

**THE DEVELOPMENT OF AN  
INSTRUMENT TO MEASURE  
INTRAPRENEURSHIP:  
ENTREPRENEURSHIP WITHIN THE  
CORPORATE SETTING**

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**Full thesis submitted in fulfilment of the requirements for the  
degree Master of Arts (MA) in Industrial Psychology**



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**January 2003**

## **ABSTRACT**

*“Intrapreneurship is not a choice,  
it is the only survival attitude”*

(Pinchot, 2000, p.75).

In 1985 Pinchot coined the term ‘intrapreneurship’, short for *intra*-corporate *entrepreneurship*, which describes the practice of entrepreneurship within organisations. Intrapreneurship is increasingly becoming a term used in the business world to describe organisations that are willing to pursue opportunities, initiate actions, and emphasise new, innovative products or services.

Due to the dynamic nature of modern organisations, it is imperative that organisations and their managers remain receptive to new ideas, approaches and attitudes. It is therefore the belief that rapid and cost-effective innovation is the primary source of lasting competitive advantage in the twenty-first century, leaving organisations no alternative but to become intrapreneurial or cease to exist. This thesis focuses on this need and examines ways in which intrapreneurship can be measured in organisations in order to provide a benchmark for further organisational development.

A questionnaire (known as the *Intrapreneurial Intensity Index*) was designed and distributed to a sample of 500 employees working in large South African organisations, which classified themselves as ‘forward-thinking’ and aimed for an intrapreneurial ‘type of thinking’. The results obtained from these questionnaires underwent item analysis,

after which the questionnaire was redesigned in an electronic format. A pilot case study was then conducted in order to test the reliability of the instrument. Finally the questionnaire was redistributed to a sample of six organisations that are viewed as being ‘intrapreneurial’ and two that are regarded as being ‘non-intrapreneurial’. The data from this sample was used to test the validity of the *Intrapreneurial Intensity Index* and to demonstrate its application.

This study resulted in an instrument that can be used to ascertain the intensity of intrapreneurship present in a large organisation. Specifically, this instrument can provide an overall view of the organisation’s intrapreneurial ability, as well as identify the specific areas in the organisation that require change or modification in order to become more intrapreneurial. This instrument provides a valuable means of identifying areas in need of organisational change, by determining an organisation’s intrapreneurial properties in the organisation’s core areas.

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## **ACKNOWLEDGEMENTS**

Firstly, I would like to thank the International Chair in Entrepreneurship (ICE) for providing me with the opportunity to complete my Masters Degree by awarding me a financial bursary and giving me a focus. A special thanks to Prof. Gideon Maas for the numerous opportunities that you have sent my way – it's been a great year of learning!

Secondly, I would like to thank my supervisor and mentor Alwyn Moerdyk, who has not only offered me much guidance and advice in my studies, but has also always had faith in me and supported me in all my endeavours within and outside of the department. In particular I would like to acknowledge his valuable suggestions with regard to the development of the intrapreneurial model and various approaches used in this research project.

Special thanks must also go out to all the representatives and participants from the various organisations involved in my research. Thank you for filling out my 'bible length' questionnaire! Without you, this research would have been impossible – thank you! In addition, I would like to thank the University of Cape Town's Graduate School of Business and the University of Limerick, Ireland for their assistance in finding information on intrapreneurship and providing me with valuable contacts. Thank you also to the Department of Information Systems, Rhodes University for assisting me with the web site design and implementation.

A special thanks also has to go to Stuart Levey who put up with my moments of irrational behaviour resulting from stress and supported me throughout! Stu, thank you my love for always wiping away my tears and being my pillar of support!

In addition, thank you to my family who have always supported me in everything I have done. Thank you for always listening and offering valuable advice even when you are facing your own crises! I love you all and want to say 'thanks for everything!'.

# CHAPTER 1

## INTRODUCTION

*“He that will not apply new remedies must expect new evils:  
for time is the greatest innovator”*

**Francis Bacon (1561 - 1626).**

There is a growing urgency for innovation in the current business world due to the rapid and continual changes caused by globalisation. The dynamic nature of modern organisations, particularly those competing in global markets, and the volatility of the South African setting make it imperative that organisations and their managers remain receptive to new ideas, approaches and attitudes. Bornman (1992, p.19) believes that this receptiveness will enable managers to:

*“anticipate the new developments likely to have an impact on their organisations, accommodate these developments into their strategic and operational plans and thus maintain a competitive edge”.*

According to Pinchot and Pellman (1999, p.11), innovation is necessary to “*differentiate one’s offerings, to find and fill unoccupied spaces in the market, and to keep up with the soaring productivity of competitors*”. Even de facto standards like the Windows® operating system would be replaced by something better if they were not supported by energetic innovation. Rapid and cost-effective innovation is the primary source of lasting competitive advantage in the twenty-first century, leaving organisations no alternative but to innovate well or cease to exist.

