Focused on truth, moral driven with charisma	Focused on outcomes (Opportunist) looks at meeting own gains at expense of others. (Democratic/Diplomatic) Allowing everyone to put their views or thoughts across, ability to diversify, linked to listening. being polite, agreeing and avoiding difficult situations	Behaviour and moods set the tone and influence people motivation. Disrespecting people leads to disengagement. Behaviour is likely to be adopted by others. Negative actions or misguided intents will not lead to the required objectives	Setting and having the same vision and goal. Knowing what is to be done and why, common direction	Knowing how one feels and the feelings of others and what is making a person feel in that manner. Knowing and understanding emotions.	Showing interest and setting a positive environment. (loyalty)Committed to the company and the people.

(white)	Initial propositions
(Green)	Reallocated propositions
(orange)	Brief literature review
(blue)	Theoretical sampling
(purple)	Member briefing

	Category	Memo	Proposition				
1	Situational response	Monitoring a situation and using the required style to best address the situation. Constant change in leadership has impact on trust. Internal drive to bring about change or attributes noted by group that would lead them to desired condition. Noting and influencing conditions. A basic set of behaviour would be in place for functional. solving problem based on facts in difficult situations	Different situation requires different leadership styles to bring about the required performance results.	A leaders who can assess the situation is able to identify and implement the skill most useful to bring about better performance.	A leader's situational response allows him to meet unforeseen challenges with flexibility, perseverance and a questioning attitude. These affect behaviour which influence performance.	A leader who is unable to use the required style would most likely become unhappy in his job and impact worker and business performance.	A leaders ability to apply different leadership styles allows different situation to be handled appropriately leading to better performance
			A leader who is flexible in approach is able to use an appropriate mix of styles to bring about the required organisational performance	A leader who is able to use the required skill is able to coordinate or persuade people to reach specific objectives which leads to the required performance	A leader's ability to select the appropriate style bases on the conditions allows him to best influence the situation leading to the required results.	A leaders who uses the applicable style to influence the business climate is able to impact business performance	A leader who is aware of the situation and adapts his style accordingly is able to achieve the best results
			A leader that uses a covert approach is able take peoples, needs and concerns into consideration and use an infusing skills approach to bring about the required results.	Any person can influence a situation to achieve the objective of reaching a specific performance level	A leader that uses the appropriate style during a crisis is able to get people to propose options and take action which would impact performance	Constant change in leadership has an impact workers trust and the performance	A leader is naturally selected or steps up to a task and is able to lead a group to the required change
			A leaders ability to identify deficiencies and correct them allows performance to be improved	A leaders ability to identify and react to change, would allow uncertainty to be better managed and in turn influence performance	A leader's ability to be decisive allows him/her to weigh up different options and choice the one which would bring about the most effective results.	A leader that cannot adapt is incapable of shifting his mind set required to change to improve performance	A leader can be any person who sees a need and does something about it to bring about the required performance.
			A leader that is not accessible has an impact on workers being able to gain help when needed which impacts work performance	A leader that is directly present to people is able to interact and connect with them which influences there performance	A leader that is visible allows people to interact with him allowing them to make contribution and reduce the stress in the environment. This in turn improves worker performance	A leader who is present on the working floor is able to re-inforce his expectations which influences the business objectives	A leader that seeks multiple perspectives, by monitoring trends, changes and getting new ideas allows him to make better informed decisions which influences performance

			A leaders situational awareness allows him to apply the most appropriate behaviour for the situation which allows him to be effective	A leader that engages with staff during changing situations would alleviate their feeling of being threatened or vulnerability which would improve their work performance	A leader that creates a secure environment would allow workers to take risks to innovate which could improve business performance	A leader that can adapt to situation as organisation go through change would need to identify and apply the required behaviours to best take the company from one state to the next state which is better.	A leader that establishes basic behaviours such as collaboration, being concerned for his people, driving the required change and providing critical feedback is able to influence basic performance
			A leader that can effectively solve problem when a company is in difficult conditions by identify the fact and resolving the problems based on the fact is able to improve the business performance.	A leader that resolve problems based on information is based on essential facts, is able put forward solutions that addresses the basic problems and improves business performance	A leader that uses the incorrect style may not focus on the areas of business which needs the most attention which would impact business performance	A leaders style would need to fit the business conditions as different style are required to bring about a required response and performance different conditions	
8	Transformational	<p>Focused on complete change(achiever)builds relations and implement strategies to bring about change. focus on results, through collaboration and challenging.</p> <p>(strategist)leading a way for change. anticipates resistance and conflict and works around these to bring about change.</p> <p>(alchemist)being able to manage multiple situations seamlessly. focused on truth, moral driven with charisma</p>	A leader with an achiever style positively influence relations and is sensitive to relationship which are required to improve business performance.	A leader that has an achiever style, creates a challenging environment and creates, supports teams and focus on delivery. These bring about the required business performance.	A strategist leader can create a shared vision amongst people to encourage transformation and improved performance	A strategist leader is comfortable in dealing with conflict and peoples resistance to change making him ideal in bringing about change in performance	An Alchemist leader is able to simultaneously deal with multiple situations, manage immediate priorities and still focus on long term goals to positively effect performance
			An alchemist has a high moral standard and focuses extensively on the truth and can speak to the hearts and with their charisma speak to the hearts and minds of people, allowing performance to be affected	Transformational leadership styles bring about higher worker job satisfaction and performance.	A leader that has people skills is able to get workers to work with him to attain the required organisation performance	A leaders ability to tell a story in a concise manner is able to spur people to take action and influence worker performance	A leader that facilitates change is able to get worker to transcend from an old condition to a new condition without much resistance and impact to performance
			A leader that is flexible is able to consider competing objectives and manage them accordingly to reach the required performance	A leader that is open to dynamic changes is able to make the required adjustment to improve performance	A leader that is flexible in trying different ways to achieve something can attain organisational successful	A leader who demonstrates courage in showing conviction, making hard choices and standing by his employees is able to influence worker reliability and their motivation which in turn would influence business performance.	A leader that develops staff in providing them with the skill to perform the required task is able to influence performance
			Teaching others leadership skills increases their values to the business and improves business performance.	A leader who develops workers in setting the environment for them to grow an succeed he/she establishes a pool of people who would be able to help in achieving the required results.	A leader that develops his workers allows them to gain the skill required to perform their work which has an impact on business performance.	A leader that develops worker through coaching, mentoring and personal follow-up is able to ensure their professional growth which influence worker performance.	A leader that foster human capability would allow workers to be creative and imaginative allowing a company to adapt to changing conditions
			A leaders ability to anticipate changes through market information allow him to put measure in place to compensate for them an	A leader that does not develop staff would lead to staff not having knowledge of business and its processes. This leads to difficulty in worker interaction	An inspiring leadership motivates workers to take on bold task but at the same time keeps them accountable for result which allows high	A leader who demonstrate passion can inspire and motivate other workers in reaching the successful objective of the organisation.	A leader who challenges his motivated competent staff, would obtain better results

