

**THE USE OF SYSTEMS THINKING
TO DEAL WITH MANAGING CHANGE
IN THE CONTEXT OF
THE NEW SOUTH AFRICA**

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MSc (Eng)

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DECLARATION

I, Ian James Weston, submit this thesis for the Degree of Master of Science (Engineering). I claim that this is my original work and that it had not been submitted in this or any similar form for a degree at any University.

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INTRODUCTION

On 27 April 1994, South Africa held its first ever fully democratic elections. This event heralded a new political order that prescribed a diametric change to governance. This enquiry deals with this change and more specifically the process of managing change in the evolution of the new form of governance.

THE EXISTING SITUATION

Prior to the 1994 elections, South Africa was governed by a minority government elected by primarily the white population group. Black citizens were not permitted to vote. Development in this era was essentially aimed at the privileged white minority with the castigated black majority being suppressed in terms of opportunities and development.

This previous form of governance was entrenched in all tiers of government, from the lowest tier of local (municipal) government, to the middle tier of provincial government and ultimately, to the highest tier of national government.

This form of government, in itself, was not necessarily perceived to be a primary problem. The primary problem, as such, essentially resided in the form of accountability at that time. In the past accountability resided wholly in the elected bodies of councils, boards and parliaments. Accountable bodies thus were delegated to make decisions for and be accountable to themselves for the outcomes of their decisions. This inferred that once a

community had elected a government body the process of decision making and accountability was delegated to that body.

The new order requires that elected bodies be directly accountable for their actions and decisions to their respective electorates. This infers a holistic participative process. No longer is decision making summarily delegated to the elected few. Procedures are required to be established so as to ensure that a broad-based participation enables the electorate to have “ownership” of the ensuing decisions.

THE CURRENT CONCERN

Having established the new emphasis on accountability and also the transitional state of governance it is necessary to outline various concerns that become apparent when dealing with this new approach. There is concern regarding the consequences of not changing management’s ability to accommodate change and the desirability of change. Change in itself infers a shift of emphasis and ultimately a shift of power. If change is not managed by suitable intervention methods then change itself may become problematic. The process of change therefore must be well managed by appropriate methods whilst enabling adherence to the policies of the new dispensation.

POSING THE QUESTION TO ADDRESS THE CONCERN

Having described the required shift in emphasis of accountability and the need to manage this change in emphasis one must consider the manner in which this may be achieved.

The question that needs to be asked is therefore:

“How can one manage change during the transformation processes of governance in the context of the new South Africa to ensure that the objectives of management are met whilst embracing the expectations of the widest possible arena of stakeholders?”

This may be put more simply:

“How can change be managed so that management’s objectives are met by considering the aspirations of the broader community?”

RESPONDING TO CONCERN

It is suggested that the answer to the above question is may be obtained by making use of systems thinking. The systemic view is seen to infer a holistic approach to solving problems. The concepts of hard systems thinking and soft systems thinking suggest different methodologies for addressing this complex issue. Two case studies are examined to illustrate dealing with, on one hand, a hard systems methodology and, on the other hand, a soft systems methodology.

The hard systems approach dealt with the problem of “The Proposed Olympic Games to be held in Cape Town in the year 2004”. In this case study the most appropriate method was considered to be Interpretative Structural Modelling, also known as ISM.

The soft systems approach dealt with the problem of “The Redevelopment of the Matthew Goniwe Hostel in Kwazakhele, Port Elizabeth”. In this case study the most appropriate process was considered to be Soft Systems Methodology, also known as SSM.

METHODOLOGY REVIEW

The case study afforded an opportunity to demonstrate how divergent opinions of various stakeholders could be harnessed and synthesised to provide input to resolve perceived problematical situations.

In the case study of the hard systems method, ISM, divergence of the stakeholder views was through the process intended to achieve convergence (consensus) in order to solve the problem situation. In the case of the soft systems method, SSM, divergence of views were synthesised to produce an all embracing solution of the perceived situation. No attempt is made to produce consensus.

Systems thinking, therefore, is able to deal with issues that have given known-to-be desirable ends (hard systems) and where known-to-be desirable ends (soft systems) cannot be taken as given.

This research has attempted to address the issue of managing the complexity of development in the context of the recently democratised South Africa. It has basically suggested that, as a point of departure, developmental issues should be approached holistically and systematically. It is important to select an appropriate methodology in seeking to solve the problem of managing change.

The quality of the outcome of the two case studies reviewed has been affected by the quality of the inputs, particularly with respect to availability of time, availability of stakeholder inputs and the status of the research (that is, as an academic exercise).

PART ONE:

**THE PROBLEM OF MANAGING CHANGE IN THE
CHANGING SOUTH AFRICA**

This part describes the changes that are taking place in the new South Africa, and more specifically, to the changes taking place in governance. A comparison of governance in terms of the pre- and post-democratic era is made. Recent developments in governance and concerns regarding the process of change are outlined. The need for managing this changing process is identified as the area of concern forming the subject matter of this enquiry.

CHAPTER ONE: SOUTH AFRICA: THE NEW ERA AND THE PROCESS OF CHANGE

1.1 INTRODUCTION

The new South Africa, as it is referred to of late, infers that the old South Africa has been dispensed with for that of the new. South Africa, prior to the first fully democratic elections held in 1994, comprised of a totalitarian, autocratic style of Government and attitude that prescribed a top-down approach style of management. Policies determined by the high-ranking, minority Government officials, were endorsed as policy by the order of the day, and handed down to society in the form of legislation and actions. The silenced majority of the people in South Africa were thus not consulted regarding their needs and hence were subjected to the whims of the minority policy makers. This too applied to all who opposed the views of the existing Government.

Democracy, following a protracted history of authoritarianism, dawned on the people of South Africa in April 1994 when the African National Congress (ANC) emerged, after the first democratic elections held in South African history, as the new ruling party. The ANC brought with its manifesto, a promise of long awaited grassroots involvement.

The approach of the new Government is thus a bottom-up approach that primarily emerged from the many years of the struggle against Apartheid. The years of struggle and the oppressive resistance from the previous Government, forced the silenced majority to organise itself from the lowest tier at street level to form ultimately an organised Government-in-hiding. Hence, grassroots involvement informed higher levels with respect to policy making.

The ANC is on record, regarding its policies for developing the new nation, as having adopted the principles of broad-based community participation in the reconstruction and development of the new South Africa (African National Congress, 1994).

This new approach is practically diametrically opposed to that of the former Government and therefore it is questionable how such a complex approach will be managed to ensure that the new South Africa is democratised appropriately.

1.2 RECENT DEVELOPMENTS IN SOUTH AFRICA

South Africa, therefore, has recently undergone a major metamorphosis in terms of the changing socio-political and socio-economic situation prevailing at the time of the birth of the new government.

The socio-political situation has changed from an authoritarian minority rule government where all the political power was derived from less than 10% of the country's population, primarily the white and to a lesser extent, the coloured sectors of the community, to that of a democracy where the entire population has participated to elect a democratic government. The new Government's compilation, therefore, largely reflects the demographic compilation of the country's population.

The previous minority rule government's electorate comprised of the well educated and developed white and coloured population groups. The present government comprises primarily of the largely uneducated and underdeveloped, comparatively speaking, black population group. Addressing this problem, in itself, has been afforded priority status from the new government in the form of adopting an initiative known as the Reconstruction and Development Programme, (RDP), (African National Congress, 1994). The RDP has, as one of its goals, attempted to level the disparity that exists between the aforementioned groupings. It is a five year Programme and as such serves as a socio-economic initiative to bring about change in the standards of living of the majority of the country's population that historically has been economically marginalised.

Socio-economically speaking, the new government through the initiatives of the RDP, is attempting to right the wrongs of the past. In the past, the neglected black sector of the population was marginalised and isolated by being forced to live in townships and distant homelands created with little or non-existence social or economic opportunities. The RDP represents an initiative to “levelling the socio-economic playing fields”.

The issue regarding the changing of the socio-political and socio-economic development of the neglected community is further compounded by the changes taking place in the approach regarding the making of decisions.

Whereas, in the past decision-making participation regarding development was limited to the select ruling minority group, this has now changed to encourage broad-based grassroots participation contributing to decisions affecting development.

1.3 THE CURRENT CONCERN

As this newly adopted participative approach becomes the rule rather than the exception, the question arises whether the traditional, bureaucratic structures, such as local, provincial or central government bodies, are able to adapt to this new approach. This is questionable, as traditionally bureaucratic structures have governed by delegated authority from, albeit exclusive, electorate bodies. This, in turn, infers that these elected bodies were empowered to formulate policies; make decisions; and implement actions, largely without recourse to or without participative involvement with the electorate concerned.

The previous system of government, as it existed, was “successful” in that it ensured that management produced results. This form of delegated management was controlled by systems of checks and balances formulated by central government. The shortcoming in this process was that the checks and balances were usually carried out **after** the managed action had taken place. Hence, accountability was dependant on the actions of a few, which circumvented any possible corrective action that may have been desired as a result of the

electorate not being satisfied with the action. In this form of management, the end result preceded consensus of expectation.

The current policy of government, which is imposed at **all** levels of government from the macro level of central government to the grassroots level of local government, prescribes grassroots involvement as **mandatory** to the decision making process. Communities are expected, through the management process, to be consulted in a fully participative manner in order to encourage community “ownership” of the particular decision. The “ownership” of a decision is expected to achieve co-operation from the beneficial community.

All too often, in the previous regime, the lack of consensus led to community resistance that often resulted in destruction and counter production.

1.4 SUMMARY

The concern of this enquiry is, therefore, to establish whether such participative involvement can be effectively managed to ensure that development is successful. It is conceded that, in large groupings such as a local government electorate, that absolute consensus is unlikely. The emphasis of this enquiry is hence to deal with managing change such that broad-based community participation leads to successful change.

The format of the enquiry hereon comprises three parts:

Part Two which deals with the development of an approach to dealing with managing change in the changing South African context,

Part Three which demonstrates two systemic problem-solving methodologies via the employment of two case studies, and

Part Four which reflectively evaluates the enquiry and learning effort.

**PART TWO :
THE APPROACH TOWARD
ADDRESSING THE CONCERN**

In Part One the concern of this enquiry was outlined. This part deals with concepts of research, problems and problem solving (with the proposition of considering the systemic approach as an alternative to the traditional approach). It ultimately provides an overview of a useful technique to assist with the choice of a suitable systemic methodology.

CHAPTER TWO: THE RESEARCH: ITS AIMS AND CONSTRAINTS

2.1 INTRODUCTION

In the previous chapter the enquiry of this research was briefly defined. Prior to outlining the approach toward suggesting a solution for the problem, it is necessary to outline firstly, the aim of the research, with a general discussion on management research and secondly, the context and models of research.

2.2 AIMS OF THE RESEARCH

Mellville and Goddard (1996, p xiv) define research as “...a process of expanding the boundaries of our ignorance”. They suggest that the research process involves activities such as observation, theorising, experimenting, drawing conclusions and reporting results.

Research, according to Mellville and Goddard (1996, p 119), originated from Ancient Greek thought at around 600 Before Christian Era (B.C.E). Notable philosophers during this era were Socrates, Plato and Aristotle. Socrates used question and answers to arrive at knowledge that became known as the “Socratic Method”. Plato was an idealist whose philosophy portrayed the real world as consisting of ideals and not of the material world. Aristotle, on the other hand, was a realist and had a more materialistic philosophy.

Modern scientific thought from 13 century After Christian Era (A.C.E), according to Mellville and Goddard, emanated from philosophers such as Galileo, Bacon, Descartes, Locke and Kant.

Galileo used techniques of experimentation and observation. Bacon employed inductive logic. Descartes, who is regarded as the founder of modern philosophy, was a rationalist who originated the phrase *"I think therefore I am"* (p 122). Locke was known as the founder of empiricism where *"all knowledge is from experience except for mathematics and logic"* (p 122). Kant tries to reconcile Descartes' and Lockes' thought. He concluded *"...we make progress in the search for knowledge when our experiments and observations are guided by certain national principles"*.

Collins (1988) defines a philosopher as *"...a person who creates or study's theories about basic things such as the nature of existence or how peoples should live"*.

It is clear from the above that philosophy has evolved through the ages of man's quest to understand of make sense of his existence.

Easterby-Smith, et al. (1991, p 1) suggest that research *"... can be seen as a way of accelerating the process of understanding ..."*. Hence, research is related to promoting understanding.

Collins (1988) defines research as *"... work that involves studying something and trying to discover facts about it ..."*. Research, therefore, involves study, objectivity and facts.

Easterby-Smith, et al. (1991, p 6-8) furthermore have suggested that research may be pure, applied or action research. Pure research is intended to lead to theoretical development and may or may not have practical implications. Applied research is intended to lead to the solution of specific problems. Action research is research *"... that should lead to change, and therefore that change should be incorporated into the research process itself"*. According to this classification this enquiry identifies with the characteristics of an applied research as it will attempt to deal with proposing solutions to manage change in the context of a changing society.

In summary, research may be described as having the following aims or characteristics:

- it should expand knowledge

- it should involve study
- it should accelerate understanding
- it should deal with facts
- it should be objective

Easterby-Smith et al. (1991), further suggest that research requires four factors or qualities in order to be successful. These are:

- motivation
- support
- style and creativity
- personal qualities

Motivation is important and it is suggested that the motives for research may comprise of one or more of the following:

- research as a vehicle for learning
- research as a basis for personal growth
- research as a means of dealing with problems

The motive of this research comprises, essentially, of a combination of being a vehicle for personal learning and as a means of dealing with a particular problem.

Successful research cannot be easily achieved without support. Support, it is suggested, may be obtained from the following sources:

- from the tutor or supervisor
- colleagues or other researchers

The research should also reflect style and creativity that emanate from:

- blind luck (discovery)
- movement (which evolves during the process)
- a prepared mind (experience)

Successful research should, finally, also reflect the personal qualities of the researcher. It should thus not be a sterile act of expression but should give the reader an insight into the author's views and feelings.

2.3 CONTEXT AND MODELS OF RESEARCH

Research cannot be independent of the context within which it takes place. Easterby-Smith, et al. (1991, p 59) put forward the view that "*... people who have conducted research in different cultural or national contexts have pointed out just how important the context is in constraining what is possible and what is desirable*".

The constraints and opportunities posed by the context has lead Easterby-Smith (1991) to propose four archetypal research models that demonstrate the diversity of what is possible and feasible. These are:

- *the military model* that comprises teams of people, substantial preparation and planning and substantial resources.
- *the private agent model* that includes mavericks who make use of their own ideas and resources and endeavour to make the most of their available opportunities.
- *the investigative journalist model* that includes researchers who are opportunistic and may publish findings despite the consequences where deception is legitimate and necessary.

- *the appropriate technology model* that involves indigenous research in primarily developing countries. The research method in these cases must adjust to the realities of the situation.

The above four models to some extent predetermine the kind of research questions that can be investigated in their respective cases. This research identifies with the private agent model as the effort is entirely individualistic and is dependent on very limited resources.

2.4 DEFINING THE ENQUIRY

Before embarking on the research it is necessary to define, in terms of the context of the subject matter of this research, various terms. The subject of this research may therefore be summarised initially by the following query:

How does one manage the complexity of development in the context of the recently democratised South Africa?

Prior to addressing this query it is necessary to take a closer look at the elements of the query firstly, in isolation and then, holistically.

manage: Collins (1988) describes managing as “... *the responsibility for controlling ...*”

Collins, furthermore, describes control as “... *the power to make all the important decisions about how something is run ...*” and as “... *the ability to make something behave exactly as you want ...*”

The Concise Oxford Dictionary (1992) describes that to manage is to “...*organise, regulate, be in charge of ...*” and to “... *gain influence with or maintain control over ...*”

Managing a task thus implies the duties of responsibility and maintaining control over that task.

complexity: The Concise Oxford Dictionary (1992) describes complexity as “...*consisting of related parts, composite ...*”

Collins (1988) defines complex as “... *a group or system of things that are connected with each other in a complicated way ...*” and complexity as “... *the state of having many different parts connected or related to each other in a complicated way ...*”

Complexity is therefore described as a group of elements related to each other in a complicated manner.

developing: Collins (1988) describes that to develop is to “... *grow or change over a period of time into a better or more complete form ...*” and development as “... *the gradual growth or formation of something ...*”

The Concise Oxford Dictionary (1992) describes development as “... *the act or an instance of developing; the process of being developed ...*”

Development in a South African context is aptly described in the Reconstruction and Development Programme, (RDP), (ANC, 1994) whereby the programme seeks “... *to mobilise all our people and our country's resources in the final eradication of apartheid and the building of our future...*”

Developing implies a change over a period of time from one form to a better or more complete form. In South Africa's case this would mean the change from a disfigured, imbalanced society to an attractive, balanced society. It is the suggestion of the governing political party, the ANC, that the RDP is the vehicle to be used to promote this development.

The RDP has five major policy programmes to achieve this development:

- meeting basic needs
- developing our human resources
- building the economy
- democratising the state and society
- implementing the RDP

democracy: Collins (1988) describes democracy as “... *a system of government or organisation in which people choose leaders or make important decisions by voting ...*”

The Concise Oxford Dictionary (1992) describes democracy as “... *a system of government by the whole population usually through elected representatives ...*”

Democracy thus implies the participation of all participants in a process of decision making. In the past, South Africa, by legislation restricted this decision making activity to a select minority and hence excluded the vast majority of South Africans' from the process. Thus South Africa, before the 1994 elections, could not be considered to have been a democratic society.

Having examined these definitions more closely it is possible therefore to expand and refine this enquiry to read as follows:

“How does one responsibly maintain control over the many complex interconnected elements required to promote change for the better over a period of time such that broad based participation is achieved in the new South Africa”

2.5 SUMMARY

At this point, having defined the nature of the enquiry and prior to that having briefly described the characteristics of research, it is useful to summarise the aims and context of this research prior to embarking on the research itself. This will enable the reader to have insight regarding the constraints and limitations of the research effort.

The aim of this research, therefore, is to promote an understanding of managing change in a society whose governance is being transformed. To enable this, the study should deal with available and emerging facts and be objective.

The context of this work, furthermore, identifies with that of a private agent or maverick where the effort is entirely individualistic and where the resources are limited to that of a part-time student.

As stated above the enquiry as such is crystallised in the hypothesis:

“How does one responsibly maintain control over the many complex interconnected elements required to promote change for the better over a period of time such that broad based participation is achieved in the new South Africa”

The following chapter introduces the concepts of problems, problem solving, systems and systems thinking.

CHAPTER THREE: PROBLEM SOLVING AND SYSTEMS THINKING

3.1 THE CONCEPT OF A PROBLEM

“A problem is a situation that is unsatisfactory and causes difficulties for people...”

(Collins, p 625).

Problems are sometimes referred to as “messes”. Collins (1988) refers to a mess as “*an untidy state*” (p483) and that “*if you describe something as a mess, you mean that it is full of problems and trouble*”.

Neglecting to manage change in a changing society, such as present day South Africa, may result in a chaotic state or a mess that would, by this definition, be termed problematic. A problem is therefore very obviously a state that is undesirable and should be altered by resolution. The action employed to resolve a problem is referred to as “problem solving”.

3.2 PROBLEM SOLVING

Checkland (1981) defines problem solving as “... *the optimising approach practised by most operational researchers and management scientists. It employs scientific methods and techniques and mathematical models*”.

Flood and Jackson (1991, p147) suggest that **problem solving** “... *is the optimising approach practised by most operational researchers and management scientists. It employs scientific methods and techniques and mathematical models ...*”.

Flood and Jackson (1991, p xi) further suggest that “... *in the modern world we are faced with innumerable and multifaceted difficulties and issues which cannot be captured in the minds of a few experts and solved with the aid of some super-method. We are faced with “messes”, sets of interacting problems, which range from the technical and the organisational to the social and political, and embrace concerns about the environment, the framework of society, the role of corporations and the motivation of individuals.*”

Checkland (1981, p316) defines the problem solver as “... *a person or persons anxious to bring about improvement in problem situation ...*”.

Problem solving is thus the employment of suitable methods to unravel “messes” such that an improvement of the situation is achieved. The problem is thus, in this process, deemed to be solved.

This enquiry deals with employing methods (methodologies) to solve problems associated with the development of the newly democratised South Africa. These methodologies may be traditional or systemic. To understand and differentiate between the two is necessary to develop firstly, the concept of systems and secondly, an overview of systems thinking versus traditional thinking.

3.3 THE CONCEPT OF SYSTEMS

According to Kauffman (p 1), a system “...*is a collection of parts which interact with each other to function as a whole*”. For the system to function properly there are two requirements:

- All of the parts must be present
- The parts must be arranged in the proper way

The above definition infers that three characteristics exist in all systems, namely:

- a collection of parts
- interaction between each part
- functioning as a whole

A system viewed in this manner is therefore “organised” and relatively stable. The system can be part of a larger system or alternatively the system can comprise a collection of sub-systems. In this manner a “hierarchy” of systems is formed. The idea of this hierarchy (that is, a collection of systems) promotes stability. Stability is more likely possible to be achieved with a collection of smaller systems as opposed to a singular large system. This is particularly evident in groupings of people. Smaller groups organised in a hierarchy are more manageable than a singular large mass of people.

This stability is possible as *“a system is a collection of parts which interact with each other to function as a whole”*. This interaction between one part of a system with the system as a whole is a circular relationship known as a “loop”. This interaction results in an action that is not possible by the part or the system alone. Although the action resulting from the interaction is possible, in order for this to be a stable situation, constant adjustments are necessary to ensure a proper result is obtained. This entails one part of a system feeding corrective information back to the other known as a *“feedback loop”*.

Prior to embarking on the research effort, it is appropriate to reflect briefly on research, and in particular, management research and the context and models of research.

Checkland (1981) develops the notion that systems have boundaries between themselves and their environments. He, furthermore, suggests that the boundaries may be closed or open. Open systems will receive inputs and generate outputs across their boundaries. This condition does not exist in closed systems. The systems work, through interaction between different parts to transform inputs into outputs.

The interactions (processes) between elements may “feedback” whereupon the behaviour of one element may feedback either directly or indirectly to influence the element that initiated the behaviour.

This may best be illustrated diagrammatically:

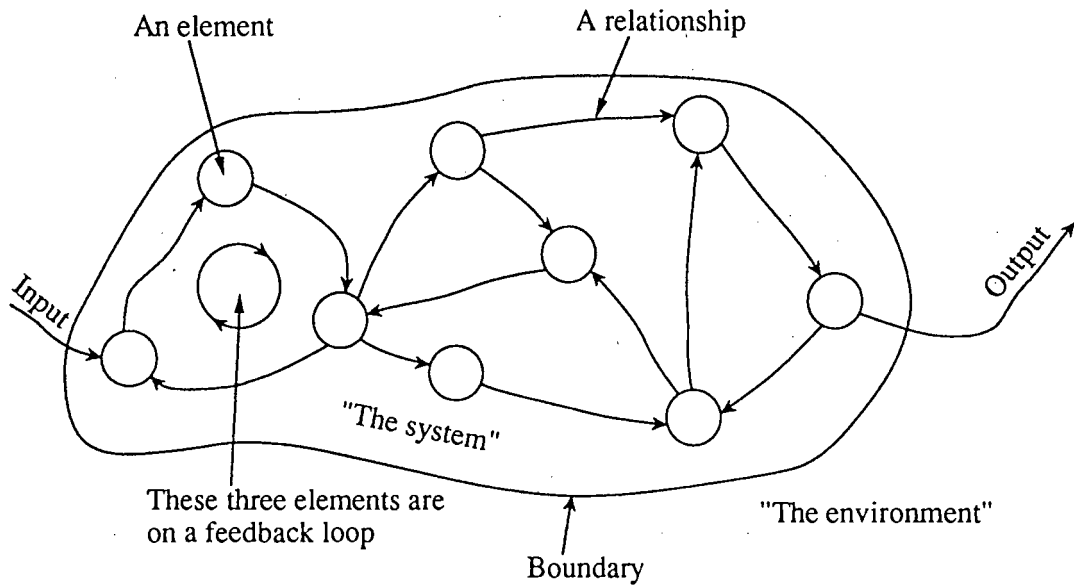


Figure 3.1 A General Concept of "System".

Checkland (1981) also develops the concept of synergy. Synergy is essentially *"the increased value of parts working together as a whole"* or more appropriately *"the whole is greater than the sum of its parts"*

Systems may comprise groups of smaller systems, known as sub-systems, which although they are characterised by internal interaction between constituent parts also interact with each other. These are known as "complex systems (networks)".

Checkland (1981) uses the concept of complex systems to suggest systemic metaphors that will be elaborated upon elsewhere in this text.

We are exposed to systems all day long. We cannot function without systems existing. Our world is made up of systems. The universe, the earth, the continents, countries, cities, suburbs, streets, homes and rooms are all systems.

The system can be part of a larger system or alternatively the system can comprise of a collection of sub-sections. In this manner a “hierarchy” of systems is formed. The idea of this hierarchy (i.e. collection of systems) is to promote stability. Stability is more likely possible to be achieved with a collection of smaller systems as opposed to a singular large system. This is particularly evident in groupings of people. Smaller groups organised in a hierarchy are more manageable than a singular large mass of people.

This stability is possible as *“a system is a collection of parts which interact with each other to function as a whole”*. This interaction between one part of a system with the system as a whole is a circular relationship known as a “loop”. This interaction results in an action which is not possible by the part or the system alone. Although the action resulting from the interaction is possible, in order for this to be a stable situation, constant adjustments are necessary to ensure a proper result is obtained. As mentioned previously this entails one part of a system feeding corrective information back to the other known as a *“feedback loop”*.

Systems therefore have certain characteristics that may be summarised as follows:

- they must comprise of a collection of parts.
- the parts must be arranged in a particular way and interact with one another.
- they may be part of larger systems or compromise of a collection of smaller systems.
- they obtain stability by adjustments where certain elements feed corrective information back to another by means of feedback (via a “feedback loop”).
- they function as a whole. Parts cannot operate in isolation within a system. Such occurrences are known as sub-systems.
- they have boundaries that may receive input from without or give output to without known as “open systems” If they do not interact beyond the boundary known as “closed systems”.

Systems may be classified into various categories such as that proposed by Wilson (1990) as follows :

- *Natural Systems* - these operate without human intervention on their own such as the solar system and weather system.
- *Designed Systems* - these are physical or mechanical or abstract such as a motor vehicle, philosophy, education, human.
- *Human Activity Systems* - these involve the purposeful activities involving humans such as political and social systems or flying an aeroplane, digging a hole.
- *Social and Cultural Systems* - these include mostly human activities such as families, businesses or the community.

3.4 SYSTEMS THINKING VERSUS TRADITIONAL THINKING

According to the glossary of terms as provided by Checkland (1981, pp 312-319):

systems thinking is “an epistemology theory by which we express knowledge of the world which, when applied to human activity is, based upon the four basic ideas:

- *emergence* - the principle that whole entities exhibit properties which are meaningful only when attributed to the whole, not its parts
- *hierarchy* - the principle according to which entities fully treated as wholes are built up of smaller entities which are themselves wholes
- *communication* - the transfer of information
- *control* - the process by means of which a whole entity retains its identity and/or performance under changing circumstances

as characteristics of systems. When applied to natural or designed systems the crucial characteristics is the emergent properties of the whole ”.

The systems therefore have *emergent* properties. These are properties that pertain to the system as a whole and not to its individual component parts.

In the case of natural and designed systems these emergent properties are readily identifiable. The emergent property of an aeroplane is thus its ability to fly. The individual parts of the aeroplane are unable to fly unless arranged in a particular way to form a structured whole.

Human activity and social and cultural systems do not readily exhibit their emergent properties. These properties are subject to interactions involving human input and thus tend to be more complex.

Systems are made up of parts and may form large systems comprising sub-systems forming a *hierarchy* of systems. Each system is thus a whole in its own right.

Checkland (1981) suggests that these larger systems consist of "levels of organisation". The higher the level, the more complex the level and the respective emergent properties.

Each system has boundaries so that they form whole identities. It is possible that the system will have transports across the boundaries, that is, receiving input from the environment and giving outputs to the environment. These systems are known as "open systems". There are systems that do not require these transports and are known as "closed systems". A clock would be a typical example of a closed system. It does not require these transports to continue its operation. This is not entirely true, as energy from time to time will have to be supplemented.

Some systems may have extremely complex boundaries which may not readily be defined. Beishon (1971) uses the illustration of a transportation system. A transportation system may comprise air, bus, train, taxi, car, cycle and pedestrian travel. The manipulation or variance of one mode may impact on others. For example, if the bus service is withdrawn this would result in commuters making more use of other modes of transport. The systems thinker should take cognisance of the interaction between various systems and their parts in defining their respective boundaries.

Interaction, as described above, can only occur between parts and systems by means of *communication* between the parts and systems. Communication involves the transmission of information between participants so that the information is mutually understood.

Collins (1988) describes communication as “... *the activity or process of giving information to other people or to other living things ...*”. In this case, one should consider the term living in its broader sense and perhaps rephrase the definition by substituting the word “living” with “active”. A computer, for example, is able to communicate with another system without “living” in the pure sense of the word.

Such communication cannot exist in a random fashion for a system to maintain stability. This communication should be *controlled*. Collins (1988) describes control as “... *the power to make all the important decisions about the way that it (the system) is run*” or alternatively “*to control a machine, process or system means to make it work in the way that is required.*” Beishon (1971, p33) describes the essential for control as:

- “1. *A goal state*
2. *A system capable of reaching that state*
3. *Some means of influencing the system's behaviour*”

This form of control is achieved by means of feedback. Feedback, therefore, is the corrective action that provides for the stability of a system. Systems thinking, therefore, embraces a holistic approach to ensuring that systems are returned to or operate in stability by ensuring those systems:

- must have emergent properties
- must function in a hierarchy of systems
- must be maintained by communication and be effective control.