Robbins (1997, p.10) believes that today’s successful organisation must foster innovation or become “*candidates for extinction*”, and that victory will go to the organisations that

*“maintain their flexibility, continually improve their quality, and beat their competition to the marketplace with a constant stream of innovative products and services”.*

It is therefore not surprising that there is a widely held belief that entrepreneurship is not something that should be limited only to the smaller and medium-sized organisations, but should also be a vital element of larger organisations. Large organisations are learning that they too must remain creative and innovative or risk becoming obsolete. Various authors suggest that entrepreneurship cannot exist in a large corporate organisation because the corporate cultures of such organisations focus on the maintenance of the status quo rather than the search for opportunities (Van Aardt, Van Aardt & Bezuidenhout, 2000). Corporate bureaucracy is often depicted as the direct opposite of the entrepreneurial spirit and does not allow for adjustment or change in response to opportunities in the environment. Peters and Waterman (1987) suggest that the most discouraging aspect of big corporations is the loss of the drive to change and thrive on the opportunities that allowed them to become so large and successful in the first place. Fortunately, this attitude is changing meaning that the terms ‘corporation’ and ‘entrepreneur’ are not necessarily as contradictory as one might think. According to Ross (1987), the corporate entrepreneur who operates within the complexities of a large organisation, but who manages to find a way to encourage the entrepreneurial spirit and release the innovative potential of the workforce, has the best of both worlds.

Thus, in 1985, Pinchot coined the term ‘intrapreneurship’, short for *intra*-corporate *entrepreneurship*, which describes the practice of entrepreneurship within organisations (Bridge, O’Neil & Crombie, 1998). Since ‘intra’ means *within*, intrapreneurship refers to the planting of the spirit of intrapreneurship within an organisation. Intrapreneurship is increasingly becoming a term used in the business world to describe organisations that are willing to pursue opportunities, initiate actions, and emphasise new, innovative products or services. These organisations may include corporations, non-profit organisations, hospitals, schools and universities. The road to successful intrapreneurship is a hazardous and difficult one. However, the potential benefits in terms of a future

successful organisation are so desirable that it is worth both the inherent risk and the hard work involved (De Coning, 1992).

Instilling a spirit of intrapreneurship in an existing organisation involves changing the organisation's culture through the establishment of goals, the development of a feedback system and the implementation of results-orientated reward systems. Employees must be encouraged and supported in their efforts to develop and implement intrapreneurial projects. Therefore organisations need to find ways to measure and reward intrapreneurship - both in terms of its frequency and the rigour with which it is pursued. This can only be achieved if measures are developed to track an organisation's intrapreneurial performance variables. The successful introduction of intrapreneurship into an organisation requires a holistic systems approach. Such an approach should make provision for both the organisational and personal implications of intrapreneurship. In other words, top management, the organisation and employees should all be involved in fostering the intrapreneurial spirit (De Coning, 1992).

# CHAPTER 2

## LITERATURE REVIEW

### 2.1. The Concept of the Organisation:

According to Morgan (1997), the word organisation is derived from the Greek word *organon*, which means a tool or instrument. In the more recent centuries, organisations have become a prominent, if not dominant, characteristic of modern societies. Wickham (1998) points out that human beings build highly structured societies and join together to create organisations, which take on a variety of forms. Organisations were present in older civilisations - Chinese, Greek, and Indian - but only in modern industrialised societies do we find large numbers of organisations engaged in performing many highly diverse tasks (Scott, 1992). Even though organisations are now ubiquitous, their development has been sufficiently gradual and uncontroversial that they have emerged during the past few centuries almost unnoticed. Scott (1992, p.4), points out that “*the spread of public bureaucracies into every sector and the displacement of the family business by the corporation constitutes a revolution in social structure*”. This co-ordination allows people to specialise their activities and to collaborate in the production of a wide variety of products and services. Morgan (1997) suggests that organisations are rarely established as ends in themselves, but as instruments designed to achieve other ends. We can therefore think of the organisation as an entity on its own, and as a process or way of doing things (Wickham, 1998).

We cannot see an organisation directly, all we can actually observe is members taking actions, and we use the idea of the organisation to explain why those actions are co-ordinated and directed towards some common goal. According to Morgan (1986, p.343), organisations can be described by means of various different metaphors, and he further argues that these “*images or metaphors are not only interpretative constructs or ways of seeing; they also provide a framework for action*”. The metaphors most commonly

referred to include the organisation as a *machine*, the organisation as an *organism*, and the organisation as a *brain* or information-processing system.

### **2.1.1. The Organisation as a Machine:**

Organisations that are designed and operated as if they were machines are now usually referred to as bureaucracies, but most organisations are bureaucratised to some degree. This is due to the fact that this mechanistic mode of thought has shaped most of our basic conceptions of what an organisation is about (Morgan, 1997). A major contribution to this theory was made by Max Weber, who studied the relationship between the mechanisation of industry and the development of the bureaucratic type of organisation. In his work we find the first comprehensive definition of bureaucracy as a form of organisation that:

*“emphasises precision, speed, clarity, regularity, reliability and efficiency achieved through the creation of a fixed division of tasks, hierarchical supervision, and detailed rules and regulations”* (Morgan, 1997, p.17).