			maintain organisational performance	and has a negative effect on performance	performance to be accomplished.		
			A coaching leadership style amongst semi-skilled and less committed staff, provides direction and support. This provides progress and motivation to people which allows the required performance to be obtained.	A coaching leadership style focuses on growing and developing people for the future which brings about a strong positive climate and improved performance.	Leaders who use a coaching approach engage with the workers more often and are able identify and rectify problem sooner which results in greater business performance.	A leader who empowers his workers allows them with the freedom to perform actions which can bring about better performance	A leader that empowers other to lead by inspiring them to step up is able to bring about the required organisational performance
			A motivational leader sets the work deliverable but allows staff the freedom to deliver and grow in the process	A leader who is able to gain accountability from his workers is able to get commitment from his workers in fore filling what the worker was supposed to do. This leads to required results being met.	A leader that is responsible and considers the impact of his decisions is able to gain peoples trust in the long run which affects the performance of a business	A leader who empower his employees provide them with the freedom to use their natural capabilities and instinct to reach the set goal.	A leaders ability to empower his/her workers would provide them with the authority to perform their job and encourage them to perform well. This in turn would allow the business to perform well.
			A leader that is able to recognise the pattern is able to identify changes that would bring about improved performance	A leader that personally communicates with workers allows for greater operational flexibility which influences business performance	A transformational leader influence workers in that they put extra effort into their work which increases business performance	A leader that fosters collaboration by setting collective bonuses rather than individual can prevent internal competing and get people to work collectively to meet performance targets	A leader that openly collaborates with workers collectively allows good and bad ideas to be put forward and with the best ideas being used to improve business performance
			A leader that enquires would ask questions allows people closest to the problem to provide answers which improves business performance				
9	Transactional	Focused on outcomes (Opportunist) looks at meeting own gains at expense of others. Associated with bad behaviour and rejects feedback.(Democratic/Diplomatic) Allowing everyone to put their views or thoughts across, ability to diversify, linked to listening, being polite, agreeing and avoiding	Transactional leadership styles focuses on rewarding outcomes but at the cost of worker morale which could affect performance.	A leader that is opportunist looks at person wins and people as opportunity to exploit. He treats people as object which in turn has a negative impact on long term business performance	An opportunist leader justifies bad behaviour and rejects feedback which has a negative effect on business performance	A democratic leadership style looks at getting worker engagement and creates a positive climate which would bring about high performance.	A leader that is inclusive is able to gather a diversity in thoughts in identifying solution to complex problems which would influence performance.
			A leader that is diplomatic is overly polite and avoids conflict which makes it difficult to provide challenging feedback required to improve business performance	A pacesetting leadership style can set high expectation and be hard on people which in the long term result in a negative working climate and result in low performance.	A pacesetting leadership can lead to the removal of flexibility and responsibility of workers and result in a reduction of commitment and a low working climate.	A leader who does not lead by example would lose the trust of his/her workers which would influence business performance	A delegating leadership approach amongst highly competent people provides guidance to small deficiencies, which brings about performance improvement and organisational improvement