Flood and Jackson (1991) contend that systems thinking emerged in the 1940's as a response to the failure of mechanistic thinking to explain biological phenomenon. Organisations were

thus considered as whole entities (systems) and as such had properties peculiar to themselves and not derived from their parts.

This bears out the view that the system is greater than merely the sum of the parts. Parts, in this view, cannot individually contribute as much independently as they could as a system.

Systems thinking therefore developed as an alternative to mechanistic thinking. Systems thinking deals with two different approaches to problem solving. On one hand there exists the problem solving methods for *hard issues* and, on the other, problem solving methods for *soft issues*. It is necessary at this point to distinguish between these two approaches.

3.5 HARD AND SOFT SYSTEMS THINKING

These two problem solving approaches deal with, in the one case, a “hard systems methodology” and, in the other case, a “soft systems methodology”. Checkland (1988, pp 312-319) proposes the following definitions:

Hard Systems Methodology:

“Systems-based methodology, also known as systems engineering; for tackling real-world problems in which an objective or end-to-be-achieved can be taken as given. A system is then engineered to achieve the stated objective.”

Soft Systems Methodology:

“Systems-based methodology for tackling real-world problems in which known-to-be-desirable ends cannot be taken as given. Soft systems methodology is based upon a phenomenological stance”.

A **phenomenological stance**, furthermore, is “... *a philosophical position characterised by a readiness to concede prime importance to the mental processes of observers rather than to the external world ...*”.

Hence, hard systems methodology deals with solving problems regarding the outcome of given objectives. The end result, or desired outcome is known in advance. The problem solving method thus is geared to achieving the particular end result. The main effort of this methodology is to arrange the solution of the problem to suit a desired end result.

Soft systems methodology, on the other hand, deals with solving problems regarding the outcome of unknown objectives. The end result is unknown at the outset. The problem solving method therefore involves determining an end result. The main effort is to arrange the solution of the problem to determine an unknown end result.

3.6 WHY SYSTEMS THINKING?

In this chapter we have examined the concepts of:

- problems
- problem solving
- systems
- systems thinking
- hard and soft systems thinking

In the context of our examining the problems associated with the development of the new South Africa, we have attempted to introduce the above concepts in order to propose that system thinking can be employed to demonstrate how the problem can be approached.

We have introduced the concepts of hard and soft systems thinking as South Africa is a complex multi-layered hierarchy of systems. To facilitate development, therefore, will require both hard and soft systems problem solving techniques.

At this point it is appropriate to distinguish the difference between traditional thinking and systems thinking.

Traditional thinking, as we have learnt, originates and has evolved from early Greek Philosophy. Flood and Jackson (1991, p 3) suggest that mechanistic (traditional) thinking *"...adheres to analysis and reductionism, claiming that all objects and events, and their properties, can be understood in terms of ultimate elements."* The implication of this type of thinking is that if all the parts making up an organisation or system are optimised, then the whole is also optimised. Unfortunately, this has proved not always to be true as some organisations fail to perform well as a whole when all the individual parts have been optimised.

Systems thinking emerged in the 1940's as a response to this phenomena and as a response to the failure of mechanistic thinking to explain holism. Systems were thus to be treated as "wholes" where emergent properties were peculiar to themselves.

The nature of this enquiry, where the solution of the problem requires a holistic approach, lends itself to systems thinking. The nature of the enquiry is complex and subject to emergent characteristics of social and political inputs. It is considered doubtful whether the traditional (reductional, mechanistic) approach would successfully resolve the problem.

The following chapter introduces a technique known as Total Systems Intervention (TSI) which is useful to determine which systems methodologies one would employ for different types of problems. This technique is briefly described for information purposes to illustrate that a technique exists for selecting suitable problem solving methodologies. Its inclusion is not intended for demonstration although the technique is referred to in the case studies conducted.

CHAPTER FOUR: TOTAL SYSTEMS INTERVENTION (TSI): A BRIEF DESCRIPTION AND OVERVIEW OF SYSTEMS METHODOLOGY

4.1 INTRODUCTION

We have seen that for systems to be stable various conditions must be met as outlined previously. Should instability prevail, then it is obvious that a problem exists. This chapter briefly outlines a technique known as Total Systems Intervention (TSI) which is useful for an appropriate problem solving method for a given problem situation. Although this technique is introduced it is done so purely to bear witness to its existence and its application is briefly demonstrated in the case studies.

TSI has been proposed by Flood and Jackson (1991, p45) as “... *a new approach to planning, designing, problem solving and evaluation.*”

Essentially, this technique focuses on creatively thinking about the issues that managers have to confront by using a range of *systems metaphors*. The systems metaphors are then in turn linked “...*through a framework, the system of system methodologies, to various systems approaches,...*” Hereafter an appropriate systems-based intervention methodology can be selected and employed.

4.2 PRINCIPLES OF TSI

TSI embraces seven principles that are embedded in the three phases of TSI. These principles are outlined as follows by Flood and Jackson (1991):

- organisations are too complicated to understand using one management “model” and their problems too complex to tackle with the “quick fix”;
- organisations, their strategies and the difficulties they face should be investigated using a range of systems metaphors;
- systems metaphors, which seem appropriate for highlighting organisational strategies and problems, can be linked to appropriate systems methodologies to guide intervention;
- different systems metaphors and methodologies can be used in a complementary way to address different aspects of organisational and business concerns;
- it is possible to appreciate the strengths and weaknesses of different systems methodologies and to relate each to organisational and business concerns;
- TSI sets out a systematic cycle of enquiry with iteration back and forth between the three phases;
- facilitators, clients and others are engaged at all stages of the TSI process.

The systems metaphors referred to above may be likened to filters for looking at problem situations. Flood and Jackson (1991, p 7) describe five systematic metaphors that capture the insights of almost all management and organisation theory.

4.3 SYSTEMIC METAPHORS

4.3.1 MACHINE METAPHOR (“CLOSED SYSTEM” VIEW)

A machine operates in a routine way performing repetitive sets of activities to produce pre-set goals and objectives. The emphasis of this metaphor or model is on controlling the activities rather than on the environment.

This metaphor is suited to:

- performing straight forward tasks
- performing repetitive tasks
- for situations where humans “fit into the design” and follow machine-like commands
- performing in a stable environment

Its limitations are:

- it is inflexible and hence unable to adapt to changing circumstances
- it is a “mindless” metaphor and tends to “dehumanise” human participation

4.3.2 ORGANIC METAPHOR (“OPEN SYSTEM” VIEW)

This metaphor focuses on giving attention to the human aspect of organisations as it was perceived that individuals operate more effectively when their social and psychological needs were met. Organisations in this metaphor are treated more as organisms where the primary aim is more on survival and adaptability rather than goal orientated as in the machine metaphor.

This metaphor is suited to:

- open relationships with changing environments
- satisfying needs which promote survival
- promoting response and change
- complex environments

Its limitations are:

- recognising that organisms should be understood from the point of view of the people within them
- emphasising harmony whereas relations in organisations are often conflictual

- seeing change as being generated externally - does not provide for proactive development.

4.3.3 NEUROCYBERNETIC METAPHOR (“VIABLE SYSTEM” VIEW)

This metaphor emphasis active learning and control rather than passive adaptability as in the “open system” view. This view sees the brain as a tried and tested control system with the ability to communicate and learn.

This metaphor is suited to:

- promoting self-enquiry and self-learning
- when there exists a high degree of uncertainty
- encouraging creativity

Its limitations are:

- that it forgets that the purposes of the parts are not always the purposes of the whole
- that it fails to recognise sociological component of organisms

4.3.4 CULTURE METAPHOR

This metaphor refers to the familiar ways of action and thinking that exist in organisations. The term “corporate culture” is used to promote the organisation as a group of employers with a collaborative and community-like spirit.

Culture has typical features such as shared language, religion, history and a sense of belonging.

This metaphor is suited to:

- encouraging organisational development by shared social and organisational practices.

Its limitations are:

- that it may lead to explicit ideological control leading to feelings of manipulation, resentment and mistrust.
- the fact that culture takes time to evolve.

4.3.5 POLITICAL METAPHOR

This metaphor considers relationships between individuals and groups as involving the pursuit of power. There are three views regarding political situations, namely:

- unitary
- pluralistic
- coercive

These views are described by Flood and Jackson (1991, p 34) as having the following characteristics:

Unitarian -

- having common interests
- having highly compatible values and beliefs
- agreeing upon ends and means
- participating in decision making
- acting according to agreed objectives

Pluralistic -

- having compatibility of interest
- having divergent values and beliefs

- enabling possible compromise
- participating in decision making
- acting according to agreed objectives

Coercive -

- not sharing in common interests
- conflicting values and beliefs
- excluding possible compromise
- coercing others to accept decisions
- not agreeing to common objectives

4.4 THE THREE PHASES OF TSI

TSI has three phases known as:

- creativity
- choice
- implementation

4.4.1 CREATIVITY

This phase uses systems metaphors to help managers think creatively about their organisations. Ultimately, this phase will produce a “dominant” metaphor that highlights the main interests and concerns and will “*become the basis for a choice of an appropriate intervention methodology*”. (Flood and Jackson, 1991, p 51). Other metaphors that may reveal problems are termed “dependant” metaphors.

4.4.2 CHOICE

This phase will choose an appropriate systems based intervention methodology using a guideline of a “*system of systems methodologies*”. (Flood and Jackson, 1991, p 42). The methodology chosen will be the “dominant” methodology possible tempered in use by the imperatives highlighted by the “dependant” methodology.

4.4.3 IMPLEMENTATION

This phase will employ a particular systems methodology to produce specific proposals for change to the dominant vision of the organisation.

These three phases may be summarised in the following table (Flood and Jackson, 1991, p 54) :

CREATIVITY

- | | |
|---------|--|
| Task | - to highlight aims, concerns and problems |
| Tools | - systems metaphors |
| Outcome | - “dominant” and “independent” metaphors highlighting the major issues |

CHOICE

- | | |
|---------|---|
| Task | - to choose an appropriate systems-based intervention methodology(methodologies) |
| Tools | - the “system of systems methodologies”; the relationship between metaphors and methodologies |
| Outcome | - “dominant” and “dependant” methodologies chosen for use |

IMPLEMENTATION

- | | |
|---------|--|
| Task | - to arrive at and implement specific change proposals |
| Tools | - systems methodologies employed according to the logic of TSI |
| Outcome | - highly relevant and co-ordinated intervention |
-

Figure 4.1

The Three Phases of TSI Methodology

4.5 AN OVERVIEW OF SYSTEMS METHODOLOGIES

4.5.1 INTRODUCTION

We have introduced various concepts at this stage of addressing the problem of developing the new South Africa.

We have developed the concept that problem solving as applicable to an organisation, and South Africa is nothing more than an extremely large and complex organisation, is best addressed by adopting a systematic viewpoint of the problems emerging in the process.

The concept of a system was introduced whereby it was seen that a system comprises an organised assemblage of parts that are interrelated.

We have further developed the concept of systems thinking and the sub-categories of hard and soft systems thinking. Subsequently, we have discussed a technique that is useful for choosing an appropriate systems methodology to address a particular set of problem metaphors. This technique is known as Total Systems Intervention (TSI).

It is important at this stage to examine some of the systems methodologies that are available to the manager or management scientist. Flood and Jackson (1991, p 31) list some systems methodologies that are available to the systems practitioner:

- operational research
- systems analysis
- systems engineering
- system dynamics
- viable system diagnosis
- general system theory
- socio-technical systems thinking
- contingency theory
- social systems design
- strategic assumption surfacing and testing
- interactive planning
- soft systems methodology
- critical systems heuristics

Another methodology that may be considered is:

- interpretative structural modelling

We are able to group these systems methodologies into “a system of systems methodologies” by looking at the underlying assumptions they make about problem situations in terms of aforescribed metaphors.

4.5.2 GROUPING PROBLEM CONTEXTS

Flood and Jackson (1991, p 33) have found it is useful to group problem contexts into two dimensions:

- systems
- participants

These two dimensions cast light on the nature of the problems being reviewed. We will consider both dimensions in turn.

4.5.2.1 SYSTEMS DIMENSION

Systems are categorised ranging from simple systems, on the one end, to complex systems on the other. Simple systems have the following characteristics:

- a small number of elements
- few interactions between the elements
- attributes of the elements are predetermined
- interaction between elements is highly organised
- well-defined laws govern behaviour
- the “system” does not evolve over time

- “sub-systems” do not pursue their own goals
- the “system” is unaffected by behavioural influences
- the “system” is largely closed to the environment

Complex systems have the following characteristics:

- a large number of elements
- many interactions between elements
- attributes of the elements are not predetermined
- interaction between the elements is loosely organised
- they are probabilistic in their behaviour
- the “system” evolves over time
- “sub-systems” are purposeful and generate their own goals
- the “system” is subject to behavioural influences
- the “system” is largely open to the environment

4.5.2.2 PARTICIPANTS DIMENSION

Participants are classified according to the relationships between them in the following categories: unitary, pluralist and coercive.

These are in turn defined as follows:

Unitary-

- they share common interests
- their values and beliefs are highly compatible
- they largely agree upon end and means
- they all participate in decision making
- they act in accordance with agreed objectives

Pluralist-

- they have a basic compatibility of interest
- their values and beliefs diverge to some extent
- they do not necessarily agree upon ends and means, but compromise is possible
- they all participate in decision making
- they act in accordance with agreed objectives

Coercive-

- they do not share common interests
- their values and beliefs are likely to conflict
- they do not agree upon ends and means and “genuine” compromise is not possible
- some coerce others to accept decisions.

These two dimensions may be portrayed to form a matrix as follows:

		P A R T I C I P A N T S		
		UNITARY	PLURALIST	COERCIVE
S Y S T E M S	SIMPLE	SIMPLE - UNITARY	SIMPLE - PLURALIST	SIMPLE - COERCIVE
	COMPLEX	COMPLEX - UNITARY	COMPLEX - PLURALIST	COMPLEX - COERCIVE

Figure 4.2 An “Ideal Type” Grouping of Problem Contexts
(Adapted from Flood and Jackson, 1991, p 35)

Flood and Jackson (1991, p 36) in turn suggest categorising various methodologies according to the matrix shown in Figure 4.2 above and depicted in the following table:

	UNITARY	PLURALIST	COERCIVE
SIMPLE	<ul style="list-style-type: none"> • Operational research • Systems analysis 	<ul style="list-style-type: none"> • Social systems design • Strategic assumption surfacing and testing 	<ul style="list-style-type: none"> • Critical systems heuristics
COMPLEX	<ul style="list-style-type: none"> • Viable system diagnosis • General system theory • Socio-technical systems thinking • Contingency theory 	<ul style="list-style-type: none"> • Interactive planning • Soft systems methodology * Interpretative structural modelling 	?

Figure 4.3 A Group of Systems Methodologies Based upon the Assumptions Made About Problem Contexts (Adapted from Flood and Jackson, 1991, p 42)

* I have included this methodology into this category which is discussed in the case study in Chapter 8.

? No systems methodology currently bases itself upon the assumptions that problem contexts are complex and coercive.

4.5.3 SUMMARY

This Chapter has briefly discussed an overview of TSI and systems methodologies.

It should be possible, at this stage, to employ TSI to choose a systems methodology, although as stated earlier, this technique has not been employed in this research.

TSI has been discussed to enable this enquiry to be categorised in terms of the metaphor most closely identifying with it and to identify the most appropriate systems methodologies for use in the problem solving phase. The nature of this enquiry, therefore, identifies primarily with the political metaphor as it deals with relationships between individuals and groups involving essentially the pursuit of power, and more specifically, with the pluralistic-complex category of this metaphor.

The following chapter will outline the background to two case studies that both identify with the political metaphor and are intended to demonstrate how systems thinking can be used to deal with the problems associated with development in the context of the new South Africa.

**PART THREE:
PROBLEM SOLVING IN PRACTISE**

In Part Two an approach toward addressing the enquiry was proposed. This part deals with demonstrating how systems thinking can be employed in the enquiry by means of two case studies. Initially, the background to the case studies is outlined prior to the demonstration of two problem solving methodologies. The case studies are followed by a critique of the two approaches used.

CHAPTER FIVE: BACKGROUND TO THE TWO CASE STUDIES

5.1 INTRODUCTION

This enquiry, as explained previously, deals with the problem of managing control of the process of change in the context of the change in governance in the new South Africa.

Primarily, the process involves activities carried out by the people of South Africa. As discussed previously, the vast majority of South Africans have not been exposed to participative decision making regarding their own development or self-enhancement.

The African National Congress has implemented a policy to achieve this form of development. This policy is known as the Reconstruction and Development Programme (RDP), (ANC, 1994) which comprise five major programmes:

- meeting basic needs
- developing our human resources
- building the economy
- democratising the state and society
- implementing the RDP

As the scope of development in this context is extremely broad, I feel that it is appropriate to examine decision-making using both hard and soft systems approaches.

As previously defined:

hard systems approach - uses a systems-based methodology “for tackling real- world problems in which an objective or end-to-be-achieved can be taken as given”. In this case problem solving involves reaching known objectives. The method therefore is geared to achieving a particular result.

soft systems approach - uses a systems-based methodology “for tackling real- world problems in which known-to-be-desirable ends cannot be taken as given”. In this case, problem solving involves reaching unknown objectives. The method therefore involves determining an unknown end result.

Two case studies, which were felt would ably demonstrate how the two different systems approaches could be used in the context of our problem, are introduced prior to their employment.

5.2 A HARD SYSTEMS METHOD CASE STUDY: THE PROPOSED OLYMPIC GAMES TO BE HELD IN CAPE TOWN IN THE YEAR 2004

This case study describes hard systems thinking and in this case how Interpretive Structural Modelling was used to propose a programme of policy implementation to ensure that certain objectives are met in the planning of a future major project.

The project under consideration is the aspiration of the city of Cape Town that is currently preparing to submit a bid to host the 2004 Olympic Games. Against the backdrop of the social and economic needs of its broader Community the question is raised regarding whether Cape Town can afford to entertain the idea of hosting a single apparently non-sustainable event.

It is therefore proposed, that to meet the broader objectives of the beneficiary community, that certain policies should be put into place to ensure that the goals and objectives of the hosting of the Olympic Games are consistent with social economic upliftment of the broader community.

The case study therefore deals primarily with workshopping various sectors/stakeholders in order to achieve a reasonably broad opinion regarding critical issues that will play a major role in shaping the policy formulation.

The case study therefore entails the employment of Interpretive Structural Modelling, (ISM), which, as demonstrated, appears to be the most suitable consensus forming methodology proposing a model to serve as a framework for reaching the objectives as described.

5.3 A SOFT SYSTEMS METHOD CASE STUDY: REDEVELOPMENT OF THE MATTHEW GONIWE HOSTEL IN KWAZAKHELE, PORT ELIZABETH

This case study describes how soft systems thinking and in this case Soft Systems Methodology was utilised to propose an action plan to enable the objectives of a major redevelopment project to be identified and fulfilled.

The project forming the subject matter of this discussion was the redevelopment and upgrading of the Matthew Goniwe Hostel situated in Kwazekhele, Port Elizabeth. An action programme was derived to ensure that redevelopment is carried out to satisfy the needs of various stakeholder groups.

The case study essentially makes comparison between the existing conditions prevailing in the Hostel and that of a theoretical conceptual model that was derived from the input of

various stakeholders. Chapter 6, therefore, demonstrates the ISM case study and Chapter 7 demonstrates the SSM case study.

CHAPTER SIX: CASE STUDY: THE BROADER COMMUNITY AND CAPE TOWN'S OLYMPIC BID

6.1 LITERATURE REVIEW: CAPE TOWN'S OLYMPIC BID FOR THE YEAR 2004

As background to this project, the views as expressed in the available literature can best be dealt with under the following headings:

- Olympic history and origin
- Cape Town 2004 Olympic bid
- Metropolitan Development Framework and the Vision for Cape Town
- Reconstruction and Development Framework and allied issues
- Success and development defined
- Economic success

6.1.1 OLYMPIC HISTORY AND ORIGIN

Judith Swaddling (1988) suggested that the Olympic Games were held in honour of the god Zeus, the supreme god of God mythology, every fourth year for a thousand years from 776 BC to 395 AD attracting pageantry from citizens all over the Greek world to Olympia that lay beneath the pine covered hill of Kronos (named after the father of Zeus). In later years, citizens flocked in from as far a field as Spain and Africa. The Games apparently originated as the "Olympic Truce" to unify the Greek states and colonies following civil wars and

pestilence that were gradually destroying the land of Greece. This truce was a major instrument in the unification of Greek states and colonies.

In a document issued by the Olympic Steering Committee for Cape Town 2004 (1993) suggested that the Ancient Olympic Games were abolished when Greece came under Roman domination in 393 AD. The Frenchman, Baron de Coubertin was subsequently responsible for the revival of the Olympic Games in 1896 after being inspired by the excavation of the ruins of the Stadium of Olympia. Athens was appropriately chosen as the venue of the inaugural Modern Olympic Games in 1896. The following venue in 1900 for the Olympic Games was Paris, despite Greek protest that Athens should remain as the permanent site of the Games.

Up to and including the venue for the year 2000, the Summer Olympic Games will have been hosted 14 times in Europe, 6 times in America, 3 times in Asia and twice in Australia. Africa has thus yet to produce a venue for the Olympic Games.

The Right Honourable Dennis Howell, PC, MP, of the Birmingham Olympic Bid Committee (1992), stated as follows:

“The true purpose of the Olympic Movement is to unite peoples of the world through sporting endeavour and achievement; to enable them to meet together, to live together in peace and in friendship; to further the harmonious relationship between nations upon which all our futures depend and to enhance the respect which all men and women should share with one another. The Olympic movement exists, through sport, to overcome all the divisions of mankind.”

Against this ideology, the Cape Town Olympic Bid Committee (1993) stated that the basic objective of their bid, was as follows:

“To use the planning of the Games as one of the vehicles to assist in the economic and social upliftment of the Cape Town Region, and in the removal of structural imbalances in the provision of facilities and of opportunities.”

6.1.2 THE CAPE TOWN OLYMPIC GAMES BID FOR THE YEAR 2004

Raymond Ackerman, in an article in the Financial Mail (23 July 1993), has been quoted with regard to Cape Town's chances of hosting the Olympics as follows:

"It's not a pipe dream. I believe in this cause more than I've believed in anything else I've ever done. It will bring unity to the city and country."

The Cape Town Olympic Bid Committee (1993) suggested that the following benefits would accrue to Cape Town in the event of the bid being successful:

- Approximately 100 000 man-years of work would be created over five or six years creating meaningful redistribution and creation of wealth.
- The region would benefit from a housing boost of over 5 000 units for the Olympic villages alone.
- The transport network of the area would be improved and rail network extended
- The airports would be upgraded.
- Tourism would be immeasurably boosted and Cape Town would be placed firmly on the world tourism map.
- The greater Cape Town would become one of the world's leading sporting destinations.
- The region's economy would be greatly stimulated.

The Olympic Feasibility Study (1993) suggested the following aims and objectives for the Steering Committee for Cape Town 2004:

- to assist in the economic and social upliftment of the region;
- to assist in the removal of structural imbalances in the provision of facilities and opportunities;
- to improve grassroots recreational and sporting facilities;
- to assist in the development of special strategies;
- to advance the "one - city" concept of planning and government in the region;

- to focus on developing Cape Culture;
- to position Cape Town for inward investments; and
- to help establish Cape Town as one of the world's greatest cities.

The Study suggested further that:

- A successful bid would enjoy the support of the widest cross-section possible of the Western Cape's inhabitants and the structure would form a sound basis for an eventual International Olympic Committee bid;
- In the event of the bid being unsuccessful, the process would have served the purpose of setting in motion development strategies that would have a lasting impact on the Western Cape.

On economic empowerment the Study suggested that the bid would:

“...assist in the development of special strategies and practises that will have an impact on existing inequalities and underprovisions through a process of partnership, joint venture, facilitation, stakeholder participation and agreement.”

The above forms part of the Mission Statement of “*the Stimulus*” that is “*An affirmative action programme of the Cape Town 2004 Olympic Bid*” (1994). This document suggests that the framework of principles of the programme should comprise of the following elements:

- Affirmative action (to address historic imbalances)
- Community participation
- Training (to facilitate black and female participation and growth)
- Anti-front code
- Job creation and labour enhancement (to drastically impact on unemployment)
- Entrepreneurship
- Access to credit and capital
- Environmentally sensitive projects

- Procurement contracts

In a leading article of the Financial Mail (23 July 1993) a less optimistic view was portrayed. The article suggested that the popular belief that since the Los Angeles Olympic Games (1984), the Games have had a track record of financial success is unfounded as summarised hereunder:

- Montreal (1976) -is still apparently paying off debt incurred from the Games.
- Moscow (1980) -apparently lost in the order of 310 million US dollars.
- Los Angeles (1984) -the only Modern Olympic Games to show a profit (without Government subsidy) which was marginal against total costs.
- Seoul (1988) -showed a "profit" of 541 million US dollars which figure does not apparently reflect 3 billion US dollars of State expenditure.
- Barcelona (1992) -had to raise unspecified loans to cover costs.
- Atlanta (1996) -has scaled down its profit projection from 140 million US dollars to 16 million US dollars.

The article further poses some challenging questions:

“Do we (South Africa), with our volatile politics and punch-drunk economy, have the resources to risk on an enterprise that has been unprofitable just about everywhere? Can we afford to be locked into a project that will be at the mercy of foreign sponsorships? Does South Africa have the management and negotiating clout?”

On 21 September 1994, the new democratically elected South African Government officially backed the Cape Town Olympic Bid and hence complied with a vital prerequisite required by the International Olympic Committee, IOC, (The Cape Times, 22 September 1994).

Cape Town Bid consultant, Des Correia in the Sunday Times (25 September 1994) has indicated that of the 5,4 billion Rand required for the improvements to the City's infrastructure required to host the Games, 3 billion Rand would have had to have been spent on capital projects prior to 2004 in any event. *“2.4 billion rand is the real cost”* stated Des Correia.

In examining the developments proposed in the Cape Metropolitan Area, CMA, it is necessary to closely examine the proposals of the City wide initiative.

6.1.3 THE METROPOLITAN DEVELOPMENT FRAMEWORK AND THE CAPE TOWN VISION.

The Interim Metropolitan Development Framework, IMDF, was proposed as the first step to enable the Cape Metropolitan Area to meet the challenges of the "New South Africa" and was intended as a general guide for short to medium term development decisions (Cape Town City Council, 1993).

The IMDF highlighted some serious departures that exist in the Cape Metropolitan Area:

- 36 % of the labour force is unemployed
- only 0,5 million out of 1,8 million economically active people have an education level higher than standard 4
- 35 % of the population are squatters and an additional 34 % are poorly housed.

It proposed, amongst others, the following :

- *"If the City worked well for the poor, it would work for the rich"*
- Higher densities with activity corridors that would reduce travel distances

It concluded that the people of the CMA must plot their future collectively and suggested that the IMDF set out a development path to which agreement can be reached.

The Town Planning Branch of the Cape Town City Council held a workshop (December 1992) which suggested that spatial development should seek to:

- contain urban sprawl

- focus further development to areas of greater access to public transport
- promote greater integration of urban activities
- redress the unequal distribution of facilities and opportunities and
- create positive urban spaces that support economic and social development

The Municipal Engineer (June 1994) in its article "*Vision 2000 - an effective programme for change*" expounded on the Annual Report of the City Planner of the City of Cape Town by indicating the goals and of objectives as follows:

- to attain democratic local government
- to address imbalances in access to opportunities and quality of life
- to be sensitive and responsive to community needs
- to be a progressive and caring employer
- to be a provider of effective and affordable services
- to achieve sustainable economic growth
- to protect and enhance the city's natural, built and cultural environments.

The article further commented on the Cape Town bid for the Olympic Games as follows:

"The pursuit of the Olympic 2004 dream will have a bearing on most of the Vision's by providing opportunity where none has existed, stimulating the economy, developing democracy and responding to community needs, highlighting environmental advantages most of all, of course, making Cape Town a really internationally competitive city"

In its document "MDF - Policies for Implementation", the Cape Town City Council (July 1994) made the following statement concerning the development of the City with particular reference to the Reconstruction and Development Programme, RDP,:

"Over the next five years South Africa will be undergoing a phase of reconciliation and reconstruction. The RDP aims to lay the foundation for growth and development in the future. It is in all our interests that it is successful. However,

funds and investment potential for achieving all its aims are limited. Not every need can be addressed in the short or even medium term. Furthermore, funds must be spent in a manner that will redress past imbalances and set the framework for equality and into sustainability in the future.

There is the danger that the implementation of the RDP is going to mirror the pattern of development under apartheid. This is due to two things. Firstly, the delivery of development procedures established under apartheid are still in place in the form of bureaucracy and construction companies geared for township development. Secondly and more importantly, all the town planning ideas and frameworks developed under apartheid are still being used to guide the development of our cities. If the impact of the RDP is to be effective then it needs to occur within the context of restructuring the city system as well.”

6.1.4 THE RECONSTRUCTION AND DEVELOPMENT PROGRAMME AND ALLIED ISSUES

The Reconstruction and Development Programme, states its own definition as follows (ANC, 1994):

“The RDP is an integrated coherent socio-economic policy framework. It seeks to mobilise all our people and our country's resources toward the final eradication of apartheid and the building of a democratic, non-racial and non-sexist future.”