Other contributions were made by a group of management theorist who developed what is known as ‘classical management theory’, which focuses on the design of the total organisation, and Frederick Taylor’s ‘scientific management’, which focused on the design and management of individuals. They were strong believers in bureaucracy and devoted most of their energies to achieving this type of organisation. In more recent years, mechanistic organisations have been under increasing attack because of their rigidities and other dysfunctional consequences. The Total Quality Management (TQM) movement and emphasis on flexible, team-based organisations of the 1980s and 1990s signalled an early response to these problems and the need to find other non-mechanical ways of organising (Morgan, 1997). This lead to what Wheatley (1999) termed ‘the new scientific management’, which includes planning, motivational theory, organisational design and organisational change, all of which bear the recognisable influence of science.

### **2.1.2. The Organisation as an Organism:**

*“The body is a unit, though it is made up of many parts; and though all its parts are many, they form one body”* (1 Corinthians 12: vs. 12). This one of the best-known passages found in the New Testament of the Christian Bible. Although this passage is referring to ‘the body of Christ’, it is an excellent way of describing what Morgan (1997) refers to as organisations as organisms. His metaphor compares the organisation to a living organism which is constantly growing and changing, and which has a definite life cycle that will eventually come to an end. Organisational theory began its excursion into biology by developing the idea that employees are people with complex needs. These needs must be satisfied if they are to lead full and healthy lives and to perform effectively in the workplace. Like organisms in the natural world, it seems that successful organisations develop appropriate structures and processes for dealing with the challenges of their external environment. Organisations are therefore seen to exist within a particular environment and need to adapt to their surroundings accordingly.

*“Just as we find polar bears in Arctic regions, camels in deserts, and alligators in swamps, we notice that certain species of organisations are better adapted to specific environmental conditions than others”* (Morgan, 1997, p.33).

As organisational environments have become more complex and turbulent, more ‘species’ of organisations seem to have emerged. This has resulted in what Bennis (1993) referred to as the ‘death of bureaucracy’ and the creation of what Toffler (1985) termed ‘adhocracy’. This term was used to describe organisations that are temporary by design, and are highly suited for the performance of complex and uncertain tasks in turbulent environments (Morgan, 1997). Using analogies from the biological sciences, systems theorists believe that the modern organisation exists in a symbiotic relationship with the environment in which it operates, and that both the organisation and the environment continually change as they influence each other (Smither, 1988). For example,

organisational ecologists “*seek to explain how social, economic, and political conditions affect the relative abundance and diversity of organisations and attempt to account for their changing composition*” (Baum, 1996, in Kreitner & Kinicki, 2001, p.629). Organisational ecologists therefore study the organisational beginnings, failings, changes and relationships within the context of the environment. Inherent in this metaphor is Darwin’s theory of natural selection, which states that in the natural world, the fittest members of each species survive because those that are least suited are pushed aside or perish. Moore (1996, in Kreitner & Kinicki, 2001) believes that the key to organisational survival today is learning how to selectively co-operate with one’s competitors.

### **2.1.3. The Organisation as a Brain:**

In the 2400 years since Hippocrates located the seat of intellect in the skull, humans have been presented with the paradox that the greatest thoughts and achievements, and even their deepest emotions, may stem from a grey blob of matter. Morgan (1997), amongst others, uses the metaphor of the brain as a means of describing organisations as information processing and complex learning systems. Every aspect of organisational functioning depends on information processing of one form or another, therefore making organisations information systems similar to that of the brain. In this world, where rapid change and transformation are becoming the norm, organisations are rapidly evolving into global information systems that are becoming more and more like electronic brains (Morgan, 1997). This approach to understanding organisations was pioneered in the 1940s and 1950s by Herbert Simon, who was famous for arguing that, “*organisations can never be perfectly rational because their members have limited information processing abilities*” (Morgan, 1997, p.78). These theories lead to the understanding of organisations as kinds of institutionalised brains that fragment and routinize the decision-making process in order to make it manageable. The various jobs, departments and divisions also create a structure of attention, information, interpretation, and decision-making that has a crucial influence on an organisation’s daily operations (Morgan, 1997). In the 1940s, the biologist Von Bertalanffy proposed the idea of General Systems Theory, which was

further developed by Ashby (1956). Von Bertalanffy (1971 in Heylighen & Joslyn, 1992) emphasized that real systems are open to, and interact with, their environments. Rather than reducing an entity to the properties of its parts or elements, systems theory focuses on the arrangement of and relations between the parts, which connect them into a whole. Wheatley (1999) took these ideas further in what she referred to as ‘the new scientific management’, which sees organisations as systems rather than as isolated parts and players. “*We can now see the webs of interconnections that weave the world together . . . learning that profoundly different processes explain how living systems emerge and change*” (Wheatley, 1999, p.158).

As we shift into what Drucker (1984 in Morgan, 1997, p.116) describes as the ‘knowledge economy’, where “*human intelligence, creativity, and insights are the key resource*”, we can expect the ideas and principles involved in creating brain-like organisations to become more and more a reality. Today’s organisations not only have to plan and execute tasks in an efficient and rational way, but also have to face the challenge of constant learning and, perhaps even more importantly, of learning to learn (Morgan, 1997). In this regard, this metaphor provides a powerful way of thinking about the implications of new information technology and how it can be used to support the development of learning organisations.