		<p>difficult situations(Pacesetting) Leading by example and expecting that others follows.(Directive/Coercive) Telling/dictating what and how people should work. Brings about quick results but non sustainable Enforcing a person wants/thoughts on others</p>	<p>A directing leadership style directs amongst low skilled highly motivated people, what needs to be done which brings about results which affects the desired performance.</p>	<p>A leader that dictates leads to people leaving the company over the long term and has an impact on performance</p>	<p>A commanding leadership style can lead to low employee engagement and high turnover which would impact business performance.</p>	<p>A long term coercive leadership style with a top down approach would result in workers feeling disrespected and worker becoming disengaged which would lead to poor performance</p>	<p>A coercive approach applied in extreme situations can change bad habits and bring about new ways of working which can bring about improved performance</p>
			<p>A coercive leadership style expects people to comply which brings about a negative climate which hinders long term performance.</p>	<p>An over-dominant leadership style can lead to workers being resistant and push back which can be counterproductive.</p>	<p>A leaders who over and micro manage their workers are likely to wear them out, cause them to be frustrated and disengaged which results in low to medium performance.</p>	<p>A leader that uses a command and control approach is unable to adapt to changing market conditions and is unable to sustain performance</p>	<p>A leader that avoids dealing with problems creates a lack of willingness of staff to work together and misunderstanding is created which influence performance</p>
			<p>A leader who is focused is able to hone in on the key items when many different distraction are taking place, allowing success to be reached on what needs to be achieved.</p>	<p>A leader that is results orientated in focusing on efficiency and productivity is able to prioritise high value work which increase business performance</p>	<p>A leader that is over occupied can be distracted and behave inappropriately which has a negative impact on worker performance</p>	<p>A leaders ability to be assertive allows him/her to be firm and bold in getting what they want when trying to achieve their goals.</p>	<p>A leader who is able to demonstrate confidence is able to provide a strong sense of choice which provide direction to his/her team. This in turn provides motivation to workers to achieve the required results.</p>
			<p>A leader can select specific team members to bring about results which affects performance</p>	<p>A leader that uses an expert approach has a single tracked thought process and limits collaboration which limit performance enhancement</p>	<p>A transactional leader who sets rewards for positive behaviour and trusts his workers can lead to positive outcomes and good business performance</p>	<p>A leader that is narrow minded and does not engage with stakeholders would not get the full picture/story which is required to improve business performance</p>	<p>An opportunist leader who withholds information to drive performance would lose trust when the information comes to light which would limit business performance</p>
			<p>A leader that establishes accountability in setting clear objective, roles and responsibilities provides with a accountability contract for worker to achieve the required performance</p>	<p>A leader that is assertive in asking a worker in a fair manner to complete a task is able to get it completed which. This approach in turn influences worker performance</p>			
10	Behavioural and moods	<p>Behaviour and moods set the tone and influence people motivation. disrespecting people which leads to disengagement of people, manner is which a leader</p>	<p>A leaders ability to demonstrate a positive behaviour would result in the team members to demonstrate the same behaviour which would result in high performance.</p>	<p>A change in leadership style can bring about a change in employee behaviour which would influence performance levels.</p>	<p>A leaders style and action has a direct influence the worker/team relationships and alignment which has an impact on the business results being achieved.</p>	<p>Leadership has an influence of social behaviour which maximizes the efforts of others to allow goals to be achieved.</p>	<p>A leader who reinforces the desired behaviour, by recognising and rewarding actions which are aligned to the values and goals of the business, will likely positively influence performance.</p>

		acts. Is likely to be adopted by others. focusing on strengths, will allow people to adopt positive approach. negative actions or misguided intents will not lead to the required objectives. being aware of feelings before acting allows best outcomes to be reached. Behaviour in an appropriate manner leads to trust. Approach can foster solution	A leaders moods and behaviours influences people and the organisation which in turn has an effect on performance	A leaders positive emotional state inspires workers to achieve good results which drives performance	A leader who matches his moods and behaviour with the situation is able to be sensitive of peoples feeling but install a positive sense which influence working performance	A leaders actions provides guidance to the manner in which workers would similarly act in carrying out the required objectives. This in turn affects performance.	A bullying leader has an effect on peoples creativity, willingness to work harder and help coworkers which influence business performance
			A leaders bad behaviour leads to workers who adopt the same behaviour which influences worker performance	A leader's action in terms of what he does and how he acts provides direction to people who in turn they do. This has a direct impact on business performance	A leader with a bad actions would not be able to lead people to the required objectives resulting in the business objectives not being met	A leader who is willing to be humble is able to learn from workers on things that he/she is not aware of which can improve performance.	A leaders boldness in acting against or with a bad decision can influence the manner in which workers perceive him and in the manner in which their work performance.
			A leaders who show integrity is able to establish trust amongst workers who would in turn be committed in achieving the required business performance.	A leaders honesty builds trust with his/her workers which in turn impacts worker behaviour and performance.	A leader who listens, acts and communicates with integrity establishes a positive relationship with workers which has an impact on business performance.	A leader who demonstrates integrity in showing straightforwardness and no hidden agenda is able to influence worker morale which in turn would influence business performance.	A leader who demonstrates honesty provides symbolic actions of trust to workers which in turn influences business performance
			A leader's ethical practice allows him/her to gain respect amongst people. This in turn would result in collaborative work which has positive impact of performance	A leader that is corrupt causes distrust in the organisation which affects the organisations performance	A leader that is open and honest, in indicating what is possible and what is not allows workers to be gain a common understanding which has a positive impact on worker performance	A leader who provides effective coaching is able to reinforce positive behaviour and accountability which would influence business performance.	A leaders behaviour has an effect on worker voicing their thoughts, with workers that can voice their thoughts achieving higher performance
			A leader that is able to influence workers is able to convince them that they can achieve set goals together which leads to performance delivery	A leader that withholds response by selectively assisting workers leads to a lack of trust in the group and lower worker performance	A leaders behaviour affects the mind set of worker and in turn their behaviour and their work performance	A leader that focuses on his strengths is able to inspire others which in turn has an impact on worker and business performance	A leader that displays self-awareness is able to pause, consider how he feels and what he wants to relay. This would allow him to make better constructive engagements which influences worker performance
			A leaders who demonstrates behaviour aligned to trust is able to influence worker behaviour	A leaders questioning approach can be solution driven which installs hope and allows workers to give solutions which in turn influences business performance			