The key programmes of the RDP are:

- meeting basic needs;
- developing human resources;
- building the economy;
- democratising the state and society; and
- implementing the RDP.

The common issues occurring in the RDP document can best be examined in tabular form, see Appendix 1, where it will be seen that the most common issues in terms of frequency of occurrence are as follows:

- equality of women
- the damages and ills resulting from apartheid
- affirmative action
- job creation
- workers rights
- land reform programme
- capacity building
- black economic empowerment

The Western Cape Reconstruction and Development Programme (June 1994) which deals specifically with Western Cape issues identifies, amongst others, the following issues:

- the labour force in the Western Cape is approximately 1 million persons of which 495 000 are unemployed
- job creation therefore will receive priority
- Cape Town's transport problems are shaped by:
 - the poor living too far from job opportunities
 - zoning restraints
 - low residential densities contributing to urban sprawl
 - sport and recreation are an integral part of reconstructing and developing a healthier society of which the Western Cape has a current backlog of in excess of 4000 sports facilities
- tourism is considered one of the most important growth forces in the Western Cape which attracts approximately 20 % of South Africa's domestic tourists
- central to the Olympic bid, the emphasis should be on the development of infrastructure and facilities that will benefit disadvantaged communities that will involve job creation and skills development.

The Cape Town 2004 Olympic Games Feasibility Study proposed “*An Affirmative Action Program of the CT 2004 Olympic Bid*”(1994) lists as its objectives the following :

- to develop an action plan that focuses on:
 - training as an overall and aggressive strategy
 - specific training and employment policies and practises related to major employers in the tourism and construction industries
 - entrepreneurship development-facilitate access to opportunities training and resources
 - professions-collaboration, partnerships, joint ventures
 - implications for cultural, youth and social development
- to formally incorporate the economic empowerment program into an integrated and comprehensive management plan of the Olympic Bid structure and organisation
- to obtain formal endorsement of the Economic Empowerment program and proposals from stakeholders in the private and public sectors as follows:
 - specific endorsement by the construction and tourism industries of training and employment policies in order to achieve or work towards:
 - community awareness of tourism assets through an ongoing campaign at schools, voluntary and other organisations, etc.
 - appropriate training, i.e. tourism college to develop tourism related skills, as well as skills related to specific technology around transportation, catering, social and hosting, supply, etc.
 - Major emphasis to be placed on training for self-reliance
 - mobilisation of labour in the development of infrastructure and to combat unemployment maximising labour content
 - affirmative action in relation to contracting to black- and female- owned businesses and black participation in equity
 - endorsement by proposed beneficiaries of this Economic Empowerment Program.

The question of whether the blacks will “*get a fair slice of the Olympic cake*” was addressed in the Peninsula Times by Dr Seshi Chonco, Chairman of the Black Management

Forum (BMF) who expressed concern about *“the size of the cake which will be used to uplift communities, compared to that which would be taken by business interests.”*

6.1.5 DEVELOPMENT DEFINED

Jamshid Gharajedaghi (1986) suggested that *“Development is the process in which people increase their abilities and desires to satisfy their own needs and legitimate desires and those of others”*. He further posed the question:

“What must a nation do to encourage and facilitate development of its members? The answer to this question lies in identifying those ideals and pursuits of which is necessary for development. These ideals are identified in the writings of ancient Greek philosophers. They are truth, plenty, good and beauty.”

Kathleen Staudt (1991) referred to Basic Development Indicators that would to some degree measure national development. The indicators were:

- Gross National Product per capita
- adult literacy as a percentage
- daily caloric supply
- total fertility, number per woman

Staudt stated that developmentalists were obsessed with measurable changes, i.e. quantity, whereas Ariel Dorfman suggested that quality rather than quantity mattered:

“The real advance consists in having made some people feel more human. How do you measure that? How do you measure the amount of dignity that people accumulate? How do you quantify the disappearance of apathy?”

Staudt further proposed some definitions of development as quoted by the following persons:

- Mahbub ul Haq, “Human Development Report 1990, United Nations Development Programme”:

“... a process of enlarging peoples' choices”

- John Lewis, “Development Promotion, A Time For Regrouping”:

“Economic growth; some form or other of interpersonal equity, including in particular, the reduction or elimination of poverty at the lower end of the income distribution scale; and national self-reliance - in the sense of being able to pay for needed imports by means of exports and/or access to commercial credit.”

- Paul Streeten and Shahid Javed, “Basic Needs; Some Issues”:

“The purpose of development is to raise the sustainable level of living of the masses of poor people as rapidly as is feasible and to provide all human beings with the opportunity to develop their fullest potential.”

- Louis G White, “Creating Opportunities For Change: Approaches To Managing Development Programmes”:

“A development programme is one that is designed to 1) carry out a nation's development goals; 2) introduce change in a society or community to increase its productive or organisational capacity; and 3) improve the quality of peoples' lives including improvements in the well-being of the poor”

The Penguin Dictionary of Third World Terms (1992) cited that the French Revolutionists saw development as “... a general tendency towards continuous cultural and economic progress.” Development was seen as a process of change that would take a “traditional” Third World country to the doorsteps of Western society. On development in a Third World context it stated:

“It is important that development as a process of change is not reduced to a series of numbers. Development as a process of social transformation implies not just a quantitative but qualitative change. Pure qualitative growth in and of itself does not produce development. Development, therefore, implies change in technology and an increase in useful material resources. Without some such increase there can be no improvement in the quality of life ...

Consequently, one of the central criteria of development is the level of the productivity of labour. A rise in labour productivity is therefore, a necessary condition for development seen as a shift from a life dominated by survival to one allowing self-expression...

The Third World, therefore, cannot develop without a rise in productivity of the sector where most of the population works and on which they directly depend - agriculture.”

6.1.6 ECONOMIC SUCCESS

In an article featured in the Weekend Argus,(28/29 January 1995), Des Correia indicated that the most recent estimates for the Expenditure and Revenue expected for the Cape Town Olympic Games were as follows:

OPERATING COSTS	R 2827m
CONSTRUCTION COSTS	<u>R 812m</u>
TOTAL COSTS	<u>R 3639m</u>
REVENUE	<u>R 3762m</u>
SURPLUS	R 123m

According to the rules of the International Olympic Committee the surplus should be distributed as follows:

10% to the IOC

25% to NOCSA

65% to South African sport development

The Bid Document (1993) in the section entitled "Economic Impact" suggests that three aspects involving Cape Town need to be considered. These are:

- Cape Town as a World City
- Cape Town as an African City
- Cape Town as a South African City

The challenge, it stated, is to find ways and means of rapidly changing this environment to improve the quality of life for all those who live in Cape Town. The potential economic benefits were classified under two headings:

MACRO BENEFITS

- the stimulus of the tourism industry
- increased investment into the Western Cape Region
- accelerated State and Regional spending

MICRO BENEFITS

- capital investment during the period leading up to the Games
- operating expenditure of the Games
- visitor spending directly attributable to the Games
- long term expenditure associated with the new facilities

The question needs to be addressed regarding who is to benefit from the success of the Games. It is my feeling that unless the issue regarding the real benefit of staging the Olympic Games to the disadvantaged communities in Cape Town is satisfactorily addressed by the planners of the event, the possibility exists that the Games will not be as successful as

anticipated. This will result, it is contended, from the lack of ownership that is bound to prevail and hence will contribute to the failure thereof.

6.1.7 AUTHOR'S REVIEW

The literature review deals with numerous issues related to the Cape Town Olympic Bid with specific reference to The Reconstruction and Development Programme as adopted by our government. It is debatable whether the Olympic Games, if awarded to Cape Town, will dovetail **entirely** with goals contained in the RDP. Much emphasis is placed on the provision of "BASIC NEEDS" to the disadvantaged communities in the country, and hence this is a highly placed priority of the Government. It is unclear from the literature how the Olympic effort will address these issues.

It is questionable whether the Olympic Games is the most effective vehicle by which Cape Town and its environs can address the redressing of historical imbalances inherent in the Metropolitan Area. It is possible that other approaches may be more fruitful and attention should be directed to addressing alternatives. It is further questionable whether the recently elected Government in its infancy is sufficiently competent to commit the country financially to the magnitude of such a project against its policy of urgently addressing the backlog of basic needs for disadvantaged communities.

It is also of concern that the Games has on occasion be seen to be a "circus" designed to satisfy the whims of a select group of sports administrators under the pretext of fulfilling the Olympic Charter which is construed to primarily unify sports women and men from all spheres of the globe. Simson and Jennings (1992) contend that modern Olympic sport "... is a secretive, elite domain where decisions about sport, our sport, are taken behind closed doors, where money is spent on creating a fabulous lifestyle for a tiny circle of officials rather than providing facilities for athletes, where money destined for sport has been siphoned away to offshore bank accounts and where officials preside forever, untroubled by elections."

The Cape Town Olympic Bid Document (1993) estimates that R60 million is to be spent on travel and accommodation costs for IOC members, visits by officials from International Federations and sponsors.

As the Games lobbyists have identified that, amongst other goals, the Games is intended to redress the historical social imbalances in the city, the threat of the influence of vested interests and the possibility that "the rich may get richer" looms as an obstacle to the desired achievement. This fear should be addressed by ensuring that suitable safeguards are incorporated into the planning process. This study is intended to propose a framework of issues to be addressed in the planning process so that the objectives of the Cape Town Olympic Games Bid are consistent with those of the Reconstruction and Development Programme of the beneficial community.

6.2 PROPOSING THE HYPOTHESIS

As will be seen from the literature review, a number of aspects are covered. Briefly the following represents the background of the hypothesis proposed hereunder.

Cape Town has made it clear that it will be bidding towards hosting the 2004 Olympic Games. Cape Town also has suffered as a result of the imbalances which were inherited prior to the 1994 General Elections with regard to the diversification of accommodating all its inhabitants. Forced removals, segregated communities and job reservation have influenced and moulded Cape Town's economic and social standing during the recent period of time. At the same time, the recently elected Government of National Unity has adopted the RDP that is geared up for the addressing the issues raised in the previous statement over a 5 year period. This implies that the disadvantaged communities will receive favourable attention when it comes to projects involving all aspects of the spectrum.

The Reconstruction and Development Programme (1994) concentrates primarily on addressing the imbalances itemised hereunder:

- gender equality
- damages resulting from the apartheid era
- capacity building
- black economic empowerment
- developing human resources
- job creation
- development of the domestic manufacturing sector
- radically distorted income
- land reform
- development of black business

The Steering Committee for the Olympic Bid,(1993) has emphasised that should the project of hosting the 2004 Olympic Games go ahead the principles and programmes of implementation of the RDP will be entrenched in the project. It is pertinent to enquire as to how such programming will ensure that the RDP principals are in fact entrenched in the project and this, therefore, is the subject matter of this report. It is intended that addressing such issues will hopefully formulate or assist to formulate policies for ensuring the successful entrenchment of the policies and programmes previously mentioned.

The hypothesis of this enquiry may therefore be summarised as follows:

“How can one ensure that the broader interests of the beneficiary community of Cape Town are entrenched in the planning process of the City’s effort to successfully host the Olympic Games in the year 2004?”

6.3 CHOICE OF THE PROBLEM SOLVING METHOD

TSI, is briefly demonstrated hereunder to assist with choosing an appropriate problem solving method and, as already mentioned, comprises three phases : creativity, choice and implementation.

6.3.1 CREATIVITY PHASE:

Our concern in this case study is to ensure that the broader interests of the community of Cape Town are catered for in the planning process of the bid effort.

As we have seen, the changing social and cultural dynamics in South Africa require that broad based participation informs development as a whole. The Cape Town bid initiative essentially is about development. It is important to manage the process so that the long term effects on the broader community are protected and ideally enhanced. This cannot occur by random adhoc control over the process. It is important from a problem solving point of view that a suitable methodology is utilised.

This problem conforms most likely to the open, cultural or political metaphors with the political metaphor being the dominant one.

In terms of Flood and Jackson (1991, p 13) considerations of when the political metaphor (view) is most useful I consider the following reasons for this choice of metaphor:

- it will definitely encourage the recognition of the organisational actor as politic for both motivational and structural reasons
- it emphasises that goals may be rational for some actors while not so for others

The political characteristics are most likely to be pluralistic as categorised in section 5.4.5.2 previously. The problem exhibits diverging group interest with a mutual focal point. Although conflict is likely to be inherent, it is deemed to be influential in a positive manner provided that the broader interests on the community are the common objective. Power is seen to be the medium through which conflict of interest may be reduced.

6.3.2 CHOICE PHASE:

Having described the problem as being dominantly a political one of a pluralistic nature it is appropriate now to choose a methodology to solve the problem. From section 4.5.2.2. we are able to categorise our problem as complex-pluralist (See Figure 4.1).

If we consider Figure 4.2 we see that there are three methodologies suited to solving complex-pluralist problems. As our problem is considered furthermore to have a desired outcome we could ideally choose a hard systems methodology to use in the implementation phase. For the purposes of this case study I have chosen Interpretive Structural Modelling (ISM) as it is considered useful for solving problems that have a known (desired) objective.

6.3.3 IMPLEMENTATION PHASE

This is addressed in section 6.5 after briefly introducing ISM.

6.4 INTRODUCING INTERPRETATIVE STRUCTURAL MODELLING (ISM)

6.4.1 WHAT IS STRUCTURAL MODELLING?

According to Saunders (date unknown) structural modelling is a technique used to break down complexity into manageable pieces of information. This process helps the human mind deal with complexity.

Interpretive Structural Modelling (ISM) was developed by Dr John Warfield of George Mason University, Fairfax, Virginia in 1976. He evolved a powerful structural modelling methodology to analyse complex issues by exploring the relationships among elements of complex issues or situations. He subsequently developed a computer programme to analyse complex situations based on sets of ideas and their relationships.

6.4.2 WHAT IS THE STRUCTURAL MODELLING PROCESS?

ISM has five basic phases according to Saunders:

- preparation
- brainstorming
- voting
- model construction
- model interpretation

Preparation Phase:

This phase involves the formulation of a trigger question to focus on the generation of issues and also on formulating a relational term to examine the interaction between the issues that have been generated.

Brainstorming Phase:

This phase involves the generation of as many ideas as possible. Various techniques are available for this phase such as Nominal Group Technique (NGT), Brainwriting and Dyad Brainstorming. In our case study, the Nominal Group Technique is used.

Voting Phase:

This phase determines the interaction between the issues previously generated.

Model Construction Phase:

This phase is determined usually by computer generation. Various programmes have been developed such as the initial programme by Dr Warfield and the Prism programme by Computer Lab. The programme used in this case study was developed by Peter Lowry, a post-graduate student of the University of Cape Town.

Model Interpretation Phase:

This phase involves the production of a graphic representation illustrating the relationship or non-relationship of the issues developed in the research. This graphic is known as a “digraph” and is usually produced by the software applicable.

6.5 CASE STUDY: ISM AND THE CAPE TOWN OLYMPIC BID FOR THE SUMMER GAMES OF 2004

Before implementing the ISM case study it was important to decide which type of model should be constructed. There are three types of structures that can be constructed using ISM:

- *an intent structure* - this type shows the interrelations between a set of objectives of criteria
- *a priority structure* - this type shows the ranking of the elements in order of priority
- *an attribute enhancement structure* - this type shows the interrelations between a set of factors, problems or opportunities

It was felt that this model should show the interrelations between a set of criteria and hence an intent structure of the ISM model would be the outcome of the study.

6.5.1 PREPARATION PHASE OF THE CASE STUDY

During preparation I felt it was necessary to receive input from as broad a selection of stakeholder groups as was possible. The following groups were short-listed for consideration to provide input during the data collection phases:

- marketing group
- tourism group

- professionals group
- Olympic Bid Team group
- economic empowerment group

Urban Planning Group:

This group comprised Professional Town Planners and it was hoped that their input would address the Olympic Bid for an urban planning perspective. Initially Mr Geoff Underwood, Professional Town Planner, The Planning Partnership was consulted.

Marketing Group:

This group comprised consultants who assessed the initial economic feasibility of the Olympic Bid. Initially, Mr Ugo Riviera, Professional Engineer, Ove Arup Incorporated was consulted.

Tourism Group:

This group comprised city officials charged with predicting the spin-off to be expected from a tourism point of view. Initially, Mr Brendan Atkins, Town Planner, Cape Town City Council, was consulted.

Professionals Group:

This group was assembled to give input from a professional developmental point of view. Initially, Mr Ron Strybis, Consulting Engineer, van Niekerk, Kleyn and Edwards, was consulted.

Olympic Bid Team Group:

This group comprised persons seconded to the Bid Team from the Cape Town City Council. Initially, Mr Marc Dendale, Town Planner, Cape Town City Council, was consulted.

Economic Empowerment Group:

This group was chosen as input was required regarding the developmental aspect of the Bid with respect to the marginalised community. Initially, Mr Naziem Kahn, Member Economic Empowerment Committee, Olympic Bid Team, was consulted.

These initial participants were invited to give their input regarding their visions of the possible outcome in the event of Cape Town being successfully awarded the Olympic Games of 2004. They were asked by way of a letter to participate in the phases of the case study (See Appendix 2).

6.5.2 BRAINSTORMING PHASE

The three phases on input referred to above may be summarised as follows:

- views from the various stakeholder participants regarding a possible “high road” and “low road” scenario should the Olympic Games take place in 2004.
- the above inputs will be synthesised to form a global group of responses whereupon the individual stakeholders would have select critical issues (according to their own perspectives).
- the input from this second phase would form the basis of the structural model to be used in the voting phase.

Initial Input Received from Stakeholder Participants:

Participants were requested to submit a list of issues indicating “high road” and “low road” scenarios in the event of the Olympic Games happening. Participants were briefed on steps that could assist in the development of their scenarios. The steps that followed were identified by Peter Swartz (1991) as being influential in scenario planning:

- Identifying *driving forces* that may influence the outcome of events. These driving forces could fall into the following categories:
 - society e.g. population growth
 - technology e.g. improved electronic media
 - economics e.g. impact on tourism
 - politics e.g. provincial policies
 - environment e.g. impact on ecology
- Identifying *predetermined elements* that are likely to remain unchanged or are slow-changing in the scenario development such as population growth.
- Identifying *critical uncertainties* that are elements where uncertainty exist regarding their behaviour in the process.

These scenarios were received from participants and appended as Appendix 3. For the sake of brevity, I have synthesised these scenarios in tabular form and they are reproduced hereunder in Figure 6.1 and Figure 6.2.

HIGH ROAD SCENARIO : SUMMARY

No	ISSUE RAISED	Geoff Underwood Planning	Ugo Riviera Marketing	Brendan Atkins Tourism	Ron Strybis Professions	Marc Dendale Olympics	Naziem Kahn Econ Emp	CONSENSUS SCORES
1	Infrastructure in Place	1				1	1	3
2	Transport System that Works	1	1		1	1	1	5
3	Sustained Building Programme	1			1			2
4	Accommodation well Facilitated	1			1			2
5	Cape Town welcomes visitors	1		1				2
6	Little Violence or Crime	1						1
7	Security present, unobtrusive	1						1
8	S A proud of athletes & Games	1		1				2
9	Economic success	1	1	1	1	1	1	6
10	Costs covered	1				1		2
11	Post use - benefits disadvantaged	1			1		1	3
12	Tourism well catered & grows	1	1	1		1		4
13	Workforce fully employed	1				1		2
14	Environmentally well managed	1	1					2
15	Accelerates Development				1	1	1	3
16	Job creation empowers disadv.		1		1	1	1	4
17	United City and Population		1	1			1	3
18	Cosmopolitan City		1	1				2
19	Sustainable City		1			1		2
20	Airport Highly Functional		1			1		2
21	Major Companies attracted		1					1
22	Political system effective		1					1
23	Urban sprawl contained		1			1	1	3
24	International Event City		1					1
25	Communications improved		1					1
26	Games - a process not event			1				1
27	Quality of Life Improved			1				1
28	Self Interest put aside			1				1
29	Long Term investment & confidence			1				1
30	Increase in Exports			1				1
31	Tourism Industry United			1				1
32	Local Govt successfully restructd					1		1
33	Low Exchange Rate and Inflation					1		1
34	Low levels of Urban Unrest					1		1
35	Low level of Industrial Action					1		1
36	Public Awareness & Loyalty						1	1
37	Wealth distributed						1	1
38	Benefit to Small Business						1	1
39	Skill sharing - advntgd & disadv						1	1
40	Public Participation						1	1
41								0
42								0
	INDIVIDUAL SCORES	14	14	12	7	15	13	75

hscen-sm.xls

Figure 6.1 Tabulation of High Road Scenario Issues as Received from the Participants.

LOW ROAD SCENARIO : SUMMARY

No	ISSUE RAISED	Geoff Underwood <i>Planning</i>	Ugo Riviera <i>Marketing</i>	Brendan Atkins <i>Tourism</i>	Ron Strybis <i>Professions</i>	Marc Dendale <i>Olympics</i>	Naziem Kahn <i>Econ Emp</i>	CONSENSUS SCORES
1	Ill preparation	1		1			1	3
2	Poorly erected infrastructure	1				1		2
3	Traffic congested	1						1
4	Poor accommodation	1						1
5	Poor administration	1		1			1	3
6	Delay of events due to traffic	1						1
7	Political violence	1	1			1	1	4
8	Police action at venues	1				1		2
9	Visitors harmed/killed	1				1		2
10	Heavy security presence	1				1		2
11	Visitors over-exploited	1						1
12	Heavy loan debt	1	1			1	1	4
13	Networks/sponsors withdraw	1				1	1	3
14	Incorrectly located infrastruct.	1		1			1	3
15	Environmental degradation	1	1			1		3
16	Saddled with white elephants		1		1			2
17	Job creation failure				1			1
18	City further divided		1	1		1		3
19	Increase of urbanization		1	1		1		3
20	Corruption of City servants		1					1
21	Drive away industry/commerce		1			1		2
22	Domination of Self interests			1				1
23	People at odds with each other			1				1
24	Short term gains only			1				1
25	Quality of life unchanged			1				1
26	Few benefits for disadvantaged			1				1
27	Rich get richer			1				1
28	Imports increase			1				1
29	Lack of cooperation: Tourism			1				1
30	C T proves it lacks capacity			1				1
31	Redistribution of wealth fails						1	1
32	Failure of R D P					1		1
33	Balance of payments detrimental					1		1
34	High costs of imported technology					1		1
35	Increasing unemployment					1		1
36	Delays due to industrial action					1		1
37	Foreign investment dwindles					1		1
38	Community rejection						1	1
39	I O C Bid fails : no contingency						1	1
40	Failure to draw people together						1	1
41	Parliament moves to Gauteng						1	1
42	Mandela no longer President						1	1
	INDIVIDUAL SCORES	15	8	14	2	18	11	68

lscen-sm.xls

Figure 6.2 Tabulation of Low Road Scenario Issues as Received from the Participants.

Note that the Consensus Scores appearing in the penultimate column are simply the arithmetical summation of the number of times a particular issue was raised.

Analysis of Initial Input Received from Stakeholder Participants:

These scenario tables enabled me to examine the frequency or number of times that issues were identified as being important to formulating the high and low scenarios.

As the number of issues raised were high (in the "high road" scenario there were 40 issues raised and in the "low road" scenario, 42), I felt it was necessary to approach the stakeholder participants in order to receive their input regarding, in each scenario, a maximum of ten issues in order of priority. That is, most important issue first, least important issue tenth.

Second Input Received from Stakeholder Participants:

The participants were asked (See Appendix 4) to examine the summaries produced (See Figure 6.1 and Figure 6.2 above) and address the following question:

"What are the 10 most important issues contained in the summaries, listed in decreasing order of importance, that you consider most likely to be crucial to contributing to the success of the Olympic Games in terms of promoting the developmental needs of the disadvantaged?"

Bearing in mind the empowerment emphasis of the enquiry the participants were given summaries, in tabular form, which I had previously compiled identifying the common issues in terms of frequency occurring in the RDP booklet. Refer Appendix 1.

It was hoped that these summaries would put into perspective the emphasis that Central Government placed on developing key areas that were deemed to be problematic.

I felt that, in order to ensure success in terms of developing the community through the vehicle of hosting the Olympic Games, that one should at minimum, cater for the most crucial needs of the RDP. The Olympic Games therefore could be viewed as an RDP vehicle which in turn would, on a regional basis, be successful.

Responses were in turn received from five of the stakeholder participants and are contained in Appendix 5. Unfortunately the response of Mr Rivera has been **assumed** by myself as he was unable to respond in time.

Analysis of the Secondary Input Received from Stakeholder Participants:

The responses received were analysed and produced the following table:

CRITICAL ISSUES : SUMMARY

No	ISSUE RAISED	Geoff Underwood <i>Planning</i>	Ugo Riviera <i>Marketing</i>	Brendan Aikins <i>Tourism</i>	Ron Strybis <i>Professions</i>	Marc Dendale <i>Olympics</i>	Naziem Kahn <i>Econ Emp</i>	Consensus <i>Total</i>	Scenario <i>Reference H/L No</i>	Accumul. <i>Score (see 1)</i>
1	Economic success	1		9	1		1	4	H 9	12
2	Long term investmt and confid.	2		4			4	3	H 29	10
3	Workforce fully employed	3	2		5	8	8	5	H 13	26
4	Growth in Tourism	4	8		3			9	H 12	15
5	Sustained building programme	5						1	H 3	5
6	Accelerated development	6			7			2	H 15	13
7	Infrastructure in place	7			9			2	H 1	16
8	Little violence and crime	8				2		2	H 6	10
9	Public awareness and loyalty	9					7	2	H 36	16
10	Post Olympics use	10			6	7		3	H 11	23
11	Transport system that works		3	6	2			3	H 2	11
12	Job creation empowers disadv.			5	4		2	3	H 16	11
13	United City and population		1	3	8	3		4	H 17	15
14	Costs covered				10			1	H 10	10
15	Quality of Life Improved			1			3	2	H 27	4
16	Wealth distributed						5	1	H 37	5
17	Public participation						6	1	H 40	6
18	Games - a process not an event			10			9	2	H 26	19
19	Political system effective		5	8			10	3	H 22	23
20	Foreign investment dwindles					1		1	L 37	1
21	Ill preparation					4		1	L 1	4
22	C T proves that it lacks capacity					5		1	L 30	5
23	Domination of self interests					6		1	L 22	6
24	Increase of urbanization					9		1	L 19	9
25	Self interests put aside					10		1	H 28	10
26	Sustainable city			2				1	H 19	2
27	Environmentally well managed		7	7				2	H 14	14
28	Cosmopolitan city		4					1	H 18	4
29	Major companies attracted		6					1	H 21	6
30	Urban sprawl contained		9					1	H 23	9
31	International event city		10					1	H 24	10

criti-sm.xls

NOTES:

- 1 Lowest score equals most important issue.
- 2 Issues of U. Riviera assumed as no response was received.
- 3 Issues marked with * selected for model.

Figure 6.3 Tabulation of Critical Issues as Received from the Participants.

This table shows (in the penultimate column) a weighted score (discussed hereunder).

The table was produced by the following analytical steps:

- **Consensus Total:** The popularity of the particular issue, that is how many separate participants selected the particular issue.
- **Scenario Reference No.:** Refers to the number as appearing on the aforementioned high road and low road scenario summaries (for identification purposes).
- **Accumulated Score:** The physical addition of the scores.
- **Weighted Score:** The accumulated score divided by the consensus total, that is total addition of the score divided by the number of participants selecting the particular issue.
- **Priority ranking of issues:** This ranking was achieved in stages:- firstly the most popular issue was considered with the lowest weighted score. This issue would have the highest priority, that is No. 1 as it reflects the highest consensus and lowest score in priority (that is highest priority score)

Thereafter the remaining, most popular issues were considered with the least weighted scores to determine the balance of the rankings.

The twenty highest priorities were then identified for utilisation in the next phase.

It was now possible to produce the twenty most critical issues that would contribute to ensuring the success of the Olympic Games in the context of our enquiry. These are listed hereunder (in descending order of priority).

1. Workforce fully employed
2. Economic success

3. United city and population
4. Long term investment and confidence
5. Job creation empowering the disadvantaged
6. Transport system that works
7. Growth in tourism
8. Post Olympics use
9. Political system effectiveness
10. Quality of life improved
11. Little violence and crime
12. Accelerated development
13. Environmentally well managed
14. Public awareness and loyalty
15. Infrastructures in place (in time)
16. Games - a process not an event
17. Foreign investment (not) dwindling
18. Wealth distribution
19. Public participation
20. (Least) domination of self interest

This list of issues thus formed the basis of the voting stage that followed as the third input that stakeholders would make in the methodology.

6.5.3 VOTING PHASE

This phase involved the consensus building phase of the methodology. The stakeholder participants were asked to form groups made up of other interested stakeholders. In this manner four groups were formed. It was initially envisaged that six groups consistent with the various initial stakeholder participants would have been ideal but as it transpired this was not achieved. It was found, due to the hive of activity embracing certain stakeholders regarding the limited time available before the initial bid submission, that some persons were unavailable

to continue with the exercise. However, four groups were assembled and comprised the following:

GROUP UNDERWOOD *(Urban Planning Hat)*

comprising: Mr. G. Underwood, Partner, Professional Town Planner, The Planning Partnership
Mr. Q. Thom, Professional Town Planner, The Planning Partnership

GROUP RIVERA *(The Marketing Hat)*

comprising: Mr. U. Rivera, partner, Professional Engineer, Ove Arup Inc.
Mr. P. Swart, Professional Engineer, Ove Arup Inc.
Mr. D. Johnson, Accountant & Economist, Ove Arup Inc.