#### **2.1.4. The Learning Organisation:**

*“With the decline of some well-established firms, the diminishing competitive power of many companies in a burgeoning world market, and the need for organisational renewal and transformation, interest in organisational learning has grown”* (Nevis, DiBella & Gould, 1995, p.73).

Learning is not about standardised routines repeated *ad infinitum*, but rather about the ability of human beings to rapidly exploit their knowledge in new ways and to continually improve whatever they do (Manning, 1992). Many organisations have

therefore become proficient in developing an ability to scan the environment, set objectives and monitor the general performance of the system in relation to these objectives. This is what Senge (1990, p.3) describes as the ‘*learning organisation*’, where people continually

*“expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together”.*

Senge (1990) refers to the five aspects or processes that are crucial for organisations to become learning organisations. These ‘five disciplines’ include *systems thinking, personal mastery, mental models, building shared vision* and *team learning*. Davidson (2002) adapted these definitions in her study on learning organisations, and creates an additional three ‘disciplines’. Davidson's (2002) ‘disciplines’ include the following: i. *high performance culture*, ii. *challenging assumptions*, iii. *shared vision and intuition*, iv. *team learning and communication*, v. *systems and non-linear thinking*, vi. *external and future scanning*, vii. *innovation and experimentation* and viii. *systematic evaluation*. These ‘disciplines’ describe the type of organisational culture that an intrapreneurial organisation strives for, therefore highlighting the similarities between the culture of a learning organisation and that of an intrapreneurial organisation.

According to Kreitner and Kinicki (2001), a learning organisation is one that proactively creates, acquires, and transfers knowledge and that changes its behaviour on the basis of new knowledge and insights. Davidson (2002) believes that these organisations have sharper ‘antennae’, meaning that they notice things more quickly, spot patterns and make insightful inferences. In addition they can learn quickly from their own and others’ successes and failures. Being able to continually generate new and better ways of doing things gives learning organisations a sustainable competitive advantage over the competition. According to Oden (1997, p.90), the most successful companies of the future will be learning organisations, which he describes as “*adaptive enterprises where*

*workers are free to think for themselves, to identify problems and opportunities, and to go after them*". Vermuelen (1999) shares this view, and believes that the ability and desire to learn and grow have to become the central concerns of any organisation that wishes to survive and prosper in changing and turbulent markets. Oden (1997) states that in a true learning organisation, people at every level of the organisation are hungry for new ideas every minute of the day. *Motorola Inc.*, the giant maker of electronics and communications equipment, has a strong reputation for product quality and is a good example of a learning organisation. While working hard to maintain its lead in quality, it also seeks to be creative, adaptive and responsive to change. It is increasingly becoming a widely held belief that people who are learning are more open to improvement, change and risk-taking. This means that employees must look at their world in new ways and be receptive to learning and change. It is interesting to note that one of the five personality characteristics identified by Costa and McCrae (1995 in Bergh & Theron, 1999) as being core to all people (the so-called 'Big Five' personality factors), is termed 'openness to experience', which together with 'conscientiousness' have been shown to be strong predictors of individual and organisational achievement. This is highly evident at *Minnesota Mining and Manufacturing (3M)*, where learning and the innovation and development of new ideas is encouraged and rewarded resulting in a more entrepreneurial approach. According to Lew Lehr, 3M's chairman in 1983, "*the entrepreneurial approach is not a sideline at 3M. It is the heart of our design for growth*" (McKnight, 1995).

## **2.2. The Changing World of Work:**

Basically the world of work is undergoing a revolution with change being the only constant. These are "*crazy hard times in which the world is turning upside-down*" (Peters, 1994, p.4). As we enter the twenty-first century, the world of work is currently undergoing dramatic changes, which are affecting the entire functioning of the workplace. This is mainly due to the fact that we are in the midst of a global restructuring of the world's markets. Companies are finding that to survive, they must compete in the

international market as well as fend off attempts by foreign corporations to gain ground at home (Noe, Hollenbeck, Gerhard & Wright, 2000). Organisations not only have to deal with the emergence of this global village, but also are also having to face various challenges resulting from rapid improvements and advancements in technology, as well as the structural changes of organisations. Organisations are becoming smaller and therefore employing fewer people, as well as shifting from vertically integrated hierarchies to networks of specialised people. Factors such as downsizing, outsourcing and the disappearance of the job as a fixed bundle of tasks are making the business world a very turbulent place.

As a result there is a need for organisations to change with the times in order to remain both competitive and successful (Cascio, 1995). As Cascio (1995, p. 930) points out, “*the autocratic top-down command-and-control approach is out of step with the competitive realities that many organisations face*”. This approach will no longer work. Focus needs to be placed on worker empowerment, on allowing employee’s more involvement in decision-making, and not placing the focus solely on managers instituting the rules with little regard for employees’ opinions. As a result corporate strategies are now starting to focus heavily on creating and fostering processes that encourage and sustain innovation. Only fluid, flexible, highly adaptive organisations will thrive in the fast-paced global economy (Hammer & Champy, 1993).