12	Purpose	Setting and having the same vision and goal. Knowing what is to be done and why, common direction	Leaders style which share the bigger picture is able to get the team to work towards this goal and reach the required results.	A leader who set clear exactions, by identifying the vision and manner in which to get to it, workers know what they working towards which influences their performance	A leader who is able to align worker to his vision and specific focus is able to commitment to these which would lead to specific objective being met.	A leader who promotes a clear vision and strategy would look at getting organisational alignment, common priorities and foster continues improvement. This in return would influence a business's performance	A leader that establishes purpose by providing the bigger picture to workers is able to provide clarity and install motivation and innovation which would positively impact business performance
			A leader who does not provide a clear and credible vision would most result in workers being unfocused and unmotivated, which would impact the ability to bring about the required success.	A visionary leadership style during times of organisational change allows employees to understand the organisational strategic plan and allows them to input the performance goals. This participation allows business objective to be attained.	A leaders commitment in facilitating the alignment of workers to business objective influences the business performance	A leader that establishes a purpose is able get worker to head in the same direction during constant changing conditions allowing long term objectives to be met.	A leader that establishes purpose, allows what needs to be performed to be identified, which simplifies work process
			A leader that creates a strong purpose would motivate staff and bring about change which would positively influence business performance	A leader that establishes a purpose would inspire customers and worker and would build trust which would improve business performance	A leaders ability to communicate well his strategy allows trust between workers and stakeholders which influences relations	A leader that communicates with people by sharing information provides guidance to people which influence business performance	A leader that openly communicates with people is able to establish trust, which leads to worker loyalty. This in turn influences business performance
			Having structure in leadership allows people to know, what, why and how they needs to do things which leads to increased productivity.	A leader that establish structure is able to provide workers with what to do and how to do it in reaching the required results.	A leader that is proactive in relaying his plan is able to get people to work with him to influence performance	A leader who leads from the front by providing people with an inspirational story and providing a clear plan to meet objectives are able to get peoples buy-in and in turn influence business performance	A leader who does not communicate with his workers would create mistrust which effects worker performance
			When leaders considers actions in terms of their long term effect they consider, the far reaching and fruitful actions which would develop people and situation for the benefit of the project or organisation.	A leader who understands what is to be achieved is able to make/influence changes which is in line with reaching the required business performance	A leader that personally communicates with workers allows for greater operational flexibility which influences business performance	A leader that is not holistic in viewing information and who focus on short term results may not achieve long term objective and the required performance of the business	A leader who fosters continual improvement would allow actions to be taken to close performance gaps, which would result in high performance.
			A leader who provides clear directions allows workers to know what needs to be carried out to bring about the required objectives.	A leaders ability to communicate allows him/her to influence people's behaviour and align them to what needs to be focused on, which has an impact on worker performance.	A leader who communicates effectively is able to relay a clear and direct message which informs workers and in turn allows business objectives to be achieved.	A leader that personally communicates with workers allows for employee engagement which influences business performance	A leaders coaching approach allows him to explain a job which bring everyone to a common understanding. This in turn influence business performance
			A leaders transparency in communicating with people will require that he needs to consider holistic information which would determine	A leaders ability to communicate effectively allows different departments to be aligned and work together to the same objective, to bring about the	A leader who listens is able to hear what worker have to say and ensure that they are aligned to business objective, which in turn bring about the required	A leader that establishes a purpose is able to set clear direct which allows workers to cooperating in achieving the required business performance	A leaders purpose would allow him to seek to gain clarity, express his passion and explore to gain an understanding which