GROUP ATKINS *(The Tourism/Olympic Bid Team Hats)*

comprising: Mr. B. Atkins, Senior Tour Planner, Cape Town City Council
Mr. D. Gretton, Principal Town Planner, Cape Town City Council
Mr. E. Isaacs, Town Planner, Cape Town City Council
Ms. C. Mueller, Town Planner, Cape Town City Council
Ms. L. Frost, Town Planner, Cape Town City Council
Mr. E. Young, Town Planner, Cape Town City Council

GROUP STRYBIS *(The Professionals Hat)*

comprising: Mr. R. Strybis, Director, Professional Engineer, VKE Consulting Engineers
Mr. M. Harris, Professional Engineer, VKE Consulting Engineers
Mr. A. Simonic, Professional Town Planner, VKE Consulting Engineers
Mr. M. Konile, Professional Engineer, VKE Consulting Engineers

The Vote

The purpose of this phase was to ascertain, by vote of the various groups, whether issues were related in a particular manner with each other or not.

With due regard to the hypothesis of this case study the following question was derived:

In a process of ensuring that the Cape Town Olympics are consistent with the objectives of the RDP would

ISSUE A
directly impact
ISSUE B

The participants were required, in their groups, to simply answer YES or NO. It was often found that the answer would be MAYBE . As it was important here to reach consensus, debate was often required to produce a closer to YES-MAYBE than a closer to NO-MAYBE.

To assist with voting, I compiled a questionnaire that could be used with a matrix structure for the responses (refer Appendix 6).

The "Yes" answer was recorded as "Y"

The "No" answer was recorded as "N"

The "Yes - maybe" answer was recorded as "Y?"

The "No - maybe" answer was recorded as "N?"

The groups were then individually visited and the questionnaires were completed. These sessions ranged in duration from two hours to four and a half hours. Refer Appendix 7.

The Analysis:

The group exercises were extremely interesting as the sizes of the groups were varied. Much debate resulted and often scores such as Y? and N? were recorded which indicated that consensus was not always possible, in these cases the route to take was merely to “beg to differ”.

Once the matrices were complete, I embarked on a system of trying to produce global consensus across the four groups. I decided that to facilitate the process I had to derive an arithmetical method that would ensure reasonable consensus.

The method I employed was to attribute the following scores to the answers in each recorded matrix:

+1	:	definite Yes vote
+0,5	:	Yes-maybe
-0,5	:	No-maybe
-1	:	definite No vote

I then substituted these scores for the relative “Y”, “Y?”, “N?” and “N” votes. These matrices are depicted in Appendix 8.

To attain consensus across the groupings (that is global consensus) I added arithmetically the relevant scores to produce a matrix of **Consensus Results** that I adapted to produce the relevant YES or NO answer. The adaptation was simply by attributing the term “YES” for a combined score greater than 2 and a “NO” for a combined score below 2.

The value of 2 was simply determined from the mean value of the 4 groups. The Consensus Results (Adapted) appears hereunder:

INTERPRETATIVE STRUCTURAL MODEL : OLYMPIC GAMES

In a process of ensuring that the CT Olympics are consistent with the objectives of the RDP would

ISSUE 'A'

directly impact

ISSUE 'B'

ISSUE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1		No	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes	No	No	No	No	No	Yes	No	No		
2	Yes		Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	
3	No	Yes		Yes	Yes	No	Yes	No	Yes	Yes	Yes	No	No	Yes	No	No	Yes	No	Yes	Yes	
4	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No
5	Yes	Yes	Yes	Yes		Yes	No	No	Yes	Yes	Yes	No	No	Yes	No	No	No	No	Yes	Yes	
6	Yes	Yes	Yes	Yes	Yes		Yes	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No	No	No	
7	Yes	Yes	No	Yes	Yes	Yes		Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
8	No	Yes	Yes	Yes	Yes	Yes	Yes		No	Yes	No	Yes	No	Yes	No	Yes	Yes	No	No	No	
9	No	Yes	Yes	Yes	Yes	Yes	Yes	No		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	
11	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	No	Yes	No	No	Yes	Yes	Yes	No	
12	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes		Yes	Yes	Yes	Yes	Yes	No	No	No	
13	No	Yes	No	Yes	No	No	Yes	No	No	Yes	No	Yes		Yes	No	No	Yes	No	No	Yes	
14	No	Yes	Yes	No	Yes	No	No	No	Yes	No	Yes	Yes	Yes		Yes	Yes	Yes	No	Yes	No	
15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No		Yes	Yes	No	No	No	
16	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes		Yes	No	No	Yes	
17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	No	No	
18	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes		Yes	Yes	
19	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes		Yes	
20	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes		

ismt-sum.xls

Figure 6.4 Consensus Results Matrix (Adapted) Determined from Group Voting.

The voting phase was now complete.

Ideally, had time been available, the groups would have been consulted on answers where it was clear consensus was not attained. Perhaps in a more formal adaptation of this method, this would be possible.

6.5.4 MODEL CONSTRUCTION PHASE:

As described earlier this method is suited to analysis by suitable computer software.

The programme used in this application was developed by Mr Peter Lowry, a post graduate student of the University of Cape Town during 1994.

The programme was run after the following inputs were made at the relevant prompts:

- the voting condition i.e. the question requiring answering as outlined in 6.5.3.1
- the computer would then prompt issue against issue and require answers achieved by consensus as outlined in 6.5.3.2.

At a point the computer completed a matrix of answers as depicted as follows:

In a process of ensuring that the C T Olympics are consistent with the objectives of the R.D.P. would issue "A" directly impact issue "B":

1. Fully employed workforce
2. Economic success
3. Unifying city and population
4. Long term investment
5. Empowering disadvantaged
6. Workable transport system
7. Growth in tourism
8. Post olympic use
9. Effective political system
10. Improving quality of life
11. Little violence and crime
12. Accelerated development
13. Good management of the environment
14. Public awareness and loyalty
15. Infrastructure in place in time
16. Games as a process - not an event
17. Declining foreign investment
18. Redistribution of wealth
19. Public participation
20. Domination of self interests

Issue No.	2	16	17	1	4	5	6	7	8	9	10	12	15	18	19	14	20	3	11	13
2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
14	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
20	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

ism-out1.xls

Figure 6.5 ISM Software Programme Output.

Examining the matrix, the following is seen:

- the top row and left column refer to the issues numbered from 1 to 20 in sequence produced by the computer. It is possible that the output of this construction has been improved as this edition of the programme was obtained prior to final refinement.
- the character, "1", indicates a positive affirmation that the issues "do impact" on each other. Conversely, the "0" character indicates a negative answer.

The matrix at this point is meaningless in that the output is not readily understandable. The programme, however, further produces a graphic that interprets the analysis.

6.5.5 MODEL INTERPRETATION PHASE

The computer generates a graphic known as a digraph. Unfortunately, as related earlier, the computer programme was not in its final development and hence the graphic (digraph) was produced on screen only.

The graphic was meticulously hand copied and reproduced to form the digraph shown hereunder:

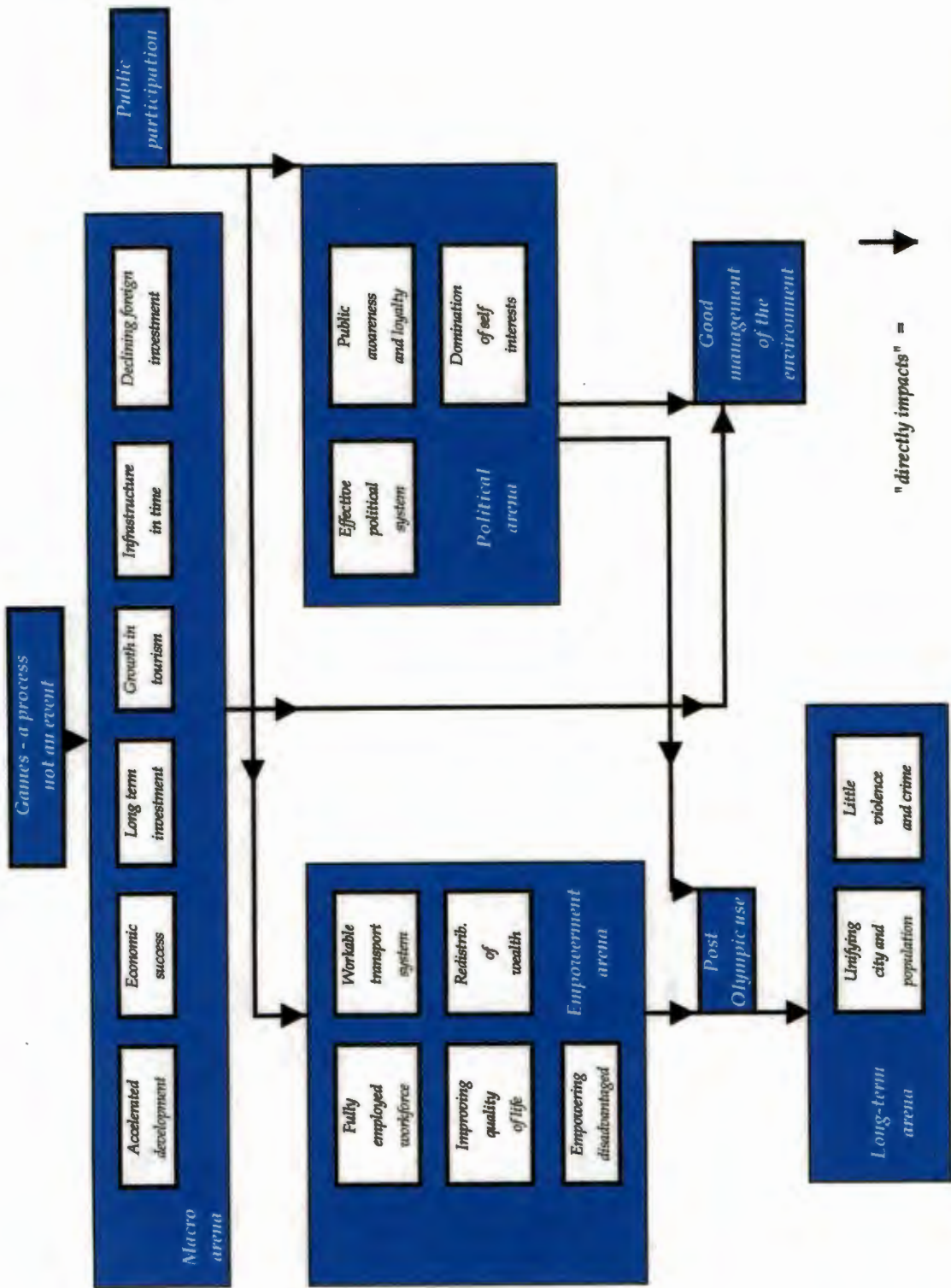


Figure 6.6 An Intent Structure Digraph Reproduced from the ISM Software Programme

6.5.6 SUMMARY

The intent structure therefore should assist the Olympic Bid planners to take measures to ensure that the broader interests of the community of Cape Town are catered for and enhanced by the possible successful award of the Olympic Games in 2004.

6.6 CRITIQUE OF THE CASE STUDY

The case study, generally, describes the steps one should employ in order to carry out ISM so as to solve a problem that is of a complex, pluralistic nature.

The particular subject of the case study is extremely broad in scope and in retrospect more consideration could have been given in the preparation phase to involve stakeholders from grassroots level such as local communities, business unions and the like. The input of politicians at local, provincial and national level could also have been obtained to give the right flavouring from the local political level.

The case study could also have suffered the fate of being subject to bias. At the time of the study, Cape Town was alive with hope and the prospects of being short-listed as a national candidate. Resultantly, Cape Town defeated Johannesburg and Durban to get the National Olympic Committee of South Africa's nod.

During the brainstorming phase, I found that this case study was more of an academic exercise as opposed to being part of the Olympic Bid process, the responses I received from some of the stakeholder participants was of a cursory, accommodating nature. Had the study been on a more official basis, more time and attention could have been given by the respondents. This comment is made not intending to criticise the ISM method but more to emphasise that the status of the study was seen to be purely academic. The quality of the end result could have been improved had all stakeholder participants taken the exercise more seriously.

The model construction phase exposed possible flaws regarding the consensus building analysis. Again, had more time been possible in this phase, stakeholder groups could have been revisited to ensure reasonable consensus rather than a mathematical weighting which is not necessarily accurate.

Finally, the model interpretation phase could have been improved by more appropriate graphic design capability. This is probably an area which can be improved to enhance the presentation of results.

This critique would not be complete without the comment that the ISM methodology in this case study had a great deal of merit in the field of unbundling the complex nature of the enquiry into smaller manageable pieces.

6.7 CRITIQUE OF THE ISM METHODOLOGY

F. R. James in his paper entitled "Interpretive Structural Modelling: A Methodology for Structuring Complex Issues" (1988, p 146) states that :

"Any methodology for dealing with complex issues must, therefore, be able to breakdown complexity into manageable chunks of information so that the human mind can deal with it."

ISM is intended to fulfil this role by focusing on the interrelations between two elements in one issue at a time without losing sight of the properties of the whole.

James (1988, p 146) further states that the method "... *places a considerable requirement upon those conducting the (ISM) enquiry.*" This suggests that the facilitator, and in this case myself, should be adequately skilled to manage the group "and attention paid to both process and contexts as well as to content and products."

The methodology portrays the following strengths, weaknesses, opportunities and dangers:

Strengths:

- It is useful for unbundling complex issues
- It promotes and encourages consensus building
- It is based on interaction between the investigator and stakeholders

Weaknesses:

- At the time of carrying out this case study, the available computer modelling technique was not finalised and thus the presentation aspects were of poor quality
- It tends to be clinical and sterile
- It appears to be inflexible during the voting phase as the introduction of emerging issues could not readily be catered for without restarting this phase.

Opportunities:

- The methodology is ideally suited to computer modelling and therefore its applications can be broadened and enhanced by the emerging growth in computer technology

Dangers:

- The process can be derailed by the exclusion or alternatively the none co-operation of any of the stakeholder groups

In conclusion, ISM is a methodology that has a mathematical, systematic approach to solving complex - pluralistic problems. It focuses on the relationships between elements within the framework of the whole and suggests that these relationships can be structured to produce a solution. It appears to be an excellent method for structuring thinking around issues toward producing a problem solving plan.

**CHAPTER SEVEN:
CASE STUDY: THE RECONSTRUCTION AND
REDEVELOPMENT OF THE MATTHEW GONIWE
HOSTEL**

**7.1 PROBLEM DEFINITION: THE REDEVELOPMENT
OF THE MATTHEW GONIWE HOSTEL, KWAZAKHELE,
PORT ELIZABETH.**

7.1.1 HISTORICAL DEVELOPMENT

According to van Zyl, et al. (1994), the Matthew Goniwe Hostel was formerly known as the Kwazakhele Single Quarters. It is situated in the township of Kwazakhele that is part of the New Brighton Township in Port Elizabeth.

These townships came into existence during the mid 20th century as creations of the then apartheid Nationalist Government. The policy of the day dictated that migrant labour from the so-called "homelands", in this case Ciskei and Transkei regions should stay confined to certain areas outside the established white Municipal boundaries.

Due to the lack of employment and a subsistence way of life in these homelands, workers migrated to towns and cities to earn a living. The proceeds of their hopeful employment would be divided between their own survival in these townships and their family sustainability back home.

The workers were thus predominantly male and were housed in single dormitories known as compounds. The Matthew Goniwe Hostel was one such compound.

This hostel complex was built during the 1950's by Port Elizabeth Municipality and comprises numerous large dormitories (32m x 6m) with separate ablution facilities, many of which have been demolished. Its purpose was to provide single accommodation for workers employed by:

- the construction industry
- other non-permanent industry

and to provide temporary accommodation for families awaiting houses elsewhere in the region. Thus, the greater part of the year saw these workers forced to live in often cramped, unhygienic conditions that produced its own problematic consequences such as faction fighting, homosexuality, crime and the typical ghetto-type way of life.

7.1.2 RECENT DEVELOPMENTS

Since the mid 1980's, concurrent with the abolishment of legislation restricting the residency of migrant workers and their families, the trend has seen these families moving from the so-called homelands to join their spouses in the cities.

In the Matthew Goniwe Hostel, this trend has resulted in an evolution in form from single dormitory type of conditions to that of semi-detached family units interspersed with single quarters. This has occurred largely on an ad-hoc basis and has resulted in severe overcrowding.

Living conditions, which were previously never good by any objective standard, have deteriorated dramatically and hence pressure has been brought to bear by various stakeholder groups such as local committees, health department, city politicians and administrators to see upgrading both to the physical and sociological conditions in the hostel.

This upgrading will require a major effort to ensure that the needs of the beneficiary community are addressed holistically in terms of physical, spatial and social upliftment.

7.1.3 SOCIAL CONDITIONS

A social survey conducted by Social Survey CC (1994) in August 1993 provides the following information:

Populations Estimates

The population is estimated at 11000 and is anticipated to increase to 13000 once upgrading has been completed.

Family Size

The average family size is 5,7 people per family, hence, to accommodate 13000 people some 2280 family dwelling units are required.

Current Accommodation

As mentioned above the hostels were intended primarily for the accommodation single persons and thus the change in usage towards accommodating families has led to further deterioration in social living conditions such as:

- the lack of adequate ablution facilities
- the lack of suitable living spaces within the units
- the overloading of services such as water, sewerage, electricity and refuse removal
- non-existence of support facilities such as recreation areas, crèche facilities, clinics and schooling
- deterioration of structures due to the lack of maintenance

The above situation may be compared to that of the typical ghetto-like conditions associated with the isolation and containment of communities that took place during World War 2 in war-torn Europe.

7.2 PROPOSING THE HYPOTHESIS

Similar to the case study in Chapter 8, we recall that the Government of the day has changed since the elections in 1994. The emphasis on development today is on participative decision-making. No longer will communities allow themselves, and justifiably so, to be dictated to by politicians or decision makers remote from the situation under consideration.

The Matthew Goniwe Hostel has organised itself and elected a broad forum committee known as the Local Negotiating Group (LNG). This group was delegated to liaise with the Provincial Housing Board and other stakeholders regarding the redevelopment of the Hostel.

The Provincial Housing Board and the local authority, the Port Elizabeth Transitional Local Council (PETLC) has in turn required that development be carried out in conjunction with the co-operation of the beneficiary community via the auspices of the LNG.

The challenge of this enquiry therefore may be hypothesised as follows:

“How can reconstruction and development of the Matthew Goniwe Hostel be planned such that the community is uplifted and integrated with the broader community?”

7.3 CHOICE OF PROBLEM SOLVING METHOD

Again TSI has been demonstrated to assist with choosing a suitable problem solving methodology. We recall that TSI comprises the three phases: creativity, choice and implementation.

7.3.1 CREATIVITY PHASE:

This case study concerns the redevelopment of the Matthew Goniwe Hostel with emphasis on the upliftment of the beneficial community.

This problem, as in the previous case study, concerns development or more specifically redevelopment. The problem, as such, is to ensure that the redevelopment effort addresses the effect in the beneficial community.

The systems metaphor most compatible with this problem is the political metaphor as the dominant metaphor, with the cultural end open metaphors being secondary metaphors (views). As in the previous case, the characteristics are of plural-complex nature where the inputs are of a diverse origin.

The different stakeholders of the hostel represent very different perspectives. The constraints of development regarding existing occupation, limited finances and community employment and empowerment are key factors that will influence the redevelopment effort.

7.3.2 CHOICE PHASE:

As in the previous case, the plural-complex category has basically three methodologies considered suitable for usage.

As this case most certainly does not prescribe a determined end product as the result of the redevelopment effort, I have selected the Soft Systems Methodology (SSM) as the most appropriate method.

7.3.3 IMPLEMENTATION PHASE:

This phase will be addressed in 7.5 after the following consideration of SSM.

7.4 LITERATURE REVIEW: SOFT SYSTEMS METHODOLOGY (SSM)

7.4.1 INTRODUCTION

Soft systems thinking has been previously described in section 3.5. It is useful to recall that soft systems thinking deals with unstructured problems that cannot be formulated as a search for an efficient means of achieving a defined end - a problem in which ends themselves are problematic.

Flood and Jackson (1991, p 168) refer to "*messy managerial situations*" and to the work of Peter Checkland, who was inspired by Churchman and Ackoff, which lead to a different approach to soft "problem solving" known as *Soft Systems Methodology* (SSM).

SSM, it is stated, is best employed in pluralist contexts, "*where there is a basic compatibility of interests, where accommodation and compromise is possible.*"

7.4.2 PHILOSOPHY OF SSM

The philosophy of SSM is diametrically opposed to that of the traditional hard view philosophy. Hard views concentrate on problem solving by attaining predetermined ends.

Soft systems methodology purports that the problem requiring solving refers to the contrasting views of people of the same situation. It recognises the plurality of possible viewpoints and effectively rejects the means-end approach. The focus of the problem solving effort is on "what should be done?" as opposed to "how should it be done?"

Flood and Jackson (1991, p170) state the following:

"It is probably the "means-end" and "system" discoveries that more than anything led Checkland to conclude that there are two paradigms in systems thinking, the second of which is the paradigm inhabited by SSM With Paradigm 1, the hard

paradigm, the real world is assumed to be systematic and the methodologies that we use to investigate that reality are systematic. The switch to Paradigm 2, the soft paradigm, turns things around stating that the real world is problematical but the process of enquiring into it, the methodologies, may be systematic. This transfers the notion of systemicity from the world to the process of enquiry into the world. For this profound observation the management and systems sciences are indebted to Checkland”

In the context of our case study many key stakeholders represented divergent views of the problems associated with the redevelopment of the Matthew Goniwe Hostel. Soft systems methodology that focuses more on seeking answers on what must be done seemed ideally suited to this case study.

7.4.3 PRINCIPLES OF SSM

Flood and Jackson (1991, p171) contend that there are four main principles that should be borne in mind when employing SSM. These are:

- learning
- culture
- participation
- “two modes of thought”

Learning

SSM is a learning system in that it seeks to “achieve organised action, coping with an ever-changing flux of interacting events and ideas”. Learning implies perception, evaluation and deciding on actions.

Culture

Culture implies that in the “real world” there are organisational and/or social constraints that must be met through intervention process.

Participation

Participation of those involved is essential to the success of the SSM application. Without broad-based participation successful results are not attainable.

“Two Modes of Thought”

SSM can be distinguished into two modes of thought:

- abstract and ideal systems thinking (that is logic based enquiry)
- context-related “real world” thinking (that is cultural enquiry)

7.4.4 SOFT SYSTEMS METHODOLOGY (SSM)

Checkland (1975, p162) suggests that SSM may be regarded as a seven stage process of enquiry as depicted in Figure 7.1 hereunder.

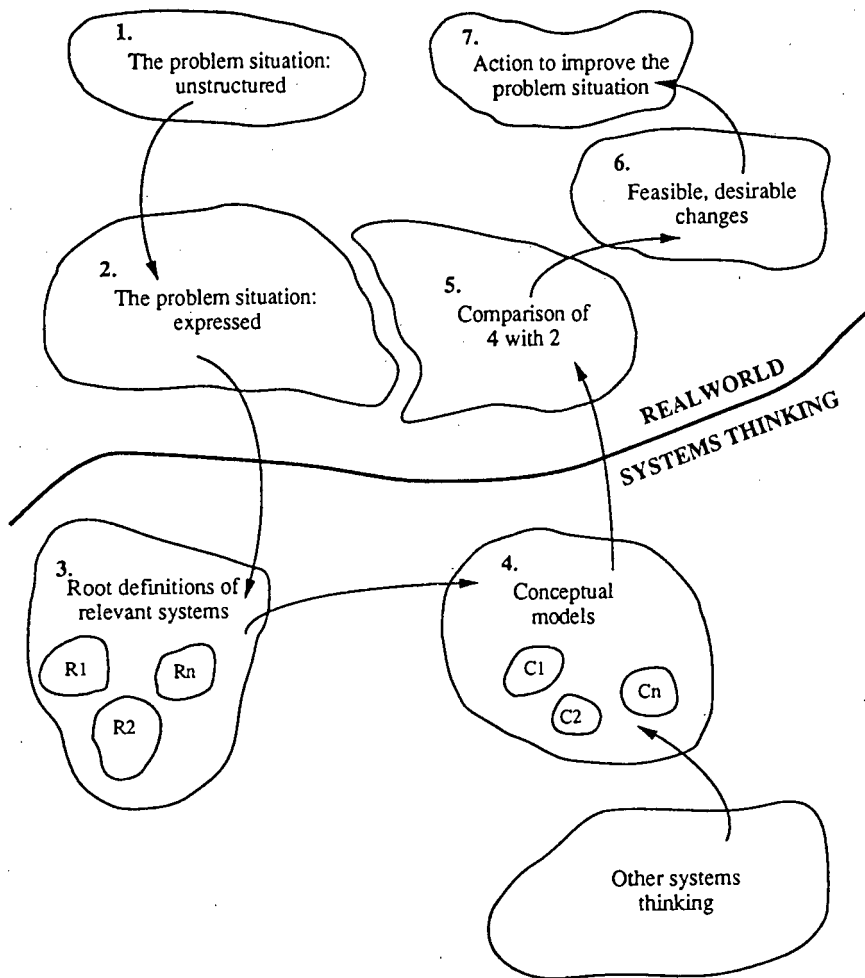


Figure 7.1 The Soft Systems Methodology in Summary (after Checkland 1975).

These stages may be briefly described as follows:

Stages 1 and 2: Expression Stage (“Finding out” stage):

- **Stage 1** involves gathering information of the problem situation by observation, collecting data and interviewing.
- **Stage 2** involves assembling the information to form a “rich picture”. This usually takes the form of a cartoon-like expression as per the illustration hereunder.

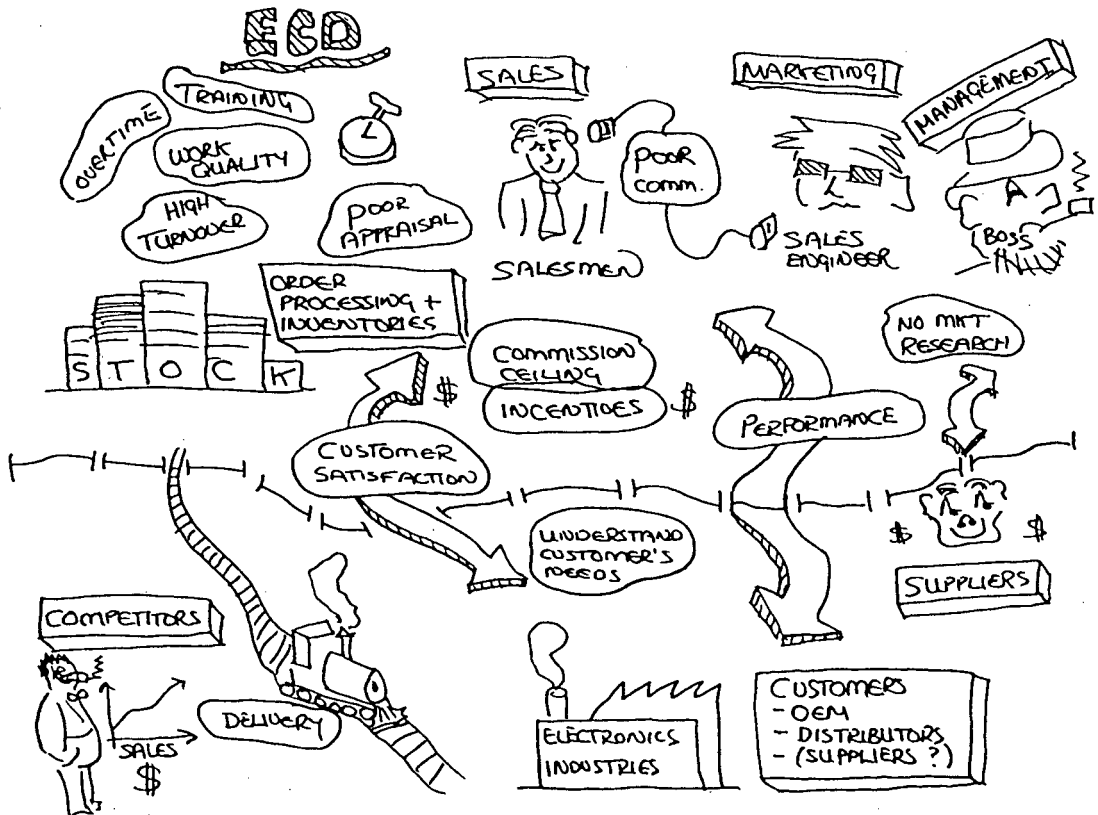


Figure 7.2 An Example of a “Rich Picture”.

From the “rich picture” a number of themes emerge as relevant viewpoints (relevant systems).

- **Stage 3** involves formulating verbal statements from the emergent viewpoints from stage 2. Or as Flood and Jackson state “A root definition is an idealised view of what a relevant system should be. The aim is to draw out the essence of what is to be done, why it is to be done, who is to do it, who is to benefit or suffer from it and what environmental constraints limit the actions and the activities.”

The statement is formulated around 6 elements forming the mnemonic - CATWOE:

C - customers i.e. victims/beneficiaries

A - actors - the doers of the activities

T - transformation process - the activity which transfers an input into an output

W - “weltanschauung”- or world view which gives the root definition meaning

O - owners - who can stage the activity - who has the power?