This new emphasis on entrepreneurial thinking first developed during what Drucker (1984 in Kuratko & Hodgetts, 1995, p.94) referred to as the “*Entrepreneurial Economy of the 1980s*”. Drucker (1984) described various developments that explain the emergence of this economy, including the rapid evolution of knowledge and technology as well as demographic trends such as dual-earning families, continuing education of adults and the ageing population (Kuratko & Hodgetts, 1995). Entrepreneurship is therefore on the rise in terms of status, publicity and economic development. This enhancement of entrepreneurship has made the choice more appealing to both young and seasoned employees. The downsizing of organisations has also resulted in the large-scale

displacement of employees from private and public sector organisations as well as reducing the rate of uptake of new job seekers. This has resulted in people becoming more independent and entrepreneurial in their behaviour. In recent years, venture capital has grown into a large industry capable of financing more ventures than ever before, thus providing much support for such entrepreneurship.

### **2.3. The South African Workplace:**

*“A new civilisation is emerging in our lives, and blind men everywhere are trying to suppress it . . . Millions are already attuning their lives to the rhythms of tomorrow. Others, terrified of the future, are engaging in a desperate, futile flight into the past and are trying to restore the dying world that gave them birth”*  
(Toffler, 1985, p.217).

This quote must be one of the most appropriate ways of describing the current South African workplace. This ‘new civilisation’ brings with it new ways of working and managing organisations. It is becoming more and more obvious that the traditional organisation is fast becoming a thing of the past. According to Carrell, Elbert, Hatfield, Grobler, Marx and van der Schyf (1998), efficiency and economies of scale, two dominant twentieth-century themes, have been replaced by new values, including teamwork over individualism, global markets over domestic ones, and customer-driven focus over short-run profits.

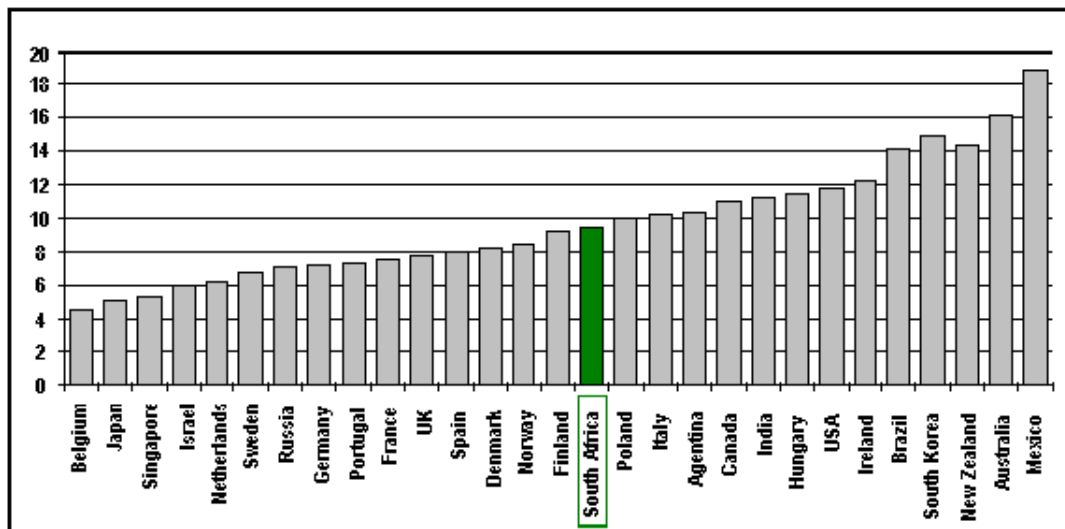
#### **2.3.1. Political and Demographic Changes:**

In addition to these market driven forces, South African organisations are required to undergo major transformation, as focus is being placed on implementing Affirmative Action, Employment Equity and managing diversity policies. White managers are being replaced by previously disadvantaged groups, which according the Employment Equity Act 55 of 1998 include blacks, women and people with disabilities. The racial and gender

compositions of organisations are therefore changing dramatically due to these policies. Increasing pressure is being placed on management to effectively harness this diversity and make it work for the organisation (Clark, 1992). This turbulent environment results in individuals having to be innovative and creative in order to remain competitive and valuable to organisations. This diversity provides a rich resource for new ideas and ways of doing things.

### 2.3.2. Commercial Pressures and Globalisation:

In South Africa during the Apartheid era, the imposition of economic sanctions led to high levels of entrepreneurial activity as a means of survival. Currently, in Post-Apartheid South Africa, there has been an increase in necessity-driven entrepreneurial activity due to high rates of unemployment, retrenchment and poverty. According to the 2001 Global Entrepreneurship Monitor (GEM), South Africa ranks fourteenth out of the twenty-nine participating countries on entrepreneurship, with an entrepreneurial activity rate of 9.4% (Graph 2.1).



Graph 2.1. International Comparison of Total Entrepreneurial Activity  
Global Entrepreneurship Monitor 2001

According to Kellas (1997), South Africa features forty-fifth out of forty-six industrialised nations in the World Competitiveness Report, and all of the major indicators that South African organisations have to achieve in order to survive and become globally competitive have shown a negative trend over the last few years, meaning that South Africa is slipping backwards.