			business sustainable performance	required performance	business performance	goals	influences him in reaching his outcomes
			A leader that places best interest first by gaining input from stakeholders is able to align the business to deliver holistic sustainable business solutions	A leader that establishes alignment by communicating the vision, goals and milestones is able to better face the challenges that it is faced with an improve performance	A leader that reinforces purpose in ensuring realignment is performed when goals are not met would impact on business performance		
19	Emotional awareness	Knowing how one feels and the feelings of others and what is making a person feel in that manner. Knowing and understanding inner emotions.	A leaders emotional intelligence assist in selecting the correct leadership style which creates a positive working climate. This in turn results in positive results.	A leader who demonstrates knowledge of his/herself, of workers and job accountabilities is able to influence worker morale, communication and worker motivation, which would result in better performance.	When a leaders treats his workers as he would like to be treated then the workers respect him/her and are committed to their work, which would bring about higher performance.	A leader that is empathetic in being thoughtful and caring to worker, but firm on the objectives is able to influence workers and business performance	A leaders values directs his actions and the manner in which people are treated which influences performance
			In gaining an understanding of a person's inner core values a person is able to identify what make them able to be effective in leading others	A leaders internal values allows him/her to act and lead these values in bring about the required performance	A leaders authentic belief can inspire and drive people which can influence performance	A leaders internal values would allow him to motivate and drive workers towards achieving the goal which would in turn influence performance	A leader with people skills is able to allow workers to perform and correct them they make mistakes. This allows them to grow and improve business performance
			A leader's internal make-up influence the actions he/she makes which impact the relations with workers. The relations in turn has an influence on performance.	Any person can be an inspirational leader in focusing on his/her strengths and bring about greater productivity.	In balancing a leaders internal and external motivators he/she is able to focus on financial, social and environmental objective required for holistic performance achievement	A leaders ability to listen allows him/her to improve on his/her self-awareness and in turn performance	A leader that is respectful allows others to put forward their feelings and ideas in addressing problem which can influence business performance
			A leader who is able to lead himself well is able to allow others to do their job well, which would bring about the required results/performance.	A leader who respects him/herself is able to focus look after themselves, allowing them to focus on what needs to be done and to make others better which would influence performance.	A leader that is open to critique is willing to receive feedback which makes him mindful of his actions and its influence of workers and their performance	A leaders experience and wisdom allows him with the foresight and vision to plan the business future which impacts business performance	A leader who is closed minded and does not listen is not able to identify problem which is hindering performance
			A leader that explores different options is able to seek different opportunities to achieve results which influence performance	A leader who does not challenge assumptions and norms by sticking to the same methods would restrict performance improvement	A leader that is open to alternative options such as collaboration and working arrangements is able to make workers happier and more productive	A leaders experience allows him to provide concise guidance which assist workers in executing their work and in turn the performance.	A leaders experience allows him to provide concise guidance which assist workers in executing their work and in turn the performance.
			A leaders system of beliefs allows advised decisions to be made which would result in client satisfaction.	A leader's knowledge allows him to have the insight of what to do in situations allowing and influence business performance.	A leader emotional intelligence allows him to manage his workers effectively which has an impact on staff turnover and performance	A leader who seek multiple perspectives would gain a complete understanding which would assist in making better decision to improve business performance	A leader that is considerate of workers and checks how they are doing will ensure that they not a risk to themselves and the company. This allows business performance to be maintained
			A leader that is empathetic is	A leader that uses emotion can	A leader that gets people		

			able to recognised hidden items which are not normally visible when using rationality. This approach can influence worker performance	set a collective target which drives workers to achieve it, to ensure that they are not the reason for the target not being met	committed to a company/project would get them emotionally attached and committed to it, which would improve performance		
20	Foster relationship	Showing interest and setting a positive environment. (loyalty)Committed to the company and the people. collaborations allows the best to be put forward	A leader who focuses on results and builds positive relations is able to promote openness, growth and success amongst people which leads to greater effectiveness.	A leader who establishes trust can provide and receive constructive feedback which allows people to positively move forward and improve on performance.	A leader who creates an open, honest environment allows workers the platform to provide feedback and their perspective which can lead to performance improvement.	A leader who demonstrates enthusiasm with a genuine interest in people and the job would influence worker morale and commitment which in turn would influence business performance.	A leader that has human skills is able to understand what is required to motivate people to achieve the required results
			A leader who cares for his workers, by greeting and enquiring how they are doing is able to set a positive work vize which influence worker performance	A leader who establishes trust, by treating people with respect is able to get them energised to perform to the required level of performance	A leader who demonstrates loyalty to workers and the organisation is would increase worker morale and their commitment which in turn would influence business performance.	A leader that is respectful increases peoples well-being and work contribution which improves work performance	A leader who shows consideration to workers, makes employees feel that they are cared for which inspires them to peak worker performance.
			A supportive leadership style amongst medium to high competency people, provides guidance in attaining the peoples next level of performance. This contributes to overall objective being met.	A leader who installs a supportive environment is able to allow team members to identify progress, concerns and improvements which contributes to high performance.	Positive feedback from leadership is likely to maintain motivational level which would result in high performance.	A supportive leader who sincerely listens and is authentic can install trust and inspire people which in turn has an impact on worker performance	A leader who listens to his workers can gain their respect and trust which in turn can influence business performance
			A leader who displays poor listening skill who establish hostility, miscommunication and a breakdown in team cohesion which affects team performance.	Leaders contribute to collaboration when they listen, evaluate and then speak to the people. This engagement with people increase productivity.	A leader who engages with his workers by listening to their difficulties and their suggestion inspires confidence in them which influence work performance.	A leader who is able to communicate is able to get worker engagement which in turn influences business productivity	A leader that promotes teamwork by getting different working teams to work together is able to achieve solution which would influence changing market conditions
			A leaders contributes to non-collaboration when they do not set the example of working together and pass on tasks. This results in low productivity.	Leaders allows for collaboration through diversification allows different strengths of people to be drawn to bring about company success.	A leader who is able to get workforce engagement, would be able to get workers to understand their roles on meeting the organisations goals. This would in turn influence a worker to strive in meeting them and influence performance outcomes.	A leader who promotes collaboration is able to get teams to work together and bring about the required organisational results	A leader that promotes team work allows new ideas to be gathered which influences business performance
			Leaders who communicate transparently are able to install trust amongst the team. This in turn allows problems to be solved and decisions to be made which affect high performance.	Leaders who are not open and transparent about information and the information's comes to light, would result in workers being aggrieved and working against them which would affect business performance	A leader that cares for workers in looking at their growth and development is able to nurture confidence in them which has a positive influence on performance	A leader who motivates the individuals in a team is able to create a sense of belonging and shared business objective which brings about high performance.	A leader who does not communicate conditions which affects the people would lose their respect which in turn would impact performance
			A leader that openly discusses	The quality of relationship	A leaders that does not engage	A leaders dominating and does	A leader that is dishonest may