E - environmental constraints - constraints taken as given

It is useful to note the following two tips for assisting with formulating root definitions:

- consider to T’s and W’s first and the rest follows. That is - “what is the core process at work?” and “why is it being done?”
- the transformation process must ensure that output can be transformed from the input
- **Stage 4** involves constructing conceptual models from the root definition. The questions that should be asked here are “what activities, in what sequence, have to occur in order to fulfil the root definition?”

Note - conceptual models must be formed only from their root definitions. From Flood and Jackson “*A conceptual model is constructed by drawing out the minimum number of verbs that are necessary to describe the activities that would have to be present to carry out the task named in the root definition*”.

Conceptual models must have the following characteristics:

- an outgoing purpose/mission
- a measure of performance

- contain a decision taking process
 - components which are systems
 - components which interact
 - interacts within its environment
 - a boundary
 - resources at the disposal of the decision-taking process
 - guarantee of continuity
-
- **Stage 5** involves comparing models with reality. This stage generates debate about changes that could be made to improve the problem situation.

 - **Stage 6** involves defining the changes resulting from the aforementioned comparison - model versus reality. The changes must be “culturally feasible”. These could be changes in:
 - structural
 - procedures
 - attitudes

 - **Stage 7**, ultimately, involves taking action that implementing the desired changes.

7.4.5 SUMMARY

To quote Flood and Jackson (1991, p 177) is appropriate at this point:

“SSM is essentially a means of introducing some ordered, structured systems thinking into the flux of the events and actions that is every day life”

SSM, although comprising the above seven stages is not necessarily carried out in the sequence listed above. In fact, it is rarely used that way. The use of SSM is therefore applied to the context in which it is used.

7.5 CASE STUDY: SSM AND THE RECONSTRUCTION AND REDEVELOPMENT OF THE MATTHEW GONIWE HOSTEL

7.5.1 PREPARATION OF THE CASE STUDY

It is apparent that the reconstruction and redevelopment of the Matthew Goniwe Hostel requires an organised, structured action plan to ensure that the goals and objectives that still require determination, are met.

Having chosen SSM as the method for problem solving it was necessary to determine the various stakeholder groups that would give input for use in the methodology.

I felt that, due to time restraints for this project, it would be useful to stick to obvious stakeholder groups such as the beneficiary community, the community leaders, the broader community structures, the Municipality and professionals such as architects, town planners and local contractors. There is, no doubt, many other stakeholders that could have been consulted had time permitted. These may have included social workers, health care groups, employment unions and so on.

The stakeholder groups and the respective candidates used in the case study are as follows:

Professional Team:

1. Ndaba Ndzombane, Town Planner, Metroplan, Port Elizabeth
2. Elwyn Harlech-Jones, Architect, H J Studio Trust, Port Elizabeth
3. Raj Maharajh, Architect, Raj Maharajh Associates, Port Elizabeth

Community:

4. Sizwe Motlana, Resident, Matthew Goniwe Hostel, Port Elizabeth
5. Totman Keke, Resident, Matthew Goniwe Hostel, Port Elizabeth

Local Negotiating Group:

6. David Lushaba, Chairperson, Matthew Goniwe Hostel, Port Elizabeth
7. Maxwell Tengo, Community Liaison Officer, M G Hostel, Port Elizabeth

Community Structures:

8. Eric Frans, Local Chairperson, SANCO, Port Elizabeth
9. Dennis Bitterhout, Member, ANC, Port Elizabeth

Port Elizabeth Municipality:

10. Alan Zeiss, Chief Estates Officer, Port Elizabeth
11. Ian Judd, Deputy Chief estates Officer, Port Elizabeth

Local Contractors:

12. Phumzile Moli, PEBACA, Port Elizabeth
13. Alfred Gedze, Gedze Builders, Port Elizabeth
14. Johnson Tula, Johnson Construction, Port Elizabeth

It was necessary to narrow down the participants from the above fourteen to a smaller group by screening the candidates in order to select the participants according to their ability, on the one hand, to be able to satisfy aspirant stakeholder needs, and on the other, regarding their power to influence the process under discussion.

The following table depicts the results of the selection process after preliminary interviews were conducted with the candidates listed above. Obviously these interviews were extremely explorative and the interpretations the subjective opinions of myself.

RATING OF PROSPECTIVE STAKEHOLDERS ACCORDING TO PERCEIVED CRITERIA						
Candidate Number	Candidate Name	Ability to Satisfy Aspirant Needs (Rating 1 to 10)	Power to influence the Project (Rating 1 to 10)	Is ability to satisfy needs greater than 5?	Is the power to influence greater than 5?	If answer yes to both questions then selected
1	Ndaba Nzombane	6	6	yes	yes	yes
2	Elwyn Harlech-Jones	7	3	yes	no	no
3	Raj Maharajh	8	7	yes	yes	yes
4	Sizwe Mollana	6	2	yes	no	no
5	Totman Keke	8	6	yes	yes	yes
6	David Lushaba	3	8	no	yes	no
7	Maxwell Tengo	8	9	yes	yes	yes
8	Eric Frans	9	8	yes	yes	yes
9	Dennis Bitterhout	7	4	yes	no	no
10	Alan Zeiss	6	8	yes	yes	yes
11	Ian Judd	7	4	yes	no	no
12	Phumzile Moli	7	9	yes	yes	yes
13	Bisset Gedze	3	8	no	yes	no
14	Johnson Tula	7	2	yes	no	no

ssm-cri1.xls

Figure 7.3 Rating of Prospective Stakeholders for Input in the SSM Case Study.

As shown in the table the following were selected to participate as stakeholders in the case study of the methodology by virtue of their perceived ability to satisfy aspirant needs and power to influence the redevelopment of the project:

Ndaba Ndzombane
 Raj Maharajh
 Maxwell Tengo
 Eric Frans

Totman Keke
Alan Zeiss
Phumzile Moli

7.5.2 STAGE 1: GATHERING INFORMATION

This stage involves gathering information about the problem situation by means of observation and/or through interviews.

Various interviews were conducted with the stakeholder participants as listed above. This process gave these people the opportunity to put forward their views and opinions. A diverse array of issues emerged.

As this case study was essentially a university project it was not possible to participate in observations of the change process or of the problem situation. This change process obviously is of long-term (in this case 3 to 5 years in span) duration. The observations of the problem situation are basically reflected in the opinions and issues raised by the stakeholders.

The issues raised by the selected stakeholders are as follows:

Ndaba Ndzombane:

Situation

The Matthew Goniwe Hostel complex is located in Kwazakhele that is situated within New Brighton, a black township located to the north of Port Elizabeth. Historically the complex was known as the Kwazakhele Single Quarters and was renamed in commemoration of Matthew Goniwe who was a political activist murdered in the 1980's. The hostels were built during the 1950's by the Port Elizabeth Municipality primarily to house single black contract labour from the rural areas of the Eastern Cape and temporary accommodation for families during reconstruction of housing in other black residential areas.

It is bounded by made and unmade streets on all boundaries and comprises some 35,8 hectare. The Kwazakhele Golf Course (defunct) abuts the property to the south.

Layout of Hostel Complex

The layout is depicted in Appendix 9, bound herein, which shows the position of buildings and the singular spine road network (roads A, B and Ebongweni Road). It is most likely that such rudimentary road access was provided due to the fact that black vehicle ownership in the period during which the hostel was built was restricted to only the most affluent of black society. It was not likely that migrant construction workers would aspire to owning their own vehicles. The primary modus of transport was most likely buses and railway station some 2,6 Km distant.

The dormitory buildings (32m x 6m) are arranged, as will be seen, in rows parallel to one another whereby the rows consist of 4 to 10 dormitories interspersed at regular intervals by ablution and eating facilities.

Dilapidated State of Buildings

The dormitory buildings comprise structures dimensioning 32m in length and 6m in width generally. The conditions of these structures are exceedingly poor showing large scale cracking and evidence of neglect for a considerable period. The situation is compounded by the ad-hoc division informally of the structures in order to accommodate families. This change in use arose during the 1980's when the erstwhile National Party's Apartheid Policy of influx control was abolished. Single workers were thus entitled to live with their families and hence makeshift arrangements were made by the workers themselves to fashion accommodation within the ambit of the hostel complex. This was further compounded by the change in eating habits. Where single workers were intended to eat together at communal facilities this changed so that ad-hoc electrical wiring was installed informally to provide kitchens in the newly refashioned accommodation where desired.

Conditions of Support Services

Road network

A rudimentary surfaced road serves as a spine traversing approximately the middle of the complex. There are no other formal or informal roadways.

Pedestrian routes

Similarly, pedestrians are not catered for in the formal manner and random movement takes place.

Stormwater drainage

There exists a primary stormwater system which due to the lack of maintenance has ceased to function effectively. This factor contributes to health problems associated with the wet season.

Foulwater drainage

Similar to the water supply system, this system is extremely suspect and subject to the continual blocking and overflowing due to lack of maintenance, condition of system and illegal stormwater influx.

Water supply

A rudimentary network exists to support various ablution and communal eating facilities. It is doubtful whether this network can sustain improvements to living conditions in the hostel.

Electrification

A poor condition network exists to supply lighting to the dormitories and heating and lighting to the ablution and eating facilities. Due to lack of maintenance and abuse, the system can best be described as a disaster with an extremely high potential for danger. The hostel is criss-crossed with leads lying on the ground and suspended in the air in an ad-hoc manner by the residents in an attempt to create family dwellings within the hostel.

Streetlighting

The area is subject to lighting from high masts in a similar fashion to black townships throughout South Africa.

Refuse removal

The refuse removal service is supplied by the Port Elizabeth Municipality through the services of local black contractors.

Land Usage

The primary usage was intended for the accommodation of single migrant labour and a small number of families in transit.

The complex can be described as a compound with dormitories housing the dwellers and localised ablution and eating facilities. With the emergence of families being accommodated the densification has multiplied and conditions are therefore similar to a “pressure cooker” waiting to explode. Ad-hoc emergence of a crèche and health clinic are evident.

Informal businesses are scattered throughout the complex. Public open spaces are restricted to unmade surfaces in the centre and on the fringes of the complex.

Raj Maharajh:

The buildings were never designed for the purposes they are now being used. Single accommodation implies that sleeping quarters are arranged separately from ablution, recreational and eating facilities.

In essence, the barrack-like accommodation has been crudely adapted to form separate dwelling units. This in turn has led to massive overcrowding and subsequent overloading of services and in particular electricity.

The building structures are basic unplastered block units exhibiting large scale cracking and the lack of regular maintenance.

Maxwell Tengo:

The community has been cast together over a period of time since the abolition of the then Influx Control Act in the mid-1980's. The Act was intended to restrict the families of migrant workers to the so-called designated homelands. In abolishing the Act, the authorities were not prepared for the sudden influx of people and, in the case of the Matthew Goniwe Hostel, families of migrant labourers. These families were subsequently left to their own devices to adapt to their new environment in order to accommodate themselves. This in turn lead to the appalling conditions currently prevailing.

Eric Frans:

The anomalies facing the disadvantaged black communities are aptly portrayed by the conditions prevailing in the Matthew Goniwe Hostel. SANCO has been striving for many years to seek parity, initially, amongst the communities that it serves.

SANCO is of the opinion that each individual is entitled to a basic standard of living wherein adequate shelter, health services and security are basic human rights. At present, shelter is inappropriate exhibiting massive overcrowding and lack of appropriate privacy. Health services, such as water and sanitation are under severe pressure as is electricity that is abused and overloaded. Security is non-existent with high levels of crime and violence prevailing.

Totman Keke:

The community has welcomed the new Government and in particular its promises to 'level the playing fields' in society. It is a well-known fact that 95% of the wealth of the country resides

in a privileged 5% of the population and therefore the upliftment of the masses is a welcome change to the approach of the previous Government.

The community accepts that it is not possible to transform society overnight. Any initiative to alleviate the plight of the underprivileged is welcomed. Having said that, the community welcomes the opportunity to share in the planning process of its own development. This is a welcome change. The needs of the community are well defined.

Alan Zeiss:

The Municipality has inherited the situation from the former Provincial department, Community Services. Previously, the Provincial Government was responsible for the development and well-being of our Black community. This situation changed, with the formation of the Metropolitan Council. It is acknowledged that the challenges of redressing the past imbalances are astronomical.

The initiatives of Council and the local Department of the Eastern Cape responsible for housing are considered to be catalytic. Development of this underprivileged community should therefore be co-ordinated in an integrated manner within the framework of available funding scenarios.

Phumzile Moli:

Black contractors welcome the opportunity to be part of the process of developing their community. Not only would they benefit from the process financially but also would they have the opportunity to prove their ability when compared to the formal sector. Local support structures such as the ANC and SANCO are able to assist in the process by serving as ombudsman for the community.

Having received the opinions of the stakeholders regarding the problem situation, it is now possible to formulate a structure putting the various views into perspective.

7.5.3 STAGE 2: ORGANISING INFORMATION

Again the issues raised by the stakeholders may be summarised as follows:

Ndaba Ndzombane :

To integrate the hostel complex into the surrounding residential area in such a manner that the “hostel” tag may be removed and the end product blends in with surrounds.

To accommodate on adjacent land the “overflow” of residents in the hostel.

To uplift the community so that the social economic environment meets the requirements of the Reconstruction and Development Programme.

To empower the community in such manner that the greatest potential is obtained in order to ensure sustainability of the redevelopment is possible.

Raj Maharajh:

The challenge facing the redevelopment process is to create a family environment. In black culture, man is closely linked to his family environment. Family, in this context, may extended beyond direct dependants to relatives and friends.

Maxwell Tengo:

The challenge is essentially to provide opportunity for betterment of the community as a whole. The community has been waiting for some sign of hope from above for many years. The community wishes to see changes urgently, talk and promises are no longer acceptable.

Eric Frans:

SANCO is expecting transformation of the living conditions in the Matthew Goniwe Hostel to be permanent and meaningful. The process is expected to be transparent with the emphasis on empowerment of our communities. Development is furthermore, expected to be driven by the initiatives of our community whereby the community and its skills' resources are used fully which thus will empower them in the future.

Totman Keke:

The challenge is to contribute to the welfare of our people.

In some manner, the bulk of the investment should be spent within the informal sector. The formal sector should in the short term concentrate on developing commerce and industry which in turn will provide employment opportunities for the informal community.

Alan Zeiss:

The challenge is to create a compromise between the current situation and a utopian solution. As the redevelopment initiative is essentially sub-economic, utopia is not realistically possible without greater financial commitment. The current funding scenario restricts the effort to providing only for basic needs.

Phumzile Moli:

Black contractors are hopeful that they shall get *a fair share of the economic cake*. All too often, development in our communities has meant the enrichment of others from more affluent communities.

Checkland (1991, p172) suggests that these findings (expressed problem situations) can be summarised in a “rich picture” whereby the rich picture is a cartoon-like expression “...*which, in the spirit of such representatives, allows for certain issues, conflicts and other problematic and interesting features to be accentuated. The rich picture represents the climate of the situation*”.

The rich picture of the Matthew Goniwe Hostel problem is represented in Figure 7.4 below :



Figure 7.4 The “Rich Picture” of the Problem Situation of the Existing Matthew Goniwe Hostel.

7.5.4 STAGE 3: FORMULATING ROOT DEFINITIONS

Having regarded the viewpoints of the various participants and the rich picture, the following root definitions are constructed as perceived for the different stakeholder viewpoints:

The Professional Team:

C - community resident in the hostel environs

A - Professionals, contractors and management team

T - determining and carrying out activities to result in redevelopment

W - All inhabitants are housed and catered for socially to reasonable safe and healthy standards.

O - The municipality and provincial housing board.

E - Number of housing units required to accommodate incumbent residents

The root definition is thus:

The de-densification and restructuring of the community of the Matthew Goniwe Hostel is required to redress the imbalances of overcrowding and social disarray in such a manner that the beneficiaries are sensitively and adequately accommodated or relocated within or adjacent to the Hostel complex within the framework of allocated financing.

The Hostel Community:

C - the hostel residents

A - the hostel residents, planning team and municipality

T - replanning and rebuilding the complex

W - upliftment of employment opportunities and living conditions

O - the Housing Board and Hostel leaders

E - community disruption and reorganisation

The root definition is thus:

The community of the Matthew Goniwe hostel expects invest in the redevelopment process to come to the community. This in turn will have a 'knock-on' effect and cause the Rand to circulate within the community. With employment levels in our community at between 50% to 60% the challenge therefore is to address unemployment and at the same time redevelop the living conditions in the Hostel.

The Local Negotiating Group (Hostel Leaders):

C - the hostel dwellers

A - Local Negotiating Group, Planners, Local Authority and Contractors.

T - rebuilding and upgrading

W - bettering the circumstances of the community.

O - LNG and Local Authority.

E - transparency of the process.

The root definition is thus:

The community has been expecting some initiative from Local Government to address the issues of bettering social conditions and creating employment opportunities in line with the One City - One People vision. The Local Authority is responsible for its people and morally

it should seek parity amongst the different community groupings. The Local Negotiating Group would like to be involved in all facets of the redevelopment initiative to ensure that co-operation is achieved.

Community Structures (Forums):

C - the hostel community.

A - Hostel committee, housing board and planners.

T - integration of community by upliftment.

W - suburban culture integrated into the broader community.

O - the hostel dwellers.

E - the social standing of the community both economically and socially.

The root definition is thus:

In the past, decision making was based on a top-down approach. SANCO, by nature of its existence, believes that the community is most able to make decisions that directly affect itself. For this to be successful, decisions should be informed by various sources of knowledge available to the community. SANCO believes that the process of empowerment is as equally important as the product of empowerment. By addressing the process correctly, it is believed that the redevelopment of the Matthew Goniwe Hostel will be sustainable.

Port Elizabeth Municipality:

C - the hostel dwellers and the housing board.

A - the local politicians, community leaders and professional team.

T - unbundling of overcrowding and creation of family and single units.

W - high density group housing scheme.

O - the hostel committee and municipal council representatives.

E - social and economical limitations of the community.

The root definition is thus:

The Local Authority of Port Elizabeth, whom ultimately takes responsibility for the upgrading and redevelopment of the Matthew Goniwe Hostel Complex requires that the Professional Team of Consultants makes and institutes proposals to promote upgrading and redevelopment of the complex in such a manner that the hostel residents are uplifted and empowered within the restrictions and confines of the development to a degree that provides quality of life both socially and economically.

The Local Contractors:

C - the hostel community.

A - the community leaders, planners and contractors.

T - reconstruction of the hostel and the environment.

W - rebuilding of the hostel and development of the residents.

O - community leaders and funding bodies (housing board).

E - transparency and public involvement in the planning and implementation process.

The root definition is thus:

Black contractors see the challenge of development in our community as an opportunity to develop capacity. The process of development should safeguard our interests with support, if necessary, from the formal sector and at the same achieve the goals of redeveloping the Matthew Goniwe Hostel.

7.5.5 STAGE 4: CONSTRUCTING CONCEPTUAL MODELS.

To recall, we need at this stage to ask the questions such as “what activities, in what sequence, have to occur in order to fulfil the root definition?”

And also, the definition from Flood and Jackson “*a conceptual model is constructed by drawing out the minimum number of verbs necessary to describe the activities...*”.

The Professional Team:

- determine the development potential and carrying capacity of the existing site, cognisance being taken of the affordability levels and preferences of the potential beneficiaries.
- identify land requirements for the accommodation of residents (families) during the redevelopment process.
- set guidelines so that the existing hostel and additional land is planned in order to achieve the upgrading process.
- offer appropriate and affordable housing and secure tenure options to the residents.
- improve the quality of life by improving engineering services and upgrading the physical environment in the existing hostel.
- integrate the hostel with adjacent communities and surrounding development.

- promote meaningful community participation within and outside the hostel during the upgrading and redevelopment project.
- identify alternate funding sources in order to create a viable and sustainable community and neighbourhood environment.
- provide beneficiaries with permanent tenure at no cost to the beneficiaries who are largely unemployed and earning negligible incomes.
- integrate the hostel complex with that of the surrounding environment.
- eliminate the hostel stigma as the conditions in the hostel could be equated with ghettos which accommodated the undesirables. The broader community would need to be confident that the efforts of upgrading elevated the community on a par socially and economically with adjacent community.
- sustain redevelopment in terms of levels of service and amenities to the beneficiaries.
- provide for all the basic needs of the community such as:
 - water
 - sanitation
 - health care
 - education
 - recreation
 - mobility
 - employment opportunities
- structure the redevelopment so that all beneficiaries received equal treatment.
- cater for family and singular groupings in order so that no current residents were forced to relocate.

The Hostel Community:

The community of the Hostel expect the following:

- ensure that money spent on redevelopment will stay within the circulation of the Hostel environment for as long as possible.

- to see value for money.
- to see tangible improvement.
- create continuous employment.
- establish security.
- achieve integration with the broader community.
- create community pride.
- establish a beautiful environment.

The Local Negotiating Group:

- involve the community at all stages of the redevelopment. This would contrast with the approach adopted prior to the democraticizing of South Africa wherein the end user (beneficiary) was frequently not consulted with respect to its input in major capital programmes.
- address the neglect of the past in the upgrading process.
- empower inhabitants in the redevelopment process.
- create a holistic environment wherein a suburban culture could be established.

Community Structures:

SANCO sees redevelopment of the Hostel achieving the following:

- empower the beneficiary community.
- uplift social conditions.
- reconstitute family life.
- create sustainable environmental conditions.
- ensure that the process is driven by the community.

Port Elizabeth Municipality:

The Municipality expected that the process should subscribe to the following principles:

- uplift the beneficiaries to such an extent that the product is sustainable.
- offset outstanding historical costs in the financing scenario.
- adhere to Municipal regulations and by-laws.
- ensure that the development process is transparent and sanctioned by the beneficiary community.

The Local Contractors:

The local contractors anticipate that development will:

- achieve employment and empowerment of disenfranchised contractors
- be a transparent process
- make limited use of the formal conventional contractors
- have continued support from the Professionals

7.5.6 STAGE 5: COMPARING THE CONCEPTUAL MODELS WITH REALITY

As this point, the proposed activities suggested by the stakeholders should be compared with the existing problem situation such that debate can lead to suggestions towards changes that can be made to improve the situation.

Each stakeholder, in turn, made the following comparisons, which is best expressed in tabular form.

The Professional Team:

COMPARISON OF CONCEPTUAL MODEL WITH STATUS QUO : PROFESSIONALS		
No.	Conceptual Model	Status Quo
1	Determine development potential	Only room for improvement exists
2	Identify land requirements	Some vacant land available
3	Set development guidelines	No guidelines/action plans exist
4	Propose affordable housing options	Currently 2/3 families per unit
5	Improve services (quality of life)	Poor rudimentary services exist
6	Integrate with adjacent community	Complex isolated, similar to ghetto
7	Promote community participation	Community eager to participate
8	Identify funding sources	Government funding available
9	Upgrade status of community	Poor morale and conditions exist
10	Promote sustainability	Poor services provided at no cost
11	Ensure equal treatment of beneficiaries	Beneficiaries disorganized

ssmcomp1.xls

Figure 7.5 Comparison of the Conceptual Model with that of the Status Quo:
Professional Team.

The Hostel Community:

COMPARISON OF CONCEPTUAL MODEL WITH STATUS QUO : TOTMIAN KEKE		
No.	Conceptual Model	Status Quo
1	Improve services (quality of life)	Poor rudimentary services exist
2	Integrate with adjacent community	Complex isolated, similar to ghetto
3	Upgrade status of community	Poor morale and conditions exist
4	Promote sustainability	Poor services provided at no cost
5	Keeping expenditure within community	Traditionally money leaves community
6	Ensure value for money	Previous experience to contrary
7	Create employment opportunities	Negligible employment prevalent
8	Beautify the environment	Environment is hostile and barren

ssmcomp2.xls

Figure 7.6 Comparison of the Conceptual Model with that of the Status Quo:
Hostel Community.

The Local Negotiating Group:

COMPARISON OF CONCEPTUAL MODEL WITH STATUS QUO : MAXWELL TENGO		
No.	Conceptual Model	Status Quo
1	<i>Promote community participation</i>	<i>Community eager to participate</i>
2	<i>Upgrade status of community</i>	<i>Poor morale and conditions exist</i>
3	<i>Correct past neglect</i>	<i>Evidence of extreme neglect prevalent</i>
4	<i>Establish a suburban culture</i>	<i>Ghetto-like ostracized culture exists</i>

ssmcomp3.xls

Figure 7.7 Comparison of the Conceptual Model with that of the Status Quo:
Local Negotiating Group.

Community Structures:

COMPARISON OF CONCEPTUAL MODEL WITH STATUS QUO : ERIC FRANS		
No.	Conceptual Model	Status Quo
1	<i>Improve services (quality of life)</i>	<i>Poor rudimentary services exist</i>
2	<i>Promote community participation</i>	<i>Community eager to participate</i>
3	<i>Promote sustainability</i>	<i>Poor services provided at no cost</i>
4	<i>Empowerment of beneficiaries</i>	<i>Beneficiaries are disenfranchised</i>
5	<i>Reconstituting family life</i>	<i>Families in turmoil due to conditions</i>

ssmcomp4.xls

Figure 7.8 Comparison of the Conceptual Model with that of the Status Quo:
Community Structures.

Port Elizabeth Municipality:

COMPARISON OF CONCEPTUAL MODEL WITH STATUS QUO : ALAN ZEISS		
No.	Conceptual Model	Status Quo
1	<i>Promote sustainability</i>	<i>Poor services provided at no cost</i>
2	<i>Eradicate historical costs</i>	<i>Some historical development costs exist</i>
3	<i>Adhere to Municipal standards</i>	<i>All Municipal standards are not met</i>
4	<i>Ensure process is transparent</i>	<i>Transparency is a new concept</i>

ssmcomp5.xls

Figure 7.9 Comparison of the Conceptual Model with that of the Status Quo:
Port Elizabeth Municipality.

The Local Contractors:

COMPARISON OF CONCEPTUAL MODEL WITH STATUS QUO : PHUMZILE MOLI		
No.	Conceptual Model	Status Quo
1	<i>Ensure process is transparent</i>	<i>Transparency is a new concept</i>
2	<i>Empowerment of beneficiaries</i>	<i>Beneficiaries are disenfranchised</i>
3	<i>Create employment opportunities</i>	<i>Negligible employment prevalent</i>
4	<i>Limit outside contractors</i>	<i>Local unemployed contractors available</i>
5	<i>Build capacity by professionals</i>	<i>Current capacity negligible</i>

ssmcomp6.xls

Figure 7.10 Comparison of the Conceptual Model with that of the Status Quo:
Local Contractors.

7.5.7 STAGE 6: PROPOSING CHANGES

Each stakeholder in turn has made suggestions arising from their view towards the reconstruction and redevelopment initiative. These are listed in turn.

Ultimately, their suggestions are arranged in tabular form to provide an overview of overlapping suggestions whereupon a synergised summary of their proposals is listed.

The Professional Team:

Determining the development potential. As there exists only room for improvement the scope of potential development is very wide. Upon establishing a successful needs analysis, potentials should be identified for further attention.

Land requirements may be established once the needs analysis has been completed. Due to severe overcrowding, de-densification may be achieved by providing accommodation on the surplus available land within and adjacent to the Hostel Complex.

Development guidelines may be established taking due cognisance of the inputs available from the previous two paragraphs. As the current land usage is diametrically opposed to the intended usage, the guidelines will be unique and detract entirely from the former usage.

Proposing affordable housing options is essentially one of the main purposes of the redevelopment programme. The emphasis will be on achieving one family per dwelling unit that entails firstly the creation of new units to cater for the overflow and, secondly, the upgrading of the current units (if feasible) to a reasonable living standard. The issue of affordability is crucial to the process as the bulk of the beneficiaries are in the so-called “*zero-rand*” category. Various options exist to achieve affordability.

The current **quality of life** services such as water, sanitation, sewerage, electricity, stormwater drainage and accessibility are in an extremely neglected state, if they in fact exist

at all. The upgrading programme should address all these aspects as well as support facilities such as health, child-care, recreation, education and business needs.

The **removal of the ghetto-like stigma** is of paramount importance and should be carried out in a sensitive manner to ensure that the stigma is lost and that the community is integrated with the surrounding areas. This can be achieved by the removal of walls and the creation of access ways (vehicular and pedestrian) to the adjoining roads. These aspects should inform the guidelines mentioned in a previous paragraph.

In the past, the needs of the **community** or more specifically the **input** available from the community was either not sought or ignored and thus prescribed by the authorities responsible for the complex. With the democratising of South Africa, which is currently prevalent, the needs and aspirations of the community are absolutely vital inputs required to inform the development guidelines. These inputs are required to be continuous throughout the redevelopment process.

As mentioned above **affordability** is an important issue. At present the Government has established a policy for the provision of housing to the disadvantaged majority of South Africans. There exist grants in the form of subsidies to deserving beneficiaries. The guidelines should be informed by the needs of the beneficiaries in this regard. Other possibilities for funding need to be explored and could possibly take the form of assistance from industry, bank financing and other grants.

Quality of life in the form of reliable and available services such as water, sanitation, sewerage, electricity, stormwater drainage and accessibility should be a priority in the redevelopment initiative.

The community should be integrated with the surrounding areas by the removal of walls and the formation of access ways (vehicular and pedestrian) to the adjoining roads.

Redevelopment referred to in this project implies the holistic upliftment of the community such that families are developed socially in order to become self-sufficient. This will encourage the upgrading of the status of the community.

Redevelopment and investment will be of a short-lived or temporary nature unless these initiatives are sustained. The process planners should make proposals regarding the **sustainability of the project**. Sustainability could be achieved by creation of continuous employment opportunities and ensuring that service charges are paid monthly.