### **2.3.3. Organisational Structures:**

As a result of the poor economic climate together with the attempts to be more competitive in the global market, the South African work environment is required to undergo drastic restructuring. Downsizing has meant the removal of traditional bureaucratic, hierarchical organisational structures in favour of flatter organisational structures with fewer managerial levels. There has been a move towards teamwork with greater emphasis being placed on interpersonal skills as criteria for promotion. Individuals who can effectively work in a team are highly valued, and focus is being placed on hiring people with problem-solving abilities, computer literacy, lateral thinking and people who are innovative, proactive and take calculated, entrepreneurial risks. Organisations are also becoming more flexible in functional, numerical and financial areas. Functional flexibility refers to the adaptability and mobility of employees to undertake a range of tasks. This is achieved via multi-skilling and job rotation. Numerical flexibility relates to varying the size and structure of the workforce in response to changes in the level and pattern of demand. This is achieved via short-term project-based hiring patterns. Financial flexibility refers to the organisation's remuneration systems whereby individuals are paid according to their profession, skills and supply and demand of the job market (Horwitz & Franklin, 1996), rather than seniority or length of service.

### **2.3.4. Technology:**

Advanced information systems are fast becoming integral to organisations and have led to organisations adopting new, decentralised forms. Employees are finding it essential to

learn new technical skills and the concept of life-long learning is becoming increasingly important. Brittan and Freeman (1980 in Morris, 2001) have shown that technological changes create opportunities for those well positioned to capitalise on them. According to Morris (2001), turbulence is a major trigger or catalyst for entrepreneurial activity. The renewed international competition, rising costs, and low labour productivity are all challenges that the South African workplace is currently facing. These conditions make South Africa an ideal environment in which entrepreneurship can prosper.

#### **2.4. Defining Entrepreneurship:**

A major concern with regards to the nature of entrepreneurship is the general lack of agreement amongst scholars and practitioners, resulting in a wide variety of definitions. Although the term 'entrepreneurship' has been used in a business context for well over two hundred years, there is still considerable disagreement regarding its meaning. The word *entrepreneur* is French and, literally translated, means "between-taker" or "go-between" (Hisrich & Peters, 2002, p.7). According to the Oxford Dictionary (1994) the term 'entrepreneur' can be defined as one who organises, manages and assumes the risks and reaps the benefits of a new business enterprise or commercial venture. Shefsky (1994) points out that by breaking down the word into its three Latin roots, 'entre' meaning to 'enter', 'pre' meaning 'before' and 'neur' meaning 'nerve centre', one can see that the term describes someone who enters a business (any business) in time to form or substantially change that business's nerve centre. Banfe (1991, p.2) believes that entrepreneurship involves "*rethinking conventional paradigms, and discarding traditional ways of doing things*".

Conceptualising entrepreneurship as a process that occurs in an organisational setting has significantly advanced the field, with considerable attention being devoted to describing the steps or stages involved, and identifying factors that both constrain and facilitate the process (Stevenson, Robers & Grousbeck, 1989 in Morris, 2001). According to Morris (2001), early definitions centred primarily around the assumption of risk, supply of

financial capital, arbitrage and co-ordination of the factors of production. During the early twentieth century, the focus shifted to innovation, or “*carrying out unique combinations of resources in order to create new products, services, processes, organisational structures, sources of supply, and markets*” (Schumpeter, 1934, in Morris, 2001, p.13). Tropman and Morningstar (1989) suggest that an extension of the Schumpeterian perspective is to identify entrepreneurship as a principle agent of change in society. Van Aardt, Van Aardt and Bezuidenhout (2000) reinforce this perspective by suggesting that the definition of entrepreneurship is changing to reflect a desire for continuity and long term commitment activities, rather than a single act or a limited number of acts to fulfil a need. Therefore entrepreneurship can be seen as a continuum, as it is a “*coherent, understandable and learnable process, sequence, or progression of transition points, critical events and stages*” (Smilor & Sexton, 1996, p.17). This implies that entrepreneurship is a quality, which can vary in degree or intensity, and can therefore be measured.

Increasingly it is becoming a widely held belief that entrepreneurship is not something that should be limited only to smaller and medium-sized organisations, but should also be a vital element of larger organisations. Large organisations are learning that they too must remain creative and innovative or risk becoming obsolete. *Sony Corporation*, a leading manufacturer of audio, video, and communication products, revealed that due to the rapid improvements in technology their new products become obsolete within two years, thus requiring continual innovation. Dyer (2001), of the *Wits Business School*, believes that entrepreneurial organisations are the only type of business that are likely to advance in the twenty-first century. Van Aardt, Van Aardt and Bezuidenhout (2000) take this further with the belief that during this period of rapid change, an organisation that does not focus on innovation will inevitably stagnate and decline. During the 1980s, a number of the benchmarking studies of corporate excellence suggested that the best-run companies tended to be more entrepreneurial than their competitors in the same or other industries.

It is for this reason that a new definition of entrepreneurship has emerged, which views entrepreneurship as:

*“an approach to general management that begins with opportunity recognition and culminates with the exploitation of the opportunity”* (Sexton & Bowman-Upton, 1991, p.12).

## **2.5. Creativity and Innovation:**

*“Creativity and innovation are fuelled by the intelligence of people who have the freedom and right to express their ideas”* (Pinchot & Pinchot, 1994, p.64).