			conflicting objectives allows people to become aware of them and deal with them to reach the required performance	between a leader workers influences worker task performance	with stakeholders may lose their trust and access to their resources which would affect business performance	not consider the alternative views of others would undermine his own credibility and would impact the support he would receive which would influence business performance.	momentarily gain in results but would dilute trust by workers and stakeholders which negatively influences
			A leader that listens and proactively engages with stakeholder (workers) is able to build a healthy reputation	A leader that collaborates with stakeholders in discussion and partnering with them are able to achieve collective solutions to improve business performance	A leader that engages with workers in providing them with a platform to raise their concerns is able to establish trust which influences worker performance	A leader who shows that he cares by paying attention to what happens in workers personnel lives and follows up on them is able to build relations with them which has a positive influence on worker performance	A leader that communicates openly with his workers by keeping them informed of his absence is able to build trust which influence worker performance
			A leader that listens and acknowledges worker input by allowing them to freely provide input, stimulates worker to take ownership and put all their effort in, which improve worker performance	A leader that provides feedback on goals and performance is able to gain worker trust which improves worker performance	A leader that foster collaboration allows the workers to put forward the sum of all of their best which would positively affect business performance	A leader that does not foster healthy interaction would bring about disorder and impact business performance	A leader that fosters participation by allowing worker at the lower level to provide their perspective and solution allows for greater worker participation and improved business performance

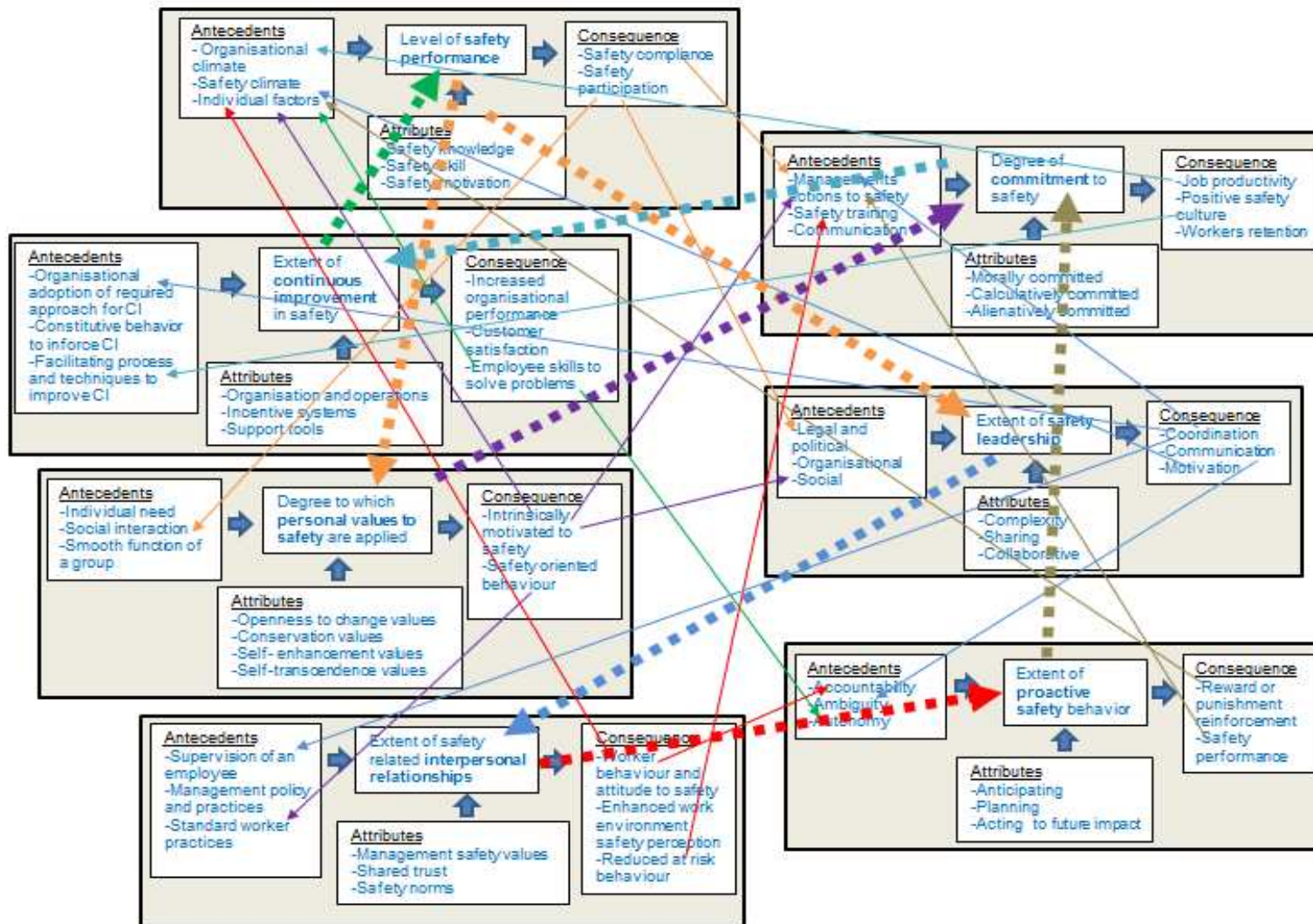
Appendix 9: List safety culture core concepts, core variables and its antecedents, attributes and consequences