The planning process should ensure that the **beneficiary group is treated with due care and fairness**. These objectives can be met by the creation of a set of principles which are adopted by the various stakeholders groups known as a “social compact”. Typically, a social compact would be signed by the developer (i.e. Local Authority) and the beneficiaries (i.e. the dwellers) and other stakeholders (i.e. local structures) such as the ANC, SANCO, etc.

The Hostel Community:

The **community should be integrated** with the surrounding areas. The nation of South Africa has recently been democratised and as such distinction between marginalised communities should be avoided. This can be achieved by the removal of walls and the creation of thoroughfares from adjacent suburbs.

The current **quality of life** is in an extremely neglected state. The upgrading programme should address all aspects such as municipal services as well as support facilities such as health, child-care, recreation and education.

The redevelopment referred to in this project implies the holistic approach towards the upliftment of community such that the **status of the community is upgraded**.

Redevelopment and investment will be of a short-lived or temporary nature unless the **sustainability of the project** is addressed possibly by the creation of continuous employment opportunities.

Expenditure being retained in the community is possible if black suppliers and black contractors and labour are utilised.

In the past, development came with a price tag, with the resultant end product being diminished due to high developmental overheads. **Value for money** can be achieved by ensuring the limiting of outsourcing of resources.

Employment opportunities are ensured by restricting the importation of labour and semi-skilled employees.

The **environment should be beautified** by community and limited contractual initiatives. The issue is one of "ownership" which should in turn contribute to the sustainability of the beautification initiative.

The Local Negotiating Group:

This project that is intended to **redevelop the hostel environment** is also intended to redevelop the community in so far as its aspirations. The development of the community is of equal importance to the development of the physical environment.

The **community** is more than to contribute to the process of redevelopment through its organised structures. This is a welcome change to the past way of doing things as the **input** available from the community was either not sought or ignored. The democratising of South Africa, prescribes that community involvement be optimised in all development initiatives.

Correcting past neglect is a political imperative and is underwritten by the principles contained in the Reconstruction and Development Programme (1994). Essentially, this activity will be achieved following most of the activities contained herein.

Establishing a suburban culture is essentially the objective of the redevelopment process. It should thus be informed by all other activities described herein. A suburban culture implies that most of the community's basic needs are met within its own environment.

Community Structures:

The question of **empowering the beneficiaries** is essentially an issue of sustainability. Empowerment is necessary to develop the community. It is a question of process rather than product.

The previous fragmentation of black migrant labour has created problems in their own right. The **restructuring of family life** is seen to be a stabilising and developmental goal.

Quality of life services such as water, sanitation, sewerage, electricity and stormwater drainage should be improved as well as support facilities such as health, child-care, recreation, education and business needs.

The **needs and aspirations of the community** are absolutely vital inputs required to inform the development guidelines. These inputs should be sought at all stages of the development process.

The process should address the **sustainability of the project**. Sustainability should be achieved by creation of continuous employment opportunities and ensuring that service charges are paid regularly.

Port Elizabeth Municipality:

Sustainability of the project is essential for the long term such of the redevelopment effort. Sustainability could be achieved by ongoing employment, ensuring that service charges are paid monthly and individual property rights.

The policies laid down by the Government require that **existing historical costs** (should they exist) **be redeemed** by the development process. This, in turn, impacts on the financing of the project. Historical costs typically include the costs of loans incurred for provision of roads and services, cost of land, costs of township establishment and building costs. In this case, it is most likely that the only historical cost is the value of the land which in fact belongs to the Local Authority. These costs, however, should be established and catered for in the financial plan.

The Local Authority is responsible for the establishment of development criteria so that they **conform with the performance standards** adopted. These standards are usually adopted from scientific and experimental input and serves to ensure that consistency is achieved. In this case, this requirement, although necessary, is considered amusing if one takes into consideration the condonation of the status being experienced at present.

Transparency of the development process is necessary to ensure that all role-players are informed of developments as they occur and more importantly, the decisions taken to inform these developments. The process therefore should be interactive amongst all role-players.

The Local Contractors:

Transparency of the development process should be ensured so that no party is favoured in the process. The community structures should act as ombudsman during the redevelopment process. The process therefore should be interactive amongst all role-players.

The question of **empowering the beneficiaries** is essentially an issue of sustainability empowerment is necessary to develop the community. It is a question of process rather than product.

Contractors from the formal sector are to be limited so that empowerment objectives are achieved. It is acknowledged that some skills will be necessary to be imported to supplement and support local initiatives.

As part of the **social responsibility of the professional group**, certain initiatives should be enshrined in the project to ensure that the community is enfranchised by the development process.

7.5.8 SUMMARY OF ACTIVITIES FORMING PROPOSED CHANGES:

The above input was then tabulated so as to identify issues of mutual concern:

SUMMARY OF ACTIVITIES IDENTIFIED BY STAKEHOLDERS

No.	Activity required	FREQUENCY					
		Profess.	Max Tengo	Eric Frans	Totman Keke	Alan Zeiss	Phumzile Moli
1	Determine development potential	*					
2	Identify land requirements	*					
3	Set development guidelines	*					
4	Propose affordable housing options	*					
5	Improve services (quality of life)	*		*	*		
6	Integrate with adjacent community	*			*		
7	Promote community participation	*	*	*			
8	Identify funding sources	*					
9	Upgrade status of community	*	*		*		
10	Promote sustainability	*		*	*	*	
11	Ensure equal treatment of beneficiaries	*					
12	Correct past neglect		*				
13	Establish a suburban culture		*				
14	Eradicate historical costs					*	
15	Adhere to Municipal standards					*	
16	Ensure process is transparent					*	*
17	Empowerment of beneficiaries			*			*
18	Reconstituting family life			*			
19	Keeping expenditure within community				*		
20	Ensure value for money				*		
21	Create employment opportunities				*		*
22	Beautify the environment				*		
23	Limit outside contractors						*
24	Build capacity by professionals						*

sensumm1.xls

Figure 7.11 Summary of Activities Identified for the Redevelopment of the Matthew Goniwe Hostel.

7.5.9 STAGE 7: PROPOSED ACTIONS REQUIRED TO IMPLEMENT THE DESIRED CHANGES.

The proposals suggested by the stakeholders may be synergised to form guidelines. Their suggestions form the content of the following list:

Determining the development potential. As there exists only room for improvement the scope of potential development is very wide. Upon establishing a successful needs analysis, potentials should be identified for further attention.

Land requirements may be established once the needs analysis has been completed. Due to severe overcrowding, de-densification may be achieved by providing accommodation on the surplus available land within and adjacent to the Hostel Complex.

Development guidelines may be established taking due cognisance of the inputs available above. As the current land usage is diametrically opposed to the intended usage, the guidelines will be unique and detract entirely from the former usage.

Proposing affordable housing options is essentially one of the main purposes of the redevelopment programme. The emphasis will be on achieving one family per dwelling unit that entails firstly the creation of new units to cater for the overflow and, secondly, the upgrading of the current units (if feasible) to a reasonable living standard. The issue of affordability is crucial to the process as the bulk of the beneficiaries are in the so-called “*zero-rand*” category. Various options exist to achieve affordability.

The current **quality of life** services such as water, sanitation, sewerage, electricity, stormwater drainage and accessibility are in an extremely neglected state, if they in fact exist at all. The upgrading programme should address all these aspects as well as support facilities such as health, child-care, recreation, education and business needs.

The **removal of the ghetto-like stigma** is of paramount importance and should be carried out in a sensitive manner to ensure that the stigma is lost and that the community is integrated with the surrounding areas. This can be achieved by the removal of walls and the creation of access ways (vehicular and pedestrian) to the adjoining roads. These aspects should inform the guidelines mentioned above.

In the past, the needs of the **community** or more specifically the **input** available from the community was either not sought or ignored and thus prescribed by the authorities responsible for the complex. With the democratising of South Africa, which is currently prevalent, the needs and aspirations of the community are absolutely vital inputs required to inform the development guidelines. These inputs are required to be continuous throughout the redevelopment process.

As mentioned above, **affordability** is an important issue. At present the Government has established a policy for the provision of housing to the disadvantaged majority of South Africans. There exist grants in the form of subsidies to deserving beneficiaries. The guidelines should be informed by the needs of the beneficiaries in this regard. Other possibilities for funding need to be explored and could possibly take the form of assistance from industry, bank financing and other grants.

The **redevelopment** referred to in this project does not merely subscribe to the physical upliftment of a **forgotten community** but implies holistic upliftment of community so that families are given the opportunity to become self-sufficient and private. This in turn will contribute to the upgrading of the status of the community.

Redevelopment and investment will be of a short-lived or temporary nature unless these initiatives are sustained. The process planners should make proposals regarding the **sustainability of the project**. Sustainability could be achieved by creation of continuous employment opportunities and ensuring that service charges are paid monthly.

The planning process should ensure that the **beneficiary group is treated with due care and fairness**. These objectives can be met by the creation of a set of principles that are adopted by the various stakeholders groups known as a "social compact". Typically, a social compact would be signed by the developer (i.e. Local Authority) and the beneficiaries (i.e. the dwellers) and other stakeholders (i.e. local structures) such as the ANC, SANCO, etc.

Correcting past neglect is a political imperative and is underwritten by the principles contained in the Reconstruction and Development Programme (1994). Essentially, this activity will be achieved following most of the activities contained herein.

Establishing a suburban culture is essentially the objective of the redevelopment process, It should thus be informed by all other activities described herein. A suburban culture implies that most of the community's basic needs are met within its own environment.

The policies laid down by the Government require that **existing historical costs** (should they exist) **be redeemed** by the development process. This, in turn, impacts on the financing of the project. Historical costs typically include the costs of loans incurred for provision of roads and services, cost of land, costs of township establishment and building costs. In this case, it is most likely that the only historical cost is the value of the land which in fact belongs to the Local Authority. These costs, however, should be established and catered for in the financial plan.

The Local Authority is responsible for the establishment of development criteria so that they **conform with the performance standards** adopted. These standards are usually adopted from scientific and experimental input and serves to ensure that consistency is achieved. In this case, this requirement, although necessary, it is considered amusing if one takes into consideration the condonation of the status being experienced at present.

Transparency of the development process is necessary to ensure that all role-players are informed of developments as they occur and more importantly, the decisions taken to inform these developments. The process therefore should be interactive amongst all role-players.

The question of **empowering the beneficiaries** is essentially an issue of sustainability.

Empowerment is necessary to develop the community. It is a question of process rather than product.

The previous fragmentation of black migrant labour has created problems in their own right. The **restructuring of family life** is seen to be a stabilising and developmental goal.

Expenditure being retained in the community is possible if black suppliers and black contractors and labour are utilised.

In the past, development came with a price tag, with the resultant end product being diminished due to high developmental overheads. **Value for money** can be achieved by ensuring the limiting of outsourcing of resources.

Employment opportunities are ensured by restricting the importation of labour and semi-skilled employees.

The **environment should be beautified** by community and limited contractual initiatives. The issue is one of “ownership” that should in turn contribute to the sustainability of the beautification initiative.

Contractors from the formal sector are to be limited so that empowerment objectives are achieved. It is acknowledged that some skills will be necessary to be imported to supplement and support local initiatives.

As part of the **social responsibility of the professional group**, certain initiatives should be enshrined in the project to ensure that the community is enfranchised by the development process.

By careful examination the proposals can be arranged to form the redevelopment and reconstruction model of the Matthew Goniwe upgrading initiative.

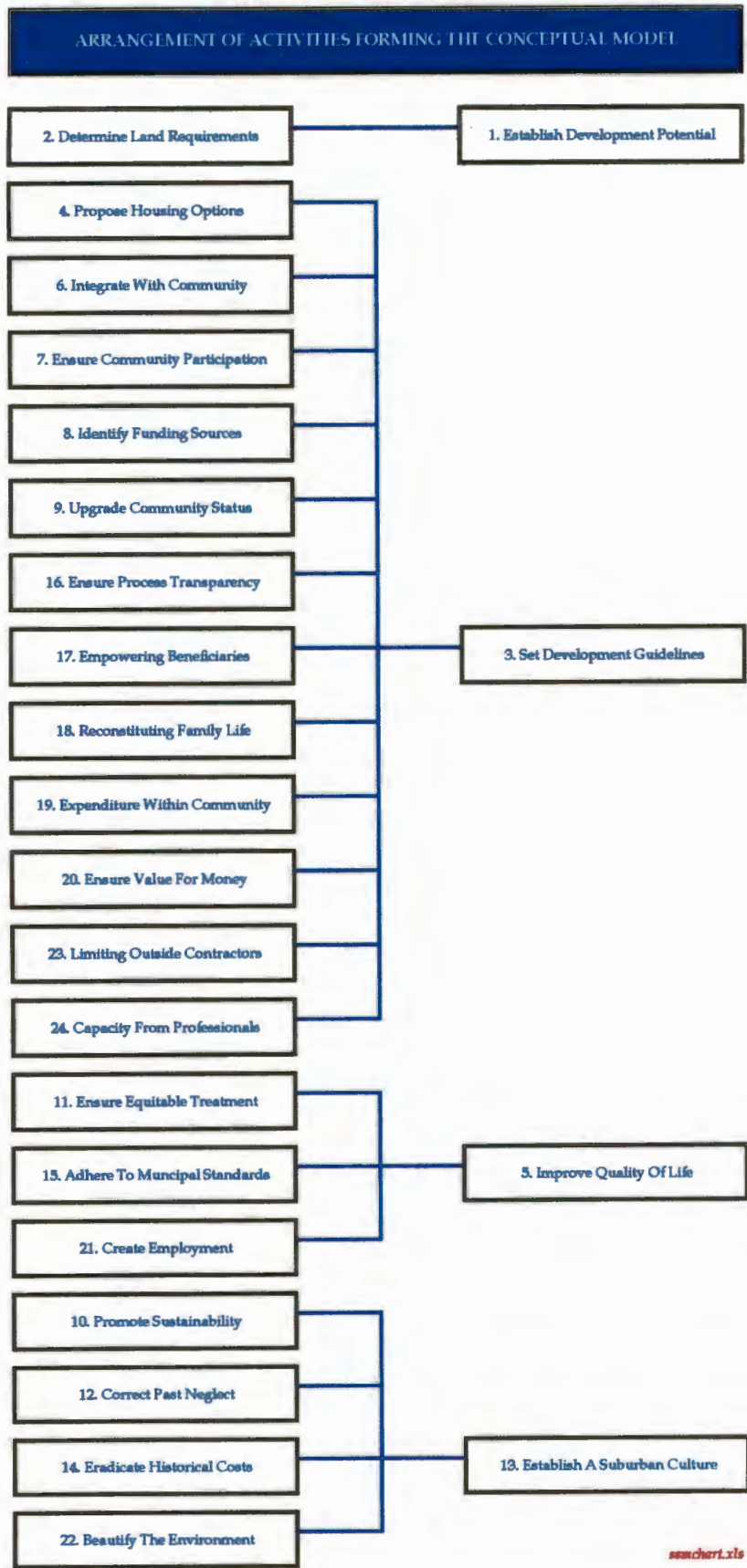


Figure 7.12 Arrangement of Activities Forming the Redevelopment Model.

7.5.10 SUMMARY

The redevelopment model should enable the Matthew Goniwe Hostel stakeholders to form policies and guidelines for culturally viable upgrading of the hostel and its broader environment.

7.6 CRITIQUE OF THE CASE STUDY

The case study briefly describes a process whereby ISM is employed to determine broad guidelines to solve a problem that is complex and pluralistic in nature. The problem is further compounded by the fact that the goals are determinate at the outset.

This case study was further compounded by the fact that precious upgrading efforts amounted to nil and hence the hostel community and leadership were extremely suspicious of the new effort.

The participation of stakeholders may have been limited as it is possible that other could have been identified and consulted. For example, the surrounding residential area has not been included. Neither were local business, schooling, health authorities, etc. included in the study. There is on doubt that the redevelopment and integration of the hostel community will impact on the broader community.

Having carried out this study from stage one to stage seven, I can in retrospect see that perhaps this study could have begun at the conceptual model stage with continued iteration through the various stages to arrive at the final stage. Again, lack of experience and availability of time has influenced the outcome of the study.

7.7 CRITIQUE OF THE SSM METHODOLOGY

This method provides a basis for problem solving whereby a multifaceted approach is employed to enlist a wide perspective of contributions. Ultimately, a synergised model is produced to address the issues requiring solution. The process employs the Soft System Methodology that is applied to the input of individual stakeholders. The aim of applying the methodology to the individual stakeholders separately is to obtain the richest possible perspective for solving the problem under review. Once the final step has been taken in each case a synergised course of action is proposed. The wider the perspective of views, the better the quality of the proposed solution.

In the case under discussion above, the methodology employed suggested a course of action to address the redevelopment and upgrading of a hostel complex that supports approximately 2800 families. Activities were identified and structured in such a manner that an action programme was derived.

The methodology portrays the following strengths, weaknesses, opportunities and dangers:

Strengths:

- It is an extremely flexible and iterative methodology
- It involves much opportunity to interact with stakeholders

Weaknesses:

- It does attempt to achieve consensus but rather provides an all-embracing solution
- It is not analytical in the sense that issues are not weighed up against each other. Small seemingly trivial issues will thus carry the same status as more important issues

Opportunities:

- It offers the opportunity to actively involve all stakeholders in an iterative developmental process toward producing solutions. In terms of current policy this achieves a major objective of the ANC government

Dangers:

- The end results could prove to be overly catered for and as such unaffordable in terms of available resources

In conclusion, SSM is a methodology that gives direction toward producing a solution for problems that have no apparent end objective. It is useful for synthesising conceptions emanating from diverse stakeholder perceptions without posing a threat to any other perception. It would be most useful in cases where the resources are not constrained and are abundantly available.

CHAPTER EIGHT: CRITIQUE OF THE TWO APPROACHES EMPLOYED

Although the methodologies used, namely, Interpretative Structural Modelling (ISM) and the Soft Systems Methodology (SSM), both adopt a systemic approach to problem solving, the methodologies have some fundamental similarities and differences.

8.1 THEORY:

ISM attempts to create a model of a structured set of elements such that the model serves as a proposed solution for the problem identified.

SSM attempts to create a solution for a defined problem from the comparison of a conceived model solution with that of the status quo.

In both cases, broad-based community participation of key stakeholder interests is required.

8.2 CONCEPT:

Both methodologies are systemic. They adopt a holistic approach to problem solving.

Both methodologies require broad based inputs from diverse stakeholders or stakeholder groups.

Both methodologies propose recommended activities to be implemented to solve the particular

problem at hand.

The ISM method is structured so that the problem solver starts at one point and proceeds to the ultimate step that proposes the action to be taken. SSM, on the other hand, whilst structured into various stages, does not prescribe where the process begins. The process may begin, for example, in the middle stages where certain assumptions are initially made, which may require revisiting and correction during the process.

8.3 PRINCIPLE:

ISM is essentially a consensus building approach utilising an iterative interaction cycle with stakeholders to arrive at consensus. A computer based technique is ultimately employed to produce a flowchart of activities required to solve a particular problem.

SSM, whilst also interactive with stakeholders, is essentially more of an individual approach where ultimately many diverse views created through the method are ultimately synergised to produce a set of activities to solve a particular problem.

8.4 STRENGTHS AND WEAKNESSES:

ISM is a structured approach to problem solving. It allows for broad-based consensus building in a manageable fashion. It results in a computer generated mathematical output that forms the model. It is possible to render the process unmanageable by not restricting the number of issues arising from criteria identified by stakeholders. The process may also involve subjectivity when determining borderline opinions from stakeholder input.

SSM is an interactive approach between the enquirer and the selected stakeholders. Herewith a number of models are produced from individual inputs and ultimately synergised, without

consensus, between the various stakeholders. The model solution is derived by subjectively selecting the desired actions towards solving the problem at hand.

8.5 OPPORTUNITIES AND DANGERS:

ISM is ideally suited to computer modelling that currently offers tremendous opportunity for far reaching application. There exists, unfortunately, a danger that the level of commitment of the selected stakeholders will not live up to expectations. Similarly, a danger exists that the quality of the effort can be adversely by the exclusion of less obvious stakeholders.

SSM offers the system practitioner an iterative developmental process to solve problems. This bodes well for the future in terms of the participative emphasis of current governmental policy in South Africa. The danger exists that the possibility of over-catering for solutions may be unattainable considering the resources available for implementation.

PART FOUR: REFLECTING ON THE RESEARCH

In Part Three a demonstration of how systems thinking was employed in the enquiry by the use of two systems methodologies was carried out. This final part reflects on the enquiry by drawing conclusions, making recommendations and ultimately, by means of a critique of my learning experience during the process.

CHAPTER NINE: CONCLUSIONS AND RECOMMENDATIONS

9.1 CONCLUSIONS:

This research has attempted to address the issue of managing the change in the context of the recently democratised South Africa. It has basically suggested that, as a point of departure, developmental issues should be approached holistically and systemically. It is important to select an appropriate methodology in seeking to solve the problem of managing this process of change.

This research suggests that systems thinking as opposed to traditional thinking is more suited to managing change in the context of new socio-political arena. Two possible methodologies that can be used to manage development in the new South Africa are demonstrated. The fundamental difference between the “old South Africa” and the “new South Africa” is found in the perspective of the accountability of government.

The former South African Government governed essentially from the top downwards, the latter governs from the bottom upwards. It is the management of the change in perspective that is essentially the underlying theme of this enquiry.

Both of the methodologies that are demonstrated utilise broad based input from diverse stakeholders/stakeholder groups. The management of this input is in its own right problematic as the larger the stakeholder participation, the better the input and the more complex the processing of the information becomes. The converse also applies in that the smaller the stakeholder participation, the lesser the input and the simpler the processing of information becomes.

In the **ISM** case study, a number of factors have contributed to the quality of the demonstration:

1. The availability of stakeholders has affected the critical timing of receiving inputs. This in turn has affected the overall programming of the exercise.
2. Stakeholder group participation varied from one member to up to five members in a group. Subsequently, the quality of individual inputs were affected.
3. It is possible that a larger diversity of stakeholder interest groups could have been employed which could have contributed to the quality of the research. For example, contractors (informal and formal), financiers (such as Government, Banking institutions, developers), sports bodies, residents, etc. may have been included. This could have been possible had the enquiry been of a more formal, contractual nature.
4. The consensus building stage was arrived at by a weighted-mean analysis that was developed during the process. It is suggested that an additional exercise could have been employed, to include the consultation with a group representing all stakeholder interests, in order to debate consensus where doubt existed regarding the relationship between specific criteria. It is also possible that a broader based stakeholder pool may have been able to resolve marginal issues.

In the **SSM** case study, the outcome has been influenced by a number of factors, such as:

1. The methodology requires that as many diverse views as possible be obtained. It is possible, that in this exercise, a larger number of diverse views may have been obtained. Although, the obvious stakeholder groups were identified, some less obvious stakeholders could have been represented, such as provincial and local government Councillors (politicians), the business community, health authorities, etc.
2. As each stakeholder developed their own view of the problem, through the SSM process, the diversities of views were synergised rather than combined by a process of consensus building into a broad-based view of the problem.

3. The process itself is iterative and thus this particular exercise is limited by virtue of following the methodology in sequential fashion. It is most likely that some steps or groups of steps could have been repeated in order to exploit the full potential and improve the outcome of the methodology.

9.2 RECOMMENDATIONS:

Although the use of systems thinking, and more specifically in this enquiry, the use of the ISM and SSM methodologies, have yielded a certain degree of success in their separate case studies, certain recommendations are proposed to assist in the successful application of these methodologies and systems thinking in general:

Interpretative Structural Modelling:

1. The hypothesis needs to be clearly and narrowly defined. This in turn defines the nature of the relationship query between issues in the model construction phase.
2. The stakeholders should represent as many wide and diverse perspectives as possible. The larger the variety of perspectives obtained, the better the quality of the outcome of the research.
3. There is no substitute for personal interaction. The questionnaire approach should be limited and de-emphasised. Personal interaction is necessary to minimise delays as the process requires numerous interactive steps. Personal interaction is also useful in promotion of consensus building.

4. The data collection phase should be flexible and should allow for sufficient time to enable adequate interaction with the chosen stakeholders through the different phases of the research.
5. Consensus should be obtained by interaction with a collective group of all stakeholder members. The weighted-mean analysis employed in this case study is flawed as marginal selections tend to be subjective rather than objective. Alternatively, the weighted-mean analysis could be improvised to minimise subjectivity.

Soft Systems Methodology:

1. Similarly to the ISM Methodology, the wider and more diverse the stakeholder participant group is, the better the input will be which will influence the final outcome. This is extremely important as the methodology entails synthesis of expectations rather than consensus of expectations.
2. Stakeholders should be chosen from the candidates that are most likely to influence the process.
3. The methodology should be approached as an iterative process. Assumptions initially made, may require adjustment through the process. Various steps in the process may require repetition which in a sense would “fine-tune” the quality of the outcome of the research.

Systems Thinking in General:

1. It is recommended that systems thinking should serve as a basis for managing the change and the complexity of development in the newly democratised South Africa. It is suggested that in future other methodologies, or possibly even combinations of

methodologies, should be used to address the process of change in the new South Africa.

2. It is further recommended that systems thinking be employed to facilitate problem solving in areas where divergent and convergent views exist. Sufficient methodologies exist, of which two were demonstrated in this work, to cater for dealing with problems that are simple or complex in nature and/or which are unitary, pluralist or coercive in character.

CHAPTER TEN: CRITIQUE OF MY LEARNING EXPERIENCE

If I have to recall my thoughts of what shape this project was to take at the outset some many, many months ago, I could never have conceived the final shape of its outcome. The project has expanded dramatically in scope and yet has narrowed down in focus.

I was warned by my mentor, Associate Professor Tom Ryan, that a broad approach to a project of this magnitude was necessary. My original hypothesis had placed the enquiry into a very definite pigeon-hole. It was as though the project's outcome was known and that I had to "discover" the method to produce it!

It is appropriate to concede that I, as an engineer of some 20 years' experience, was seemingly set in my "hard world view". Systems thinking seemed to me to be an abstract diversion from reality. It was the appeal of "doing things differently" that captured my interest and ultimately my attention. Perhaps it was the idea of balancing my approach to thinking that really appealed to me.

Engineers by virtue of their "hard world" approach to problem solving often scoff at the idea of a lateral, soft approach to problem solving. For me, this lateral shift of emphasis has been an enriching experience. It has in fact opened doors to my thinking that were hitherto closed.

As a first effort, I am too much of a novice to comment on the success of the project and am continually reminded by the words of Professor Ryan, "*...the thesis is more about process than product...*"

The process, as it turned out, has succeeded in converting my thinking. The concepts of synergy and holism became meaningful to me and hence it is now difficult for me to approach a problem situation without viewing it from a system thinker's perspective. This is not to say that traditional (mechanistic) thinking is taboo! There exists obviously a place for both forms of thinking and much scope for combining the two.

Broad based participation, stakeholders, world view, conceptual modelling, structural modelling, "rich picture", critical relationships, open and closed systems, feedback loops, environments and all the other systems jargon have expanded my view and opened a new dimension in my approach to problem resolution. In fact, I find myself using these terms with some confidence, although I am acutely aware of my lack of experience.

It is a pity that this project has had to take second place to my commitments as an area manager of a national Consulting Engineering practice. Naturally, to do justice to any problem resolution, commitment of one's resources is of paramount importance. However, I believe this project has established the principles that I will be able to employ to greater advantage than in the past, and as such I believe I have benefited tremendously.

Finally, it is true to say that I have been privileged and enriched to have experienced part of this area of thinking and am excited by the possibility of practising systems thinking in the future.