The key elements of entrepreneurship are essentially creativity and innovation, which are often confused with each other. Some believe that that are synonymous, but in fact they are very different. Creativity is often a solitary, individual process and refers to the generation of novel ideas. These ideas may have very little value to anyone else except to the creator. In other words, creativity can be defined as *“a process of being sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies etc.”* (Van Aardt, Van Aardt & Bezuidenhout, 2000, p.18). Innovation refers to the process that follows the conception of a novel idea, and often involves several people who each offer different suggestions and contributions (Fuller, 1995). Rosenfeld and Servo (1990 in Fuller, 1995) define innovation as:

**Innovation = Conception + Invention + Exploitation.**

With the increased emphasis on creativity and innovation in the world of work, organisations face the challenge of nurturing new ideas and effectively transforming these creative new ideas into innovative products. According to Pinchot and Pellman (1999) innovation is necessary in order to keep up with the soaring productivity of competitors. However a significant dilemma that exists within any organisation is that of what to do with ideas and innovations that don't fit under the current corporate umbrella.

Fuller (1990) points out that profitable inventions are often discarded because the innovation appeared to be a misfit with the organisation's core competency. It is therefore essential that organisations don't allow for these valuable ideas to fall by the wayside, but rather turn them into profitable innovations. *Kodak* attempted to address this problem by implementing an 'Office of Innovation', which provided an environment for ideas to grow as well as providing assistance to the innovator to enhance and develop the idea. In order for an organisation to remain competitive in the current turbulent business environment, it is essential to develop and implement measures to not only develop new creative ideas, but also to turn those 'dreams' into reality. An organisation attempting to manage this generation and exploitation of ideas would potentially be open to the implementation and development of entrepreneurship within their corporate setting.

## **2.6. Intrapreneurship:**

### **2.6.1. The History of Intrapreneurship:**

In an article in *The Economist* in 1976, Macrae (1982) predicted a number of trends in business. One of them was that dynamic corporations of the future should simultaneously be trying alternative ways of doing things in competition with themselves. In a survey called '*The Coming Entrepreneurial Revolution*' he argued that:

*"the methods of operation in business are going to change radically in the next few decades, in a direction opposite to that which most businessmen and nearly all politicians expect"* (Macrae, 1982).

The survey aroused enthusiasm and infuriation in almost equal measures, resulting in invitations to lecture in more than twenty countries. In 1982, he revisited those same thoughts, noting that this trend had resulted in confederations of intrapreneurs (Kautz, 1999). Around the same time, Gifford and Elizabeth Pinchot were developing their

concept of the intra-corporate entrepreneur. In 1985, they coined the term '*intrapreneurship*', giving credit for their thinking to the 1976 article by Macrae.

Based on the success of some of their early trials they began a school for intrapreneurs near New York, known as *Mr. Bob Schwartz's Tarrytown School for Entrepreneurs* (Macrae, 1982), and in 1985 they published their first book, '*Intrapreneuring*'. This became the second school for intrapreneurs after the Foresight Group (a group of four intrapreneurial Swedes operating from their homes) started the first school in 1980. By 1986, John Naisbett was citing intrapreneurship as the way for established businesses to find new markets and new products in his book, '*Re-inventing the Corporation*', whilst at about the same time, the developments of the Macintosh computer were being described as intrapreneurial.

### **2.6.2. Defining Intrapreneurship:**

By 1992, the term '**intrapreneur**' had been added to *The American Heritage Dictionary*, which defined it as:

*“a person within a large corporation who takes direct responsibility for turning an idea into a profitable finished product through assertive risk-taking and innovation”* (Kautz, 1999).

Intrapreneurs take new ideas and turn them into profitable realities, therefore suggesting that '**intrapreneurship**' can be defined as the process in which:

*“innovative products or processes are developed by creating an entrepreneurial culture within an already existing organisation”* (Fry, 1993, p.373).

Attitudinally, intrapreneurship refers to the willingness of an individual to embrace new opportunities and take responsibility for affecting creative change (Morris, 2001). By innovating, intrapreneurs continually demonstrate the ability to seize opportunities, and

convert opportunities into marketable ideas, therefore becoming catalysts for change (Smilor & Sexton, 1996). Behaviourally, intrapreneurship includes the set of activities required to move a concept or idea right through to implementation. Dyer (2001) defines this as ‘the management of bold ideas’, and that success requires a combination of clarity and boldness of vision and purpose. He also believes that there is a strong need for deliberate and well-managed action to follow up on those ideas, as to be intrapreneurial, you need to not only have an idea, but also the ability to make it happen. Large corporations are trying to groom intrapreneurs to breath innovation back into the company. These companies are looking for people who do more than think of new things to do, but actually do new things. In other words, they need people who have the guts to take responsibility for converting the idea from the mind to the marketplace (Burch, 1986). This is what Costa and McCrae (1995 in Bergh & Theron, 1999) referred to as ‘openness to experience’, which was mentioned earlier.