Concept	Variable	Antecedents	Attributes	Consequences
Safety Performance	Level of safety performance	<ul style="list-style-type: none"> - Organisational climate - Safety climate - Individual factors 	<ul style="list-style-type: none"> - Safety knowledge - Safety skill - Safety motivation 	<ul style="list-style-type: none"> - Safety compliance - Safety participation
Continuous improvement (CI) in safety	Extent of continuous improvement in safety	<ul style="list-style-type: none"> - Organisations adoption of required approach for CI - Constitutive behaviour to inforce CI - Facilitating process and techniques to improve CI 	<ul style="list-style-type: none"> - Organisation and operation - Incentive systems - Support tools 	<ul style="list-style-type: none"> - Increased organisational performance - Customer satisfaction - Employee skills to solve problems
Commitment to safety	Degree of safety commitment	<ul style="list-style-type: none"> - Management actions to safety - Safety training - Communication of safety 	<ul style="list-style-type: none"> - Morally committed, - Caculatively committed - Alienatively committed 	<ul style="list-style-type: none"> - Job productivity - Positive safety culture - Workers retention
Proactive behaviour to safety	Extent of proactive safety behaviour	<ul style="list-style-type: none"> - Accountability - Ambiguity - Autonomy 	<ul style="list-style-type: none"> - Anticipating - Planning - Acting in advance 	<ul style="list-style-type: none"> - Reward or punishment reinforcement of safety - Safety performance
Interpersonal relationship	Extent of safety related interpersonal relationships	<ul style="list-style-type: none"> - Supervision of an employee, - Management policy and practices and - Standard examples co-worker practices 	<ul style="list-style-type: none"> - Management safety values - Shared trust - Safety norms 	<ul style="list-style-type: none"> - Worker behaviour and attitude to safety - Enhanced work environment safety perception - Reduced at risk behaviour
Personal values to safety	Degree of personal values to safety	<ul style="list-style-type: none"> - Individual need - Social interaction - Smooth function of a group 	<ul style="list-style-type: none"> - Openness to change values - Conservation values - Self- enhancement values - Self-transcendence values 	<ul style="list-style-type: none"> - Intrinsically motivated to safety - Safety oriented behaviour
Safety leadership	Extent of safety leadership application	<ul style="list-style-type: none"> - Legal and requirements - Organisational characteristics - Social characteristics 	<ul style="list-style-type: none"> - Complexity - Sharing - Collaborative 	<ul style="list-style-type: none"> - Coordination of safety activities - Communication - Safety motivation

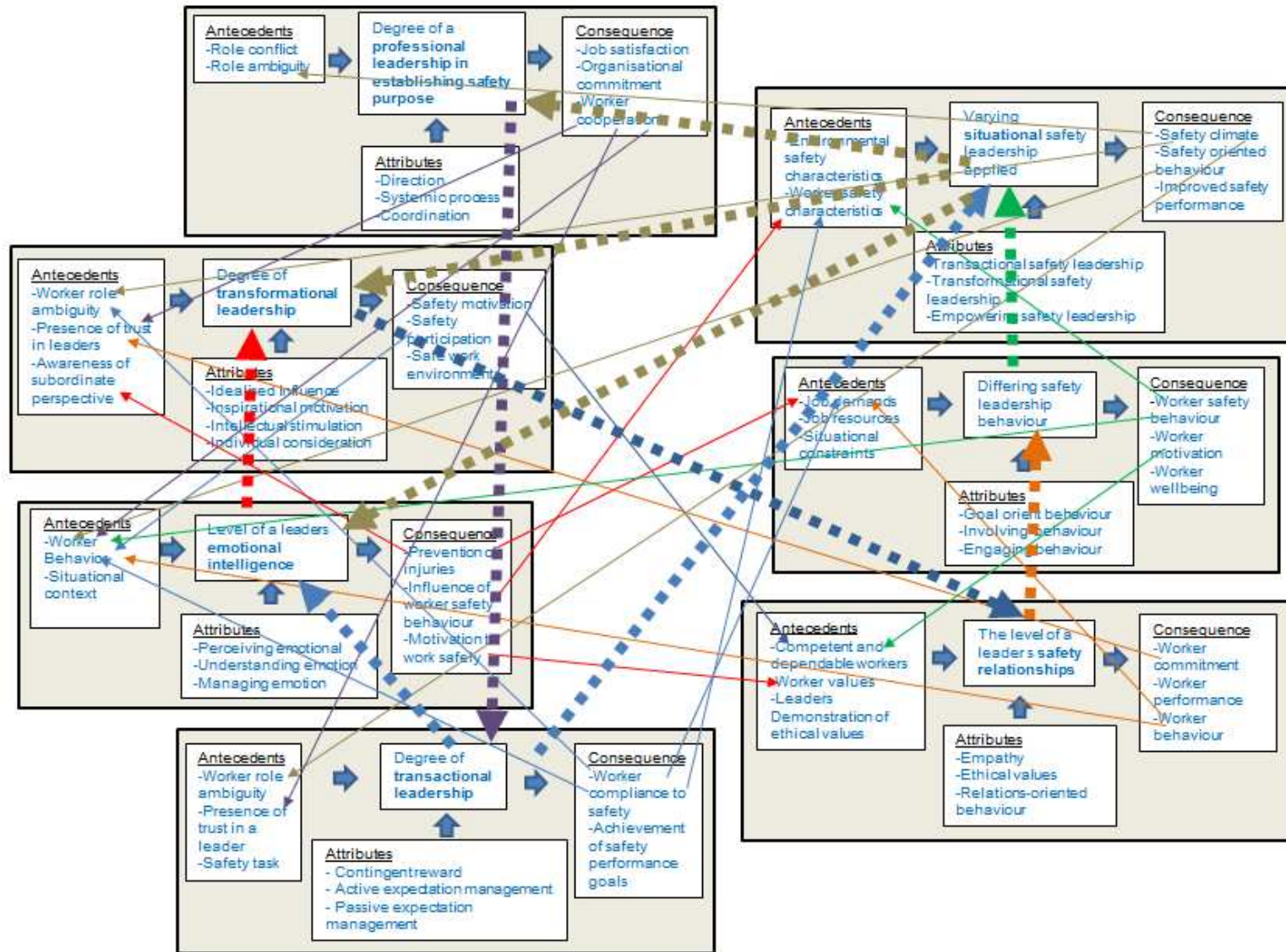
Appendix 10: List safety leadership core concepts, core variables and its antecedents, attributes and consequences