**APPENDIX I:
RECONSTRUCTION AND DEVELOPMENT
PROGRAMME: COMMON ISSUES**

RECONSTRUCTION AND DEVELOPMENT PROGRAMME : COMMON ISSUES

No	Common Issue	Chapter : No of occurrences							Total Occurrences
		1	2	3	4	5	6	7	
1	Framework document	1							1
2	Compiled in broad consultation	1							1
3	Racially distorted income	1			2	1			4
4	Economy from enforced racial divisions	1			2				3
5	Harnessing resources	1							1
6	Attacking poverty and discrimination	1	1		1				3
7	Principle 1 : Integrated sustainable programme	1							1
8	Principle 2 : People driven process	1							1
9	Principle 3 : Peace and security for all	1	1					1	3
10	Principle 4 : Nation building	1		1			1		3
11	Principle 5 : Reconst. linked to development	1			1				2
12	Principle 6 : Democratising South Africa	1				1			2
13	Key Prog. 1 : Meeting Basic Needs	1	1						2
14	Key Prog. 2 : Developing Human Resources	1		1	3				5
15	Key Prog. 3 : Building the Economy	1			1				2
16	Key Prog. 4 : Democratising State and Society	1				1			2
17	Key Prog. 5 : Implementing the RDP	1					1		2
18	Education and Training For All	1		1					2
19	Equal Role For Women	1	3	2	2	2			10
20	Adequate Sports Facilities	1							1
21	Special Attention for Youth	1	1	1					3
22	Restructuring Industries	1							1
23	Racial Inequality : ownershp, employmt & skills	1							1
24	Workers Rights	1							1
25	Development of Domestic Manufacturing Sector	1			4				5
26	How to pay for the RDP	1							1
27	Better Organisation of Existing Facilities	1							1
28	Improve Capacity of Financial Sector	1							1
29	Self-financing of telecom and electricity	1							1
30	Reallocation of Existing Funds	1							1
31	Improved and Reformed Tax System	1							1
32	Poverty - greatest burden in S A		2						2
33	S A can afford all its citizens		1						1
34	Redistribution of Wealth		2						2
35	RDP : Facilitating and enabling		1		1				2
36	Improve quality of life especially for the poor		2						2
37	Creating opportunities for all citizens		1		1				2
38	Job creation		5		2				7
39	Access to basic physical and social services		1						1
40	Social security for the poor, disabled and elderly		3						3
41	Affirmative action	1	3		3	2			9
42	Population growth policy		2						2
43	Public works programme		1	1					2
44	Apartheid ills and damages		4	2	1	2	1	1	11
45	Land reform programme		2		3				5
46	Rural infrastructure and development		1		2				3
47	Housing backlog eradication		1						1
48	Development of Black business		1		3				4
SUB - TOTALS ofwd		32	40	9	32	9	3	2	127

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RECONSTRUCTION AND DEVELOPMENT PROGRAMME : COMMON ISSUES

No	Common Issue	Chapter : No of occurrences							Total Occurrences
		1	2	3	4	5	6	7	
	<i>SUB - TOTALS b/fwd</i>	32	40	9	32	9	3	2	127
49	Housing standards		1						1
50	Housing subsidies		2						2
51	Hostel upgrading to be funded by Government		1						1
52	Capacity building		2	1	2	1			6
53	Water security for all		1						1
54	Water tariff restructuring		1						1
55	Electrification for all		2		1				3
56	Energy efficiency and conservation		1						1
57	Energy Policy Council		1						1
58	Cross-subsidy of electricity by other consumers		1						1
59	Telecommunications		1		1				2
60	Development of Public Pass. Transport System		1		1				2
61	Environmental Legislation		3						3
62	Waste Management Controls		1						1
63	Nutrition		1		1				2
64	Improved Health Care		1						1
65	Births,Care and Maternity/Paternity Leave		1						1
66	Reduced substance abuse		1						1
67	Improved Mental Health		1						1
68	Combatting and non-discrimination of AIDS		1						1
69	Occupational Health rights		1						1
70	Human Resource Development			1					1
71	Education and Training Legislation			1					1
72	Early Childhood Educare			1					1
73	Adult Basic Training and Education			1					1
74	Physical and other disabled people		1	1					2
75	Black Education Curriculum Development			1					1
76	Higher Education			1					1
77	Teachers & trainers committed to RDP			1					1
78	Arts and Culture			1					1
79	Affirming and promoting diverse cultures			2					2
80	Developing of all languages of South Africa			2					2
81	Sport and Recreation Facilities to all			2					2
82	Youth Development Programmes			1					1
83	Integrate into World Economy				1				1
84	Alleviate inequalities of Income and Wealth				1				1
85	Breakdown Apartheid Geography				2				2
86	Geographic Distribution of Economic Activity				1				1
87	S A to emerge as a significant exporter				1				1
88	RDP to strengthen mineral-based industries				1				1
89	Restructure relationships with African Countries				2				2
90	Review functions of Government Departments				1				1
91	Review Privatisation				1				1
92	Abolish anti-competative practises				1				1
93	Black Economic Empowerment				3	2			5
94	Climate for Foreign Investment				1				1
95	Black business : lack of credit, market & skills				1				1
96	Fin. institut. to loan assets to Black business				1				1
	<i>SUB - TOTALS e/fwd</i>	32	67	26	56	12	3	2	198

RECONSTRUCTION AND DEVELOPMENT PROGRAMME : COMMON ISSUES

No	Common Issue	Chapter : No of occurrences							Total Occurrences
		1	2	3	4	5	6	7	
	<i>SUB - TOTALS b/fwd</i>	32	67	26	56	12	3	2	198
97	Increase number of Local Service Centres				1				1
98	Encourage girls and women : Technical Skills				1				1
99	Appropriate Technology				1				1
100	Return of Private Mineral Rights to Government				1				1
101	Process raw materials into products				1				1
102	Drought management				1				1
103	Mobilise Domestic savings to fund RDP				1				1
104	Force Banks to lend to Black Business				1				1
105	Encourage Community Banking				1				1
106	Combat Illegal Capital Flight				1				1
107	Workers entitled to a Living Wage				1				1
108	Industrial Bargaining Forums				1				1
109	Workplace empowerment				1				1
110	Reform of Labour, Company and Tax Law				1				1
111	Stakeholder Participation in RDP				1				1
112	Prohibition of sexual harassment				1				1
113	Balance trade with neighbours				1				1
114	Democratising Power					1			1
115	Collective Power					1			1
116	Industrial Court to be more Accessible					1			1
117	Legal Aid Fund for Women					1			1
118	Prisoners Human Rights					1			1
119	Rights of pregnant women and children in prison					1			1
120	Public Sector to show nat. distr. race & gender					1			1
121	Train Public sector in line with RDP					1			1
122	Reorganisation of Local Government					1			1
123	Informal settlements to be incorp. into LA's					1			1
124	Black service arrears to be written off					1			1
125	One Municipality, One Tax Base					1			1
126	Open and transparent Government and LA's					2			2
127	Mass organisations to be involved in policy making					1			1
128	Rights of Individual to be Protected						1		1
129	Decision-making to be accountable						1		1
130	RDP to be updated by Government annually						1		1
131	Tax structures to be reviewed						1		1
	TOTALS	32	67	26	73	27	7	2	234

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APPENDIX II:
LETTER OF INVITATION SENT TO
PARTICIPANTS



School of Engineering Management

Room 522 Menzies Building, University of Cape Town
Postal Address: Private Bag, Rondebosch 7700, Republic of South Africa
Telegraphic Address: "Alumni Cape Town" Telex No. 5-21439
Telefax: (021) 650-3782
Telephone (021) 650-2600
(021) 650-3479

Fax :

Dear Sir

PARTICIPATION IN A RESEARCH STUDY TOWARDS A POLICY FRAME WORK FOR THE IMPLEMENTATION OF THE RECONSTRUCTION AND DEVELOPMENT PROGRAMME FOR THE OLYMPIC GAMES IN CAPE TOWN IN THE YEAR 2004

I refer to my recent telephonic conversation and wish to thank you for agreeing to participate in my research study by way of sharing your views in the implications of hosting the Olympic Games in Cape Town in the year 2004.

For your information I am reading the degree of Master of Science in Engineering and am required as, part of the thesis requirement, to conduct research to elicit views on the implication of hosting the Games in accordance with the Reconstruction and Development Programme. It is hoped that this effort will produce a frame work of principles that will inform the planning process.

Your involvement should be in three brief phases as summarised as follows :

1. The response of your views outlining a possible high road and a low road scenario for the Games. This is dealt with in this correspondence.
2. Following the response to the above from all the "subjects", the responses will be synthesised. These synthesised scenarios will be submitted to yourself as part of the second phase. You will in turn be requested to identify certain issues based on the synthesis.
3. The response thereto shall form the basis of the final phase in the form of a questionnaire.

The above actions should assist me to produce the aforementioned frame work.

I should be grateful if you could let me have your response to the first phase as described on the attachment by way of facsimile (or if preferred I could collect) by 27 October 1994. Please wear your "..... Hat" in this exercise.

Yours faithfully

Ian Weston Pr Eng
Prof Tom Ryan

Phone no : 531-3086
Fax no : 531-5863

BRIEF TO PARTICIPANTS

You are one of eight participants in this project. Your input is of high regard and I trust you will enjoy being part of this exercise.

In this phase, which is to be regarded as a brief initial input from yourself, I would like to assume that the Olympic Games will take place in the year 2004.

Wearing your particular "hat" try to sketch two possible scenarios for the Games - namely a "high road" scenario where the Games are a remarkable success, and a "low road" scenario where the Games are a failure insofar as your particular interest is concerned.

To assist you, I suggest the following steps to assist you with developing the scenarios.

1. Start by looking for the forces that influence or drive the outcome of the events. A scenario requires driving forces (motives). These driving forces may fall within the following categories :
 - a) Society - e g population growth
 - b) Technology - e g continuous improvements of electronic media
 - c) Economics - e g infrastructural costs, tourism
 - d) Politics - e g local or provincial policies/laws
 - e) Environment - e g ecological impact
2. Identify predetermined elements such as population growth (slow changing), constraints. This is the category of elements which are likely to unchange in the scenario of inevitabilities.
3. Identify critical uncertainties. These are elements where uncertainty exists regarding their behaviour in the process. Their behaviour is influenced by decisions/policies which affect them.

The above "building blocks" should assist you to formulate your high road and low road scenarios. As this is a "think-tank" exercise let your imagination unfold.

If possible, keep your scenario brief (say approximately 200 words each).

In the next phase I shall let you have the synthesised scenarios and take the process further.

I look forward to receiving your reply by 27 October 1994 by Fax or I can arrange to collect.

The attached letter was sent to :

1. Mr G Underwood
The Planning Partnership
Cartwrights Corner House
Adderley Street
CAPE TOWN
8001
"Urban Planning Hat"
Fax : 454136
2. Mr U Riviera
Ove Arup Inc
72 Loop Street
CAPE TOWN
8001
"Marketing Hat"
Fax : 248214
3. Mr B Atkins
Town Planning Department
City Planners Office
P O Box 1694
CAPE TOWN
8000
"Tourism Hat"
Fax : 254448
4. Mr R Strybis
Van Niekerk, Kleyn & Edwards
Hycastle House
58 Loop Street
CAPE TOWN
8001
"Professional Hat"
Fax : 245899
5. Mr M Dendale
Town Planning Department
City Planners Office
Civic Centre
CAPE TOWN
8001
"Olympic Team Hat"
Fax : 216209
6. Mr N Khan
Bham, Tayob & Khan
2 Orphan Lane
CAPE TOWN
8001
"Economic Empowerment Hat"
Fax : 239727

**APPENDIX III:
INITIAL RESPONSES RECEIVED FROM
PARTICIPANTS**

OLYMPIC GAMES

RESEARCH STUDY : PHASE ONE

Contribution by G. Underwood

HIGH ROAD

Prior to the games, all the necessary infrastructure was put in place. The transport systems were radically improved and despite some congestion, they operated well. A sustained building programme for accommodation was supplemented by passenger liners berthed at the harbour and Capetonians taking visitors into their homes. The stadiums, including the satellite stadiums in the less advantageous areas of the city, were able to accommodate the crowds. The people of Cape Town, and indeed of South Africa, came out in force to welcome the Olympic visitors. There were only a few isolated incidents of pickpocketing, but no violence throughout the games. Security was evident, but not obtrusive, and as it turned out, the security forces were not needed. New records were broken by South African athletes and the nation felt proud and united by the fact that it had matched the best athletes in the world and had organised a successful Olympic event.

But the crowning glory was the economic consequence of the Games. The flood of tourists and the sale of advertising and broadcasting rights had adequately covered the cost of organising the Games and of the infrastructure needed. Most of this infrastructure was converted to use by the citizens of Cape Town, many from disadvantaged communities. Of particular benefit was the improvement to the tourist infrastructure of the city which placed it in a good position to cater for the crowds of tourists who continue to visit this area. This tourist boom transformed employment within the region from an unacceptably low level to one of nearly full employment. With increasing awareness of the tourist importance of Cape Town's natural environment, a large amount of resources had been channelled towards the management of the mountain and coastal environments around the city. As tourists continued to visit the city after the Games, these resources continue to be applied and sustain management of these important environmental systems.

LOW ROAD

Cape Town was awarded the Olympic Games as an international political statement, despite the fact that the city was patently unprepared. Much of the necessary infrastructure was hastily erected at the last minute and the quality of construction was not good. Extreme traffic congestion and poor accommodation facilities for athletes and visitors caused many complaints. Due to inexperience and unpreparedness, the administration of the Games was poor. Athletes were stuck in traffic as they tried to reach satellite events and some events were delayed by several days, causing chaos to the programme. A major problem arose from the violence surrounding the games. Many poor people had become disillusioned since the 1993 elections because their basic needs remained unfulfilled. They regarded the Games as an unjustified extravagance. Clouds of black smoke hung over the city as burning tyres reminded visitors of the unresolved conflicts in this country. Protests occurred outside the main stadiums and the police were called in to disperse rioters with dogs and rubber bullets. During the period of the Games, twenty international visitors died as a direct result of these protests. In order to protect visitors, security forces were on duty and highly visible throughout the games.

Visitors complained that accommodation and services were inadequate and too expensive. Cape Town developed a reputation as the "rip-off city" of the country.

It is conservatively estimated that the city will take 15 years to repay the debts and recover the losses incurred during the Games. Revenue was less than expected because of the violence and fewer visitors, while major sponsors and broadcasting contracts were not forthcoming, due partly to the violence and partly to administrative blunders.

Unfortunately, the pressure to complete infrastructure for the Games resulted in compromises to environmental issues. Buildings were erected in inappropriate locations, and there was inadequate management of visitors to the mountain and coastline. As a result, severe environmental degradation occurred which will take many years to rectify.

Scenarios for Weston's Thesis

High Road

- United city and population.
- Jobs for many.
- Public transport that works.
- Cosmopolitan city.
- City that can afford to serve its people with what they need.
- Airport.
- Technology.
- Headquarters of major co.
- Tourism marketing.
- Effective political system where people are properly represented.
- Volunteer force highly motivated.
- Funds available to maintain environment.
- Equal distribution of facilities.
- Densification of city/reduction of urban sprawl.
- Improved communication systems in metro area - people and systems.
- Regular venue for international events - sporting / cultural / recreational / exhibitions / conventions.

Low Road

- City that is further divided into haves & have nots City riddled by debt.
- Increase in crime / social problems.
- White elephants which cost too much to maintain.
- Tourism has wrecked assets that region once possessed.
- Environmental degradation.
- Increased urbanisation into region.
- Unrealisable expectations.
- Increased urban sprawl & loss of valuable agricultural land.
- Corrupt politicians and public servants.
- Relocation of industry & commerce out of region.

(Upo Riviera)

Olympic Games in Cape Town 2004 - High Road Scenario *(Brendan Atkins)*

Specific interest : sustained economic development in the region, enhanced quality of life for all people, increased numbers of quality tourists / visitors to the City, ongoing development of new products for locals and visitors to the city

In my perspective the 2004 Olympics are not seen as an event but rather as a process which begins with governments ratification of Cape Town as South Africa's host city and which stretches beyond the two weeks in 2004.

It is based on excellent cooperation between all parties involved in this process and includes

- olympic organising committee
- local government, provincial government, central government
- local business, national business, international business
- regional tourism board
- transport agencies ie road, rail, airport, harbour
- all sporting codes
- all the people of Cape Town, others in South Africa, southern Africa, rest of Africa

Prior to the 2 weeks in 2004

Cape Town (as a generic brand name) begins to get its act together and unifies around this catalytic event.

The planning process for the games is all embracing and involves inputs from all of the groups listed above.

There is an effective plan in place to improve the quality of urban life in the City as well to accommodate the demand of "new immigrants" who wish to settle in the city. The plan is underpinned by the City successfully integrating itself from a social, physical and economic perspective.

There are tangible economic and social benefits to people at the lowest level

Self interest is put aside in the development of infrastructure and facilities in areas which are best suited to accommodate such and in line with the role that they will play in the future (ie post games)

The city benefits from investment both social and physical from present and new organisations (business) wishing to be part of the city. This investment is based on peoples long term confidence in the City and in South and southern Africa.

All investment is done within a framework of sustaining the natural, social and built environment in which it finds itself in.

Business generally "booms" with increased focus on the city in international media and with international investment into the city. Specifically the construction and service sectors experience rapid growth. Exports out of the region increase significantly as increased contact with the international world is established.

Partnerships is the key word in this process.

The tourism industry comes together for the first time to develop and market the region and its attractions holistically. Areas which were previously excluded from tourists "traditional" experience of the city are developed in a sustainable way.

Tourist numbers both from overseas, other parts of South and southern Africa experience strong growth (10 - 20 % per annum)

During the 2 weeks in 2004

The international positive media attention on Cape Town

The games prove to be a spectacular organisational success. Effective management by all sectors in the city ensure that the participants, spectators and local residents experience of the event is extremely positive.

Post 2004

The process continues to run

Cape Town is unified in its vision for its social, economic and physical infrastructure.

Strategies are already in place to translate the international attention which Cape Town received during the 2 weeks into additional economic benefits.

Tourism (overseas) continues to grow at 8 - 12 % per annum.

Cape Town proves to the international world that it has the capacity.

Olympic Games in Cape Town 2004 - Low Road Scenario *(Brendan Atkins)*

Specific interest : sustained economic development in the region, enhanced quality of life for all people, increased numbers of quality tourists / visitors to the City, ongoing development of new products for locals and visitors to the city

This low road scenario is almost the antithesis of the high road scenario above

In this perspective the 2004 Olympics are seen as an event which will occur for 2 weeks in 2004.

While there is cooperation between the parties listed in the high road scenario the process is characterised by self interest and selfishness. Implementation of the plan is often acrimonious and tends to place different individuals / groups and organisations at odds with one another and from time to time with different alliances.

Prior to the 2 weeks in 2004

Cape Town (as a generic brand name) appears to be getting its act together but never really unifies around this catalytic event.

The planning process for the games is far from all embracing and differing interest group at different times jostle for positions of prominence. Constituencies are used as bargaining tools to achieve position. Short term gain wins over long term best interest for Cape Town and its people.

There is no effective plan in place to improve the quality of urban life in the City as well to accommodate the demand of "new immigrants" who wish to settle in the city. Squatting becoming endemic as an increasing number of people are drawn to the city in the hope of deriving some benefit from the Games. Increasingly area's of the City become more polarised from one another. Poverty and crime increase significantly in specific areas of the city.

There are few tangible economic and social benefits to people at the lowest level with large corporations and local politicians dominating.

Self interest is the rule which sees the development of infrastructure in areas which are not appropriate to its long term use and sustainability.

Only certain areas of the city benefit from investment in physical infrastructure and much of it is tied specifically to infrastructure to host the games and with little reference to the greater needs of the city.

Large amounts of investment is done with an eye to short term gains and with reference to the natural, social and built environment in which it finds itself in.

Business generally "booms" with increased focus on the city in international media and with international investment into the city, however much of it is channelled through large corporations with little benefit to the man in the street. Exports out of the region increase significantly as increased contact with the international world is established. However, imports increase significantly leading to a net outflow of funds from the region.

There is an absence of cooperation between the tourism industry and the Olympic organising Committee and tourism continues to develop and market the region on the same lines as it has done previously. Areas which are presently excluded from tourists "traditional" experience of the city remain so.

Tourist numbers both from overseas, other parts of South and southern Africa experience strong growth (10 - 20 % per annum) however peoples experience of the city leaves much to be desired and there is very little repeat business which is generated

During the 2 weeks in 2004

There is international media attention on Cape Town

The games prove to be a spectacular organisational failure. Ineffective management by all sectors in the city ensure that the participants, spectators and local residents experience of the event is poor to good.

Post 2004

The process continues to run

Cape Town remains divided in its vision for its social, economic and physical infrastructure.

Differing groups / organisations lay the blame at others for the lack of success of the Games. No strategies are in place to translate the international attention which Cape Town received during the 2 weeks into additional economic benefits.

Tourism (overseas) continues to grow at 3 - 8 % per annum but again there is little repeat business generated from these visitors.

Cape Town proves to the international world that it lacks capacity.

THE OLYMPIC GAMES 2004
SUCCESS OR FAILURE FROM AN ENGINEERING VIEWPOINT

Cape Town's bid for the Olympic Games in 2004 is based on the premise that whatever is provided for the games will in any event be needed in the future to satisfy the needs of the growing population in the Cape Town Metropolitan Area. The games bid is seen as the catalyst to accelerate the process of providing badly needed transportation, housing and sporting facilities. The success or failure of the games will depend on how well we are able to provide the facilities necessary to ensure the successful holding of the games.

How should we measure the success of the games? I believe we should measure the success by what we have over after the last competitor and spectator has left. Was it a financial success? Are we now saddled with a huge debt for facilities which are now white elephants? Did the transportation system come up to expectations? Do we now have a better system than we would have had if the games had never been held in Cape Town? Did we create a system of transportation which is sustainable into the future without the support of the many thousands who used it during the two weeks of the olympics?

The stadiums which we built, are they now well used by the local population and can the cost of the stadiums be recovered over a 20 year period of time, for example, through the entrance fees and sponsorship or will they forever have to be subsidized and simply be accepted as public amenities which are not expected to pay for themselves, let alone make a profit?

The hotels which we built, are they still being filled by the tourists now attracted to Cape Town because of all the publicity which we received as a result of the olympics?

Are the apartments which we built to accommodate the athletes, officials and the media now being used as housing for the local population or are they standing empty because of reluctance on the part of the public to purchase them at possibly highly inflated prices?

How much and what type of job creation did the olympic games bring to Cape Town? Was it mainly skilled labour which was used or was there a high percentage of unskilled labour jobs created? Did the job creation accelerate the process of learning in improving the levels of skills now available to a large sector of the population?

Were the spectators, competitors and the media impressed by the way we handled the olympics, by the accommodation we

provided and the transportation system we put in place to move them around? If they were impressed, this will be reflected in the future as more tourists flock to Cape Town and use the facilities provided and therefore make the construction of these facilities an economic success. In other words the additional growth in tourism could mean an expansion of the facilities already provided for the games thereby stimulating further growth in the provision of transportation and other tourist facilities thereby creating more jobs.

Dear Ian,

As you will see from the above, I have written my comments in a question format and to some questions I have suggested answers. The answers to other questions would either be "yes" or "no" with the resulting consequences. I could re-work the report to separate the 'high scenario' from the 'low scenario' but maybe it's OK in its present format.

I tried to get hold of you at about 11:00 today (Saturday) but was unable to leave a message with your maid. When I asked her to take a message, she seemed to try and find something to write with, returned to the phone and then went silent although I could hear her breathing! Then she quietly put the phone down!

Please phone me anytime this weekend and we can talk about this.

Regards

Kon Strybis.

A6320.MD/de/1

HIGH ROAD SCENARIO - GAMES ARE A SUCCESS (*marc sundale*)

Although population growth would still be high, the successful implementation of city management and rural development policies in the region would have reduced the population pressure on the metropolis. This would enable the city's urban problems such as housing and transportation to be addressed. A successful local government restructuring process would have greatly assisted in the resolution of many of these critical issues.

A reasonably stable exchange rate and a modest rate of inflation would ensure that imported equipment required to host the Games would remain affordable.

A stable socio-economic environment as reflected by low levels of urban unrest, industrial action, demands for higher wages and discrimination, largely as a result of meaningful economic growth, would assist in boosting tourism and capital investment in the region. This would contribute to sustainable job creation and ultimately make significant inroads into the high levels of unemployment which have characterised Greater Cape Town for so long.

This generally positive economic climate would have enabled the government to satisfactorily implement the public transportation, plan described in the Olympic Plan, thereby ensuring a more efficient movement system throughout the metropolitan area.

Similarly the funding of capital infrastructure by both public and private sources would have proceeded successfully and project deadlines would have been met.

LOW ROAD SCENARIO: GAMES ARE A FAILURE

The current urbanisation trend would have continued and the city's attempts at managing the associated problems would have failed. The redistribution objectives of the new local government system would have only succeeded in impoverishing the established areas of the city without uplifting the disadvantaged communities.

The failure of the regional and national Reconstruction and Development Programme would have halted the inflow of foreign aid and this would have negatively impacted upon investor interest in South Africa. The balance of payments would be detrimentally affected and the exchange rate would shift against the local currency. Imported technology would be exorbitant and would negatively affect the appropriate provisioning of the Olympic facilities.

The region's economic woes would increase unemployment and would cause a divisive sentiment vis a vis the Olympics to emerge. Industrial action would cause many projects to be incomplete by 2004. The IOC would have to intervene financially and otherwise to ensure that the required Olympic standards be met both regarding the facilities as well as in the management of events. This would reflect negatively on South Africa and would create a climate of extreme distrust amongst foreign investors, organisers of large events and politicians in particular.

A6320.MD/de/1

2

The level of violence and crime would escalate and lead to the Games being marred by a host of unpleasant experiences by foreign visitors.

The inability of the Bid to deliver the facilities timeously would lead to so-called "nice to haves" such as environmental policies to be abandoned. This would also exacerbate the deteriorating environmental conditions of Cape Town such as the effluent problem in False Bay, the destruction of various wetlands, etc.

The economic problems facing the region would further have complicated the funding of capital infrastructure.

NAZIEM KHAN •

• HIGH ROAD SCENARIO:

- PUBLIC AWARENESS PROGRAMME — CREATE LOYALTY
DRAW COMMUNITY TOGETHER — PROCESS RATHER
THAN PRODUCT — PRODUCT = BONUS.
- POSSIBLE JOB CREATION — FRAGMENTED
TO ADDRESS UNEMPLOYMENT
TO STIMULATE THE ECONOMY
- EMPHASIS ON FRAGMENTATION: A PRINCIPLE
OF THE R.D.P. — OPPORTUNITIES FOR
PERSONS WHO HAVE HAD NO JOBS.
- DIRECT CONTRACTOR TO EMPOWER HIMSELF
- BENEFITS TO ALL — CONTRACTORS
— SUPPLIERS
— PROFESSIONS
— TOURISTS
— PROMOTERS
- SKILL SHARING: DISADVANTAGED ↔ ADVANTAGED
SYMBIOTIC RELATIONSHIP
- TWO PHASES: PREPARING FOR BID → 1997
THE GAMES → 2004
- AFTER AFFECTS: INFRASTRUCTURE TO BENEFIT
DISADVANTAGED: PRACTICAL & FUNCTIONAL

- TRANSPORTATION SYSTEMS TO CARRY WORKERS TO WORK AFTER GAMES
- CONTAINING URBAN SPRAWL BY INFILLING CURRENT OPEN AREAS IE. AROUND GAMES VENUES.
- FULL COMMUNITY PARTICIPATION IN PLANNING PROCESS.
- OLYMPIC COMMITTEE TO SET UP STRUCTURES WITH SANCO NAFCO
- INTERNATIONAL FOCUS NOW DUE TO POLITICAL CHANGES — INVESTMENT
- LOW ROAD SCENARIO:
 - COMMUNITY REJECTION DUE TO LACK OF CONSULTATION
 - FINANCIAL BURDEN — SPONSOR FAILURE
 - HIGH FOCUS INSTABILITY
 - LACK OF EXPERIENCE OF THIS SIZE PROJECT.

**APPENDIX IV:
SECOND LETTER SENT TO PARTICIPANTS**



School of Engineering Management

Room 522 Menzies Building, University of Cape Town
Postal Address: Private Bag, Rondebosch 7700, Republic of South Africa
Telegraphic Address: "Alumni Cape Town" Telex No. 5-21439
Telefax: (021) 650-3782
Telephone (021) 650-2600
(021) 650-3479

Fax :

Dear Sir

TOWARDS A POLICY FRAMEWORK FOR THE IMPLEMENTATION OF THE RECONSTRUCTION AND DEVELOPMENT PROGRAMME FOR THE OLYMPIC GAMES IN CAPE TOWN IN THE YEAR 2004

Thank you for your most valuable input ! I have correlated the salient issues raised and attach for your attention, a tabulated summary of the issues raised by the various correspondents regarding the "High Road" and "Low Road" scenarios. The correspondent's identities have been concealed in order to minimise bias in the exercise proposed hereunder.

You will see that in the case of the "High Road" scenario - 40 issues were raised and that in the "Low Road" scenario - 42 issues were raised.

The next step in this exercise is to look at the summaries and extract the ten most important issues from either table that, in your opinion, address the following question :

"What are the 10 most important issues contained in the summaries, listed in decreasing order of importance, that you consider most likely to be crucial to contributing to the success of the Olympic Games in terms of promoting the developmental needs of the disadvantaged ?"

I attach also, for your convenience, a summary of the Common Issues (in terms of frequency) occurring in the various chapters of the Reconstruction and Development Program of the ANC. Those marked with an * may be regarded as common issues.

Please note that the issues may be extracted from either the "High Road" or the "Low Road" summary and may be qualified to address the question.

The results of your consideration may be faxed and may take the following format, for example :

1	-	31 High
2	-	35 Low
3	-	16 High
4	-	etc
5	-	
6	-	
7	-	
8	-	
9	-	
10	-	

Note : descending order of importance. (i.e. most crucial at no. 1 least crucial at no. 10)

This is the penultimate exercise. The final exercise will be a short group session approximately 1 - 1½ hours in length hopefully to take place in early December 1994.

Please let me have your response by no later than 23 November 1994 per fax or otherwise.

Yours faithfully

Ian Weston Pr Eng
Prof Tom Ryan

Phone no : 531-3086 (w)
 531-3614 (h)
Fax no : 531-3863

The attached letter was sent to :

1. Mr G Underwood "Urban Planning Hat"
The Planning Partnership
Cartwrights Corner House
Adderley Street
CAPE TOWN
8001
Fax : 454136
2. Mr U Riviera "Marketing Hat"
Ove Arup Inc
72 Loop Street
CAPE TOWN
8001
Fax : 248214
3. Mr B Atkins "Tourism Hat"
Town Planning Department
City Planners Office
P O Box 1694
CAPE TOWN
8000
Fax : 254448
4. Mr R Strybis "Professional Hat"
Van Niekerk, Kleyn & Edwards
Hycastle House
58 Loop Street
CAPE TOWN
8001
Fax : 245899
5. Mr M Dendale "Olympic Team Hat"
Town Planning Department
City Planners Office
Civic Centre
CAPE TOWN
8001
Fax : 216209
6. Mr N Khan "Economic Empowerment Hat"
Bham, Tayob & Khan
2 Orphan Lane
CAPE TOWN
8001
Fax : 239727

**APPENDIX V:
SECOND RESPONSE RECEIVED FROM
PARTICIPANTS**

2/11 '94 14:44

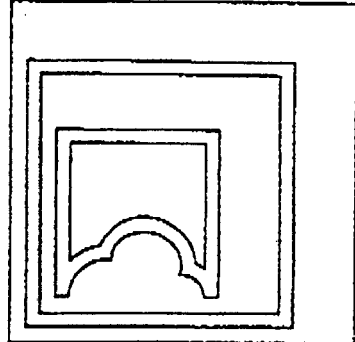
-->5315863

Pg. 01

THE PLANNING PARTNERSHIP DIE BEPLANNINGSVENNOOTSAP

STADS- en STREEKBEPLANNING · PROJEKBEPLANNING · LANDSKAPARGITEKTUUR · OMGEWINGSBEPLANNING · STADSONTWERP
TOWN and REGIONAL PLANNING · PROJECT PLANNING · LANDSCAPE ARCHITECTURE · ENVIRONMENTAL PLANNING · URBAN DESIGN

FAKSIMILEE VERSENDING FACSIMILE TRANSMISSION



U Faks Nr./Your Fax No. 531 5863	Verw./Ref.	Bl./P. 1	Datum/Date 22/11/1994
Aan/To Pinelands Municipality		Aandag/Attention Mr. I.J. Weston	
Onderwerp/Subject Phase 2 as requested.			Van/From Geoff Underwood

Cartwright's Corner House
Adderley Straat/Street
Posbus/PO Box 4866
Kaapstad/Cape Town 8000
Tel. (021) 461-8355
Faks. (021) 45-4136

Boodskap/Message

Rank	Numbers from High Road Scenario.	
1	9	Economic success
2	29	Long term investment
3	13	Workforce fully employed
4	12	Growth in tourism
5	3	Sustained building programme
6	15	Accelerates development
7	1	Infrastructure in place
8	6	Little violence and crime
9	36	Public awareness and loyalty
10	11	Post Olympics use.

Geoff Underwood

Civic Centre
12 Hertzog Boulevard
P O Box 1694
Cape Town 8000
Telegr: Citiplan
Telex : 52 0966 CEECT SA
Fax : 27 21 25 4448

Burgersentrum
Hertzogboulevard 12
Posbus 1694
Kaapstad 8000
Telegr : Citiplan
Teleks : 52 0966 CEECT SA
Fax : 27 21 25 4448



DATE : 1994-11-25
ORGANISATION : PINELANDS MUNICIPALITY
FAX NO : 531-3863
ATTENTION : MR IAN WESTON
ORIGINATOR : BRENDAN ATKINS
TOWN PLANNING

CITY OF CAPE TOWN
CITY PLANNERS DEPARTMENT

RECEIVED

1994-11-25

STAD KAAPSTAD
DEPARTEMENT VAN DIE
STADSBEPLANNER

Total Pages Sent

1

Ian

Apologies for the 48 hour delay !!

The ten most important issues considered to be crucial to the success of the Olympic Games in terms of promoting the developmental needs of the disadvantaged.

- | | | |
|----|---------|---|
| 1 | 27 high | quality of life improved |
| 2 | 19 high | sustainable city |
| 3 | 17 high | united city and population |
| 4 | 29 high | long term investment and confidence |
| 5 | 16 high | job creation empowers disadvantaged |
| 6 | 02 high | transport system that works |
| 7 | 14 high | environmentally well managed |
| 8 | 32 high | local government effectively restructured |
| | 22 high | political system effective |
| 9 | 09 high | economic success |
| 10 | 26 high | games a process not an event |

Regards

BRENDAN ATKINS

HIGH ROAD SCENARIO : SUMMARY

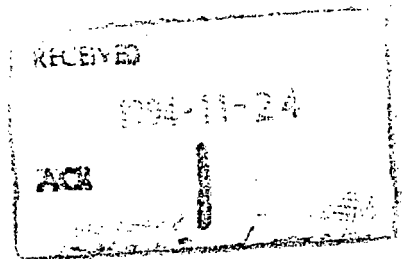
*Rou
gary bis*

No	ISSUE RAISED	A	B	C	D	E	F	CONSENSUS SCORES	RATING
1	Infrastructure in Place	1				1	1	3	9
2	Transport System that Works	1	1		1	1	1	5	2
3	Sustained Building Programme	1			1			2	
4	Accommodation well Facilitated	1			1			2	
5	Cape Town welcomes visitors	1		1				2	
6	Little Violence or Crime	1						1	
7	Security present, unobtrusive	1						1	
8	S A proud of athletes & Games	1		1				2	
9	Economic success	1	1	1	1	1	1	6	1
10	Costs covered	1				1		2	10
11	Post use - benefits disadvantaged	1			1		1	3	6
12	Tourism well catered & grows	1	1	1		1		4	3
13	Workforce fully employed	1				1		2	5
14	Environmentally well managed	1	1					2	
15	Accelerates Development				1	1	1	3	7
16	Job creation empowers disadv.		1		1	1	1	4	4
17	United City and Population		1	1			1	3	8
18	Cosmopolitan City		1	1				2	
19	Sustainable City		1			1		2	
20	Airport Highly Functional		1			1		2	
21	Major Companies attracted		1					1	
22	Political system effective		1					1	
23	Urban sprawl contained		1			1	1	3	
24	International Event City		1					1	
25	Communications improved		1					1	
26	Games - a process not event			1				1	
27	Quality of Life Improved			1				1	
28	Self Interest put aside			1				1	
29	Long Term investmt & confidnc			1				1	
30	Increase in Exports			1				1	
31	Tourism Industry United			1				1	
32	Local Govt successfully restructd					1		1	
33	Low Exchange Rate and Inflation					1		1	
34	Low levels of Urban Unrest					1		1	
35	Low level of Industrial Action					1		1	
36	Public Awareness & Loyalty						1	1	
37	Wealth distributed						1	1	
38	Benefit to Small Business						1	1	
39	Skill sharing - advnted & disadv						1	1	
40	Public Participation						1	1	
41								0	
42								0	
	INDIVIDUAL SCORES	14	14	12	7	15	13	75	

TO : IAN WESTON

FROM : MARC DELUDALE

DATE : 1994-11-23



DEAR IAN

HERE ARE MY 10 ISSUES IN
DESCENDING ORDER OF IMPORTANCE.

1. 37 L
2. 6 H
3. 17 H
4. 1 L
5. 30 L
6. 22 L
7. 11 H
8. 13 H
9. 19 L
10. 28 H

REGARDS



2/11/94 17:00

BHAM TAYOB - KHAN P01

RECEIVED

1994-11-23

ACK

**FAX Transmission****BHAM TAYOB KHAN**

From: NAZEEM KHAN BHAM TAYOB KHAN
 Questions? Call (021) 23-6160 P.O. BOX 6509, ROGGEBAAI, 02
 Fax (021) 23-9727 ORPHAN LANE
 CAPE TOWN, 8001
 To: MR. I. J. WESTON
 Company: PINELANDS MUNICIPALITY
 Address:
 Date: November 22 1994
 Time: 5: 00PM Pages: 3 (including this one)

RE : 10 IMPORTANT ISSUES

1. 9 High
2. 16 High
3. 27 Hig
4. 29 High
5. 37 High
6. 40 High
7. 36 High
8. 13 High
9. 26 High
10. 22 High

Yours faithfully

N KHAN**BHAM TAYOB KHAN**

**APPENDIX VI:
ISM PROFORMA QUESTIONNAIRE AND
RESPONSE RECORDING SHEET**

In a process of ensuring that the C T Olympics are consistent with the objectives of the R.D.P. would issue "A" directly impact issue "B":

1. Fully employed workforce
2. Economic success
3. Unifying city and population
 4. Long term investment
5. Empowering disadvantaged
6. Workable transport system
 7. Growth in tourism
 8. Post olympic use
9. Effective political system
10. Improving quality of life
11. Little violence and crime
12. Accelerated development
13. Good management of the environment
 14. Public awareness and loyalty
 15. Infrastructure in place in time
16. Games as a process - not an event
17. Declining foreign investment
 18. Redistribution of wealth
 19. Public participation
20. Domination of self interests

Issue No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
2																				
3																				
4																				
5																				
6																				
7																				
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10																				
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12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				

**APPENDIX VII:
GROUP INTERACTION RESPONSE
SHEETS**

In a process of ensuring that the C T Olympics are consistent with the objectives of the R.D.P. would issue "A" directly impact issue "B":

1. Fully employed workforce
2. Economic success
3. Unifying city and population
4. Long term investment
5. Empowering disadvantaged
6. Workable transport system
7. Growth in tourism
8. Post olympic use
9. Effective political system
10. Improving quality of life
11. Little violence and crime
12. Accelerated development
13. Good management of the environment
14. Public awareness and loyalty
15. Infrastructure in place in time
16. Games as a process - not an event
17. Declining foreign investment
18. Redistribution of wealth
19. Public participation
20. Domination of self interests

TEAM: UNDERWOOD:

Issue No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1		N	Y	N	Y	Y	N	Y	N	Y	Y	N	N	N	N	N	N	Y	N	N
2	Y		Y	Y	Y	N	Y	N	N	Y	N	N	Y	Y	N	N	Y	Y	N	Y
3	N	Y		N	N	N	N	N	Y	N	Y	N	N	N	N	N	Y	N	Y	Y
4	Y	N	Y		Y	N	Y	N	N	Y	N	N	N	N	N	Y	N	Y	N	N
5	Y	Y	Y	N		N	N	N	Y	Y	Y	N	N	Y	N	N	N	N	Y	Y
6	N	Y	N	Y	N		N	Y	N	Y	N	Y	N	Y	N	N	N	N	N	N
7	Y	Y	N	Y	N	N		N	N	N	N	N	N	N	N	Y	N	Y	N	N
8	N	N	Y	N	N	N	Y		N	Y	N	N	N	Y	N	Y	N	N	N	Y
9	N	Y	Y	Y	Y	N	N	N		Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y
10	N	N	N	N	Y	N	N	N	N		Y	N	N	N	N	N	N	N	N	N
11	N	Y	N	Y	Y	Y	Y	N	Y	Y		N	N	Y	N	N	N	N	Y	N
12	Y	N	N	N	N	Y	N	N	N	N	N		N	Y	Y	Y	N	N	N	N
13	N	Y	N	Y	N	N	Y	N	N	Y	N	N		N	N	N	N	N	N	N
14	N	N	Y	N	N	N	N	N	Y	N	Y	N	N		N	Y	N	N	Y	Y
15	N	Y	N	Y	N	Y	Y	N	N	Y	N	N	N	N		N	N	N	N	N
16	N	N	N	Y	N	N	N	Y	N	N	N	Y	Y	Y	Y		N	N	Y	Y
17	Y	N	N	N	Y	N	N	N	N	Y	N	Y	N	N	N	N		Y	N	N
18	N	N	Y	N	Y	N	N	N	N	Y	Y	N	N	Y	N	N	Y		N	N
19	N	N	Y	N	Y	N	N	Y	Y	Y	Y	N	N	Y	N	N	N	N		Y
20	N	N	Y	Y	Y	N	N	Y	Y	N	Y	N	N	Y	N	Y	N	Y	Y	

In a process of ensuring that the C T Olympics are consistent with the objectives of the R.D.P. would issue "A" directly impact issue "B":

1. Fully employed workforce
2. Economic success
3. Unifying city and population
4. Long term investment
5. Empowering disadvantaged
6. Workable transport system
7. Growth in tourism
8. Post olympic use
9. Effective political system
10. Improving quality of life
11. Little violence and crime
12. Accelerated development
13. Good management of the environment
14. Public awareness and loyalty
15. Infrastructure in place in time
16. Games as a process - not an event
17. Declining foreign investment
18. Redistribution of wealth
19. Public participation
20. Domination of self interests

TEAM: RIVERA

Issue No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1		N	Y	N	Y?	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N	Y	N
2	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	N
3	N	Y		Y	Y?	N	Y	N	Y	Y	Y	N	Y	Y	N	N	N	N	Y	N
4	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	N
5	Y	Y	Y	Y		Y	N	Y	Y	Y	Y	N	N	Y	N	N	N	N	Y	N
6	Y	Y	Y	Y	Y		Y	Y	N	Y	N	Y	N	Y	Y	Y	Y	N	N	N
7	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
8	Y	Y	N	Y	Y	Y	Y		N	Y	N	Y	N	Y	Y	Y	Y	N	N	N
9	Y	Y	Y	Y	Y	Y	Y	N		Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
10	Y	Y	Y	Y	Y	Y?	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	N	Y	N
11	N?	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	N	N	N	N	Y	Y	N	N
12	Y	Y	Y?	N	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	N	Y	N
13	N	Y	Y	Y	N	N	Y	N	Y	Y	N	Y		Y	Y	Y	Y	N	Y	Y
14	N	Y	Y	N	Y	N	N	N	N	N	N	Y	Y		Y	Y	Y?	N	Y	N
15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	N	Y	N
16	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y		Y	N	N	N
17	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		N	N	N
18	Y	Y	N	Y	N	N	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y		Y	Y
19	Y	N	Y	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	N	Y	Y		Y
20	N	Y	Y	N	N	N	N	N	N	N	N	Y	Y	Y	Y	N	Y	Y	Y	

In a process of ensuring that the C T Olympics are consistent with the objectives of the R.D.P. would issue "A" directly impact issue "B":

1. Fully employed workforce
2. Economic success
3. Unifying city and population
4. Long term investment
5. Empowering disadvantaged
6. Workable transport system
7. Growth in tourism
8. Post olympic use
9. Effective political system
10. Improving quality of life
11. Little violence and crime
12. Accelerated development
13. Good management of the environment
14. Public awareness and loyalty
15. Infrastructure in place in time
16. Games as a process - not an event
17. Declining foreign investment
18. Redistribution of wealth
19. Public participation
20. Domination of self interests

TEAM: ATKINS

Issue No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1		Y	Y	Y	Y	Y	Y	Y	N?	Y	Y	Y	Y	Y	Y	Y	Y?	Y	Y	N
2	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
6	Y	Y	Y	Y	Y		Y	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y?
7	Y	Y	Y	Y	Y	Y		Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
8	Y	Y	Y	Y	Y	Y	Y		N	Y	Y	Y	Y?	Y	Y	Y	Y	Y	Y	Y
9	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
10	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
11	N	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y
12	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
13	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y
14	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y
15	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y
16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y
17	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
18	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y
19	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y
20	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y?	Y	Y	Y	Y	Y	Y	Y	Y	Y	

In a process of ensuring that the C T Olympics are consistent with the objectives of the R.D.P. would issue "A" directly impact issue "B":

1. Fully employed workforce
2. Economic success
3. Unifying city and population
 4. Long term investment
5. Empowering disadvantaged
6. Workable transport system
 7. Growth in tourism
 8. Post olympic use
9. Effective political system
10. Improving quality of life
11. Little violence and crime
12. Accelerated development
13. Good management of the environment
 14. Public awareness and loyalty
 15. Infrastructure in place in time
16. Games as a process - not an event
17. Declining foreign investment
18. Redistribution of wealth
19. Public participation
20. Domination of self interests

TEAM: STRYBIS

Issue No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1		N	Y	Y	Y	Y	Y	N?	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N	N?
2	Y		Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N
3	N	N		Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y?	Y	Y	Y
4	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
5	Y	Y	Y	Y		Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
6	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
7	Y	Y	N	Y	Y	Y		Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
8	N	Y	Y	Y	Y	Y	Y		N	Y	Y	Y	N	Y?	N	Y	Y	Y	N	N
9	N	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
10	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y?	Y	Y	N	Y
11	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y
12	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y		Y	Y	Y	Y	Y	Y	N	Y
13	N	Y	N	Y	Y	N	Y	Y	N	Y	N	Y		Y	N	N	Y	N	N	Y
14	N	Y	N?	Y	Y	N?	Y	Y	Y	Y?	Y	Y	Y		Y	Y	Y	Y	Y	N
15	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y?	N		Y	Y	Y	N	N
16	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y		Y	N	Y	Y
17	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	N	Y
18	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y
19	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y
20	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	

**APPENDIX VIII:
SPREADSHEET MATRIX RECORD OF GROUP
RESPONSES**

INTERPRETATIVE STRUCTURAL MODEL : OLYMPIC GAMES STUDY

In a process of ensuring that the C T Olympics are consistent with the objectives of the R D P would

ISSUE 'A'

directly impact

ISSUE 'B'

ISSU	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1		-1	1	-1	1	1	-1	1	-1	1	1	-1	-1	-1	-1	-1	-1	1	-1	-1
2	1		1	1	1	-1	1	-1	-1	1	-1	-1	1	1	-1	-1	1	1	-1	1
3	-1	1		-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	-1	1	-1	1	1
4	1	-1	1		1	-1	1	-1	-1	1	-1	-1	-1	-1	-1	1	-1	1	-1	-1
5	1	1	1	-1		-1	-1	-1	1	1	1	-1	-1	1	-1	-1	-1	-1	1	1
6	-1	1	-1	1	-1		-1	1	-1	1	-1	1	-1	1	-1	-1	-1	-1	-1	-1
7	1	1	-1	1	-1	-1		-1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1
8	-1	-1	1	-1	-1	-1	1		-1	1	-1	-1	-1	1	-1	1	-1	-1	-1	1
9	-1	1	1	1	1	-1	-1	-1		1	1	1	1	1	1	-1	1	-1	1	1
10	-1	-1	-1	-1	1	-1	-1	-1	-1		1	-1	-1	-1	-1	-1	-1	-1	-1	-1
11	-1	1	-1	1	1	1	1	-1	1	1		-1	-1	1	-1	-1	-1	-1	1	-1
12	1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1		-1	1	1	1	-1	-1	-1	-1
13	-1	1	-1	1	-1	-1	1	-1	-1	1	-1	-1		-1	-1	-1	-1	-1	-1	-1
14	-1	-1	1	-1	-1	-1	-1	-1	1	-1	1	-1	-1		-1	1	-1	-1	1	1
15	-1	1	-1	1	-1	1	1	-1	-1	1	-1	-1	-1	-1		-1	-1	-1	-1	-1
16	-1	-1	-1	1	-1	-1	-1	1	-1	-1	-1	1	1	1	1		-1	-1	1	1
17	1	-1	-1	-1	1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1		1	-1	-1
18	-1	-1	1	-1	1	-1	-1	-1	-1	1	1	-1	-1	1	-1	-1	1		-1	-1
19	-1	-1	1	-1	1	-1	-1	1	1	1	1	-1	-1	1	-1	-1	-1	-1		1
20	-1	-1	1	1	1	-1	-1	1	1	-1	1	-1	-1	1	-1	1	-1	1	1	

INTERPRETATIVE STRUCTURAL MODEL : OLYMPIC GAMES STUDY

In a process of ensuring that the C T Olympics are consistent with the objectives of the R D P would

ISSUE 'A'

directly impact

ISSUE 'B'

ISSUE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1		-1	1	-1	0.5	-1	-1	1	1	1	1	-1	-1	-1	-1	-1	-1	-1	1	-1
2	1		1	1	1	1	1	1	1	1	1	1	1	1	1	-1	1	-1	1	-1
3	-1	1		1	0.5	-1	1	-1	1	1	1	-1	1	1	-1	-1	-1	-1	1	-1
4	1	1	1		1	1	1	1	1	1	1	1	1	-1	1	1	1	-1	-1	-1
5	1	1	1	1		1	-1	1	1	1	1	-1	-1	1	-1	-1	-1	-1	1	-1
6	1	1	1	1	1		1	1	-1	1	-1	1	-1	1	1	1	1	-1	-1	-1
7	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	-1	-1	1
8	1	1	-1	1	1	1	1		-1	1	-1	1	-1	1	1	1	1	-1	-1	-1
9	1	1	1	1	1	1	1	-1		1	1	1	1	-1	1	1	1	1	1	1
10	1	1	1	1	1	0.5	1	1	1		1	1	1	1	1	1	1	-1	1	-1
11	-0.5	1	1	1	1	1	1	1	1	1		1	-1	-1	-1	-1	1	1	-1	-1
12	1	1	0.5	-1	1	1	1	1	1	1	1		1	1	1	1	1	-1	1	-1
13	-1	1	1	1	-1	-1	1	-1	1	1	-1	1		1	1	1	1	-1	1	1
14	-1	1	1	-1	1	-1	-1	-1	-1	-1	-1	1	1		1	1	0.5	-1	1	-1
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	-1	1	-1
16	1	1	1	1	1	1	1	1	-1	1	1	1	1	1	1		1	-1	-1	-1
17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		-1	-1	-1
18	1	1	-1	1	-1	-1	1	-1	1	1	1	1	1	1	1	-1	1		1	1
19	1	-1	1	1	-1	1	-1	-1	1	-1	-1	1	1	1	1	-1	1	1		1
20	-1	1	1	-1	-1	-1	-1	-1	-1	-1	-1	1	1	-1	1	-1	1	1	1	

INTERPRETATIVE STRUCTURAL MODEL : OLYMPIC GAMES STUDY

In a process of ensuring that the C T Olympics are consistent with the objectives of the R D P would

ISSUE 'A'

directly impact

ISSUE 'B'

ISSUE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1		1	1	1	1	1	1	1	-0.5	1	1	1	1	1	1	1	0.5	1	1	-1
2	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	1	1	1	1	1		1	1	-1	1	1	1	1	-1	1	1	1	1	1	0.5
7	1	1	1	1	1	1		1	-1	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1		-1	1	1	1	0.5	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1
11	-1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1
17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1
18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1
19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1
20	1	1	1	1	1	1	1	1	1	1	0.5	1	1	1	1	1	1	1	1	

INTERPRETATIVE STRUCTURAL MODEL : OLYMPIC GAMES STUDY

In a process of ensuring that the C T Olympics are consistent with the objectives of the R D P would

ISSUE 'A'

directly impact

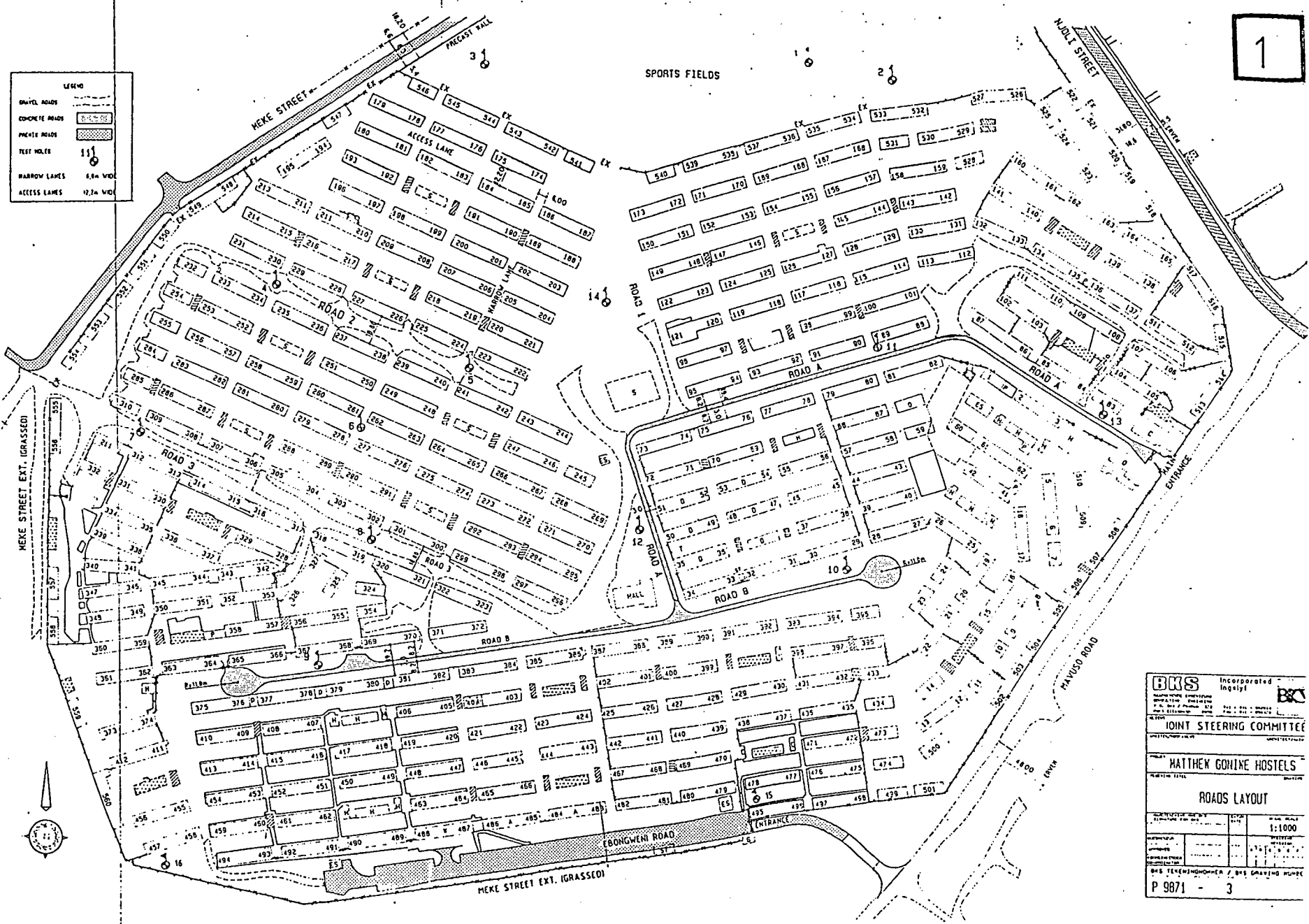
ISSUE 'B'

ISSU	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1		-1	1	1	1	1	1	-0.5	1	1	1	1	1	-1	1	-1	1	1	-1	-0.5
2	1		1	1	1	1	1	-1	1	1	1	1	1	-1	1	1	1	1	-1	-1
3	-1	-1		1	1	1	1	-1	1	1	1	1	-1	1	1	1	0.5	1	1	1
4	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	-1	1
5	1	1	1	1		1	1	-1	1	1	1	1	1	1	1	1	1	1	1	1
6	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	-1	-1
7	1	1	-1	1	1	1		1	-1	1	1	1	1	1	1	1	1	1	-1	-1
8	-1	1	1	1	1	1	1		-1	1	1	1	-1	0.5	-1	1	1	1	-1	-1
9	-1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1		1	1	1	1	1	0.5	1	1	-1	1
11	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	-1	1	1		1	1	1	1	1	1	-1	1
13	-1	1	-1	1	1	-1	1	1	-1	1	-1	1		1	-1	-1	1	-1	-1	1
14	-1	1	-0.5	1	1	-0.5	1	1	1	0.5	1	1	1		1	1	1	1	1	-1
15	1	1	1	1	1	1	1	1	-1	1	-1	1	0.5	-1		1	1	1	-1	-1
16	1	1	1	1	1	1	1	1	-1	1	1	1	-1	1	1		1	1	-1	1
17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	-1	1
18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1
19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1
20			1	1	1	1	1	1	1	1	1	1	1	-1	1	1	1	1	1	

APPENDIX IX:
LAYOUT OUT OF THE MATTHEW GONIWE
HOSTEL

LEGEND

- DIMED ROAD
- CONCRETE ROADS
- PAVED ROADS
- TEST HOLES
- NARROW LINES 6.8m WID
- ACCESS LINES 12.2m WID



BKS Incorporated
 Building & Construction
 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149, 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181, 183, 185, 187, 189, 191, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213, 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239, 241, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291, 293, 295, 297, 299, 301, 303, 305, 307, 309, 311, 313, 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337, 339, 341, 343, 345, 347, 349, 351, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 383, 385, 387, 389, 391, 393, 395, 397, 399, 401, 403, 405, 407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437, 439, 441, 443, 445, 447, 449, 451, 453, 455, 457, 459, 461, 463, 465, 467, 469, 471, 473, 475, 477, 479, 481, 483, 485, 487, 489, 491, 493, 495, 497, 499, 501, 503, 505, 507, 509, 511, 513, 515, 517, 519, 521, 523, 525, 527, 529, 531, 533, 535, 537, 539, 541, 543, 545, 547, 549, 551, 553, 555, 557, 559, 561, 563, 565, 567, 569, 571, 573, 575, 577, 579, 581, 583, 585, 587, 589, 591, 593, 595, 597, 599, 601, 603, 605, 607, 609, 611, 613, 615, 617, 619, 621, 623, 625, 627, 629, 631, 633, 635, 637, 639, 641, 643, 645, 647, 649, 651, 653, 655, 657, 659, 661, 663, 665, 667, 669, 671, 673, 675, 677, 679, 681, 683, 685, 687, 689, 691, 693, 695, 697, 699, 701, 703, 705, 707, 709, 711, 713, 715, 717, 719, 721, 723, 725, 727, 729, 731, 733, 735, 737, 739, 741, 743, 745, 747, 749, 751, 753, 755, 757, 759, 761, 763, 765, 767, 769, 771, 773, 775, 777, 779, 781, 783, 785, 787, 789, 791, 793, 795, 797, 799, 801, 803, 805, 807, 809, 811, 813, 815, 817, 819, 821, 823, 825, 827, 829, 831, 833, 835, 837, 839, 841, 843, 845, 847, 849, 851, 853, 855, 857, 859, 861, 863, 865, 867, 869, 871, 873, 875, 877, 879, 881, 883, 885, 887, 889, 891, 893, 895, 897, 899, 901, 903, 905, 907, 909, 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