Concept	Variable	Antecedents	Attributes	Consequences
Leader safety behaviour	Differing safety leadership behaviour	<ul style="list-style-type: none"> - Job demands - Job resources - Situational constraints 	<ul style="list-style-type: none"> - Goal-oriented - Involving - Engaging 	<ul style="list-style-type: none"> - Worker safety behaviour - Worker motivation - Worker wellbeing
Situational safety leadership	The varying situational conditions faced by safety leaders	<ul style="list-style-type: none"> - Environmental safety characteristics - Worker safety characteristics 	<ul style="list-style-type: none"> - Transactional safety leadership - Transformational safety leadership - Empowering safety leadership 	<ul style="list-style-type: none"> - Higher safety climate - Safety oriented behaviour - Improved safety performance
Leadership safety relationships	The level of a leader safety relationships	<ul style="list-style-type: none"> - Competent and dependable workers - Worker values - Safety climate 	<ul style="list-style-type: none"> - Empathy - Ethical values - Relations-oriented behaviour 	<ul style="list-style-type: none"> - Better worker performance - Worker behaviour - Worker commitment
Transactional safety leadership	The Degree of transactional safety leadership	<ul style="list-style-type: none"> - Safety tasks - Worker role ambiguity - Presence of trust 	<ul style="list-style-type: none"> - Contingent reinforcement - Active management by expectation - Passive management by expectation 	<ul style="list-style-type: none"> - Worker compliance to safety - Achievement of safety performance goals.
Transformation safety leadership	The degree of transformational safety leadership	<ul style="list-style-type: none"> - Presence of trust - Worker role ambiguity - Awareness of subordinate perspective 	<ul style="list-style-type: none"> - Idealised influence - Inspirational motivation - Individual consideration - Intellectual stimulation 	<ul style="list-style-type: none"> - Safety motivation - Safety participation - Safe work environment
Emotion intelligence	The level of a leaders emotional intelligence	<ul style="list-style-type: none"> - Worker behaviour - Situational context 	<ul style="list-style-type: none"> - Perceiving emotion - Understanding emotion - Managing emotion 	<ul style="list-style-type: none"> - Prevention of injuries - Influence worker safety behaviour - Motivation to work safely
Leadership establishing safety purpose	Degree of professional leadership	<ul style="list-style-type: none"> - Direction - Systematic process - Role conflict and ambiguity 	<ul style="list-style-type: none"> - Mission, vision - Constancy - Coordination 	<ul style="list-style-type: none"> - Common purpose - Job satisfaction

Appendix 11: Relationships between respective safe culture core concepts



Appendix 12: Relationship between the respective safe leadership core concepts



Appendix 13: Sample of the participant consent form

INFORMATION SHEET & CONSENT FORM

Good day colleague

I am a post graduate student in the department of Electrical Engineering at the University of Cape Town, currently conducting research towards a master's degree in Nuclear Power. My research focuses on the influence safety culture has on project performance and would like to invite you to participate in an interview.

I am interested in finding out whether safety culture impacts the manner in which projects are executed and if it influences aspects of cost, quality and time of a project. I would like to gain an understanding of how or whether safety culture is as a driving factor in projects and which aspects of safety culture influences project members to ensure that the project and station is safe and sound. As a nuclear professional your input to this research in participating in the interview is highly valued as it would provide the insight and understanding related to the research topic.

Please understand that you do not have to participate, i.e. your participation is voluntary. If you choose not to participate, there will be no negative consequence. If you choose to participate, but wish to withdraw at any time, you will be free to do so without negative consequence.

A conversational interview will be held which looks at gathering your insight and experience on the subject of safety culture. It should take 30 min for the most.

The research does not require any confidential, identifiable nor sensitive information to be divulged. Any form of identification will be removed during the data processing phase of the research to assure you anonymity.

A summary of the research will be compiled and I will be more than willing to explain the outcomes and finding on your request.

Thanking you in advance

Zieyaad Isaacs

I have read and understand the content noted in the consent form and would be willing to be interviewed

**Interviewee
Signature**