An analogy for the intrapreneur would be the chess player, who may make a bold move yet understands the parameters of the game and anticipates the possible counter-moves (Smilor & Sexton, 1996). They are willing to take calculated risks because they have come to terms with the possible ramifications of the innovation; in other words, they feel comfortable with the ambiguity and uncertainty of the changes they are making. Intrapreneurs constantly seek innovative, even experimental, ways to watch, evaluate, sense, interact with, respond to, and anticipate customers. In this way, intrapreneurs not only are learning from the marketplace but also are constantly educating it. According to Burch (1986, p.40), the intrapreneur:

*“is not a blue-sky dreamer or an intellectual giant. He or she may even be a product-service idea thief or may be impatient and egotistical. But most of all, such people get the job done. And when they do, they are fêted in style with lights flashing and big rewards”.*

### **2.6.3. Intrapreneurial Organisations:**

Morris (2001, p.16) defines the entrepreneurial organisation as “*one that proactively seeks to grow and is not constrained by the resources currently under its control*”. Organisations are recognising a strong need for intrapreneurship, largely as a result of rapidly growing, new and sophisticated competitors, a sense of distrust of traditional management, and an exodus of many of the best employees, who are leaving the organisation in order to start their own companies. The modern organisation is therefore seeking avenues for developing in-house entrepreneurship; as to do otherwise will result in stagnation, loss of personnel and decline. Organisations are therefore being encouraged to develop the intrapreneurial spirit within the organisational boundaries, thus allowing for an atmosphere of innovation to prosper (Kuratko & Hodgetts, 1995). This new corporate revolution represents an appreciation for and a desire to develop intrapreneurs within the corporate structure.

It is therefore clear that organisations have the possibility to do things both differently and better than they are being done at the moment. To do things ‘differently’ means that an innovation has been made. This might take the form of offering new products or organising the organisation in a different way. To do things ‘better’ means the product offers a utility in terms of an ability to satisfy human needs that existing products lack (Wickham, 1998). Developing an intrapreneurial philosophy in organisations results in several advantages, including the development in the size and / or diversity of the product and service range, and helping the organisation to expand and grow. It also assists in the creation of a workforce that can help maintain its competitiveness and promote a climate conducive to high achievement (Kuratko & Hodgetts, 1995).

#### **2.6.4. Forms of Intrapreneurship:**

According to Fry (1993), intrapreneurship exists in different forms, and the form that is appropriate in one organisation may not work for another. These forms vary in terms of management’s commitment and can thus be placed on a continuum from high to low managerial commitment. The different forms of intrapreneurship include the *organic*

*organisation*, the *new products group*, the *new products subsidiary*, the *venture capital company* and the *training section*. Each of these forms of intrapreneurship varies in terms of the extent of the organisation's managerial commitment. Fry (1993, p.379) believes that "*the ultimate placement of a particular innovative product is not as important as the formalised structure that supports the overall concept*". Therefore the level of organisational commitment to intrapreneurship affects what form the organisation can support. This concept can be visually demonstrated in the following diagram, which indicates the relationship between managerial commitment with that of the intrapreneurial structure (Figure 2.1).

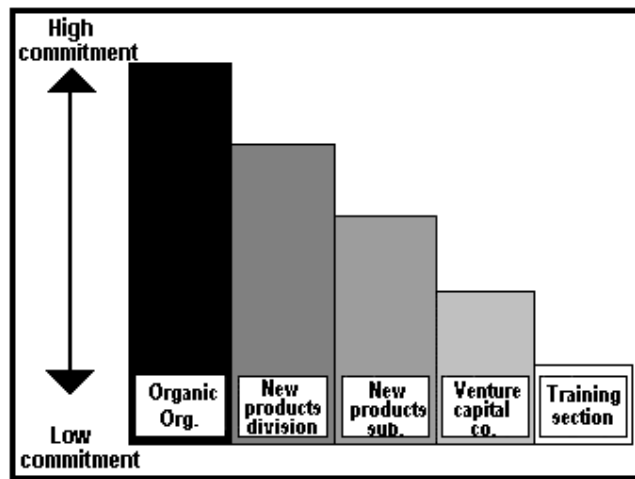


Figure 2.1. Intrapreneurial Structure Compared with Commitment (Fry, 1993, p. 380).

Developing an *organic organisation* requires major commitment to the concept of intrapreneurship, and very few organisations have developed to that stage. This is due to the fact that it requires a new thought process throughout the organisation. It is therefore extremely difficult to develop a totally organic organisation from a traditional mechanistic or bureaucratic one (Fry, 1993). *Minnesota Mining and Manufacturing (3M)* is probably the best example of an organic organisation. Perseverance, ingenuity and creativity have made 3M's first 100 years a century of success. Former President and Chairman of the Board, McKnight (1995, p.1) believes that "*it's essential that we have many people with initiative if we are to continue to grow*". It is this philosophy that has

infiltrated the organisational culture, which has allowed 3M to develop into an organic organisation where new ideas and products are continually being developed.

The ***new products group*** requires both the financial and moral support of the organisation, and in order to be carried out correctly, the leader of the group will need to have the authority to restructure parts of the organisation in order to develop a fully-funded division or department (Fry, 1993). An example of this would be *Microsoft™*, which consists of separate teams known as ‘product families’, such as *Windows®*, *Office®*, *Servers* and *Business Solutions*. Each team has the authority to run as a separate division, making its own decisions to a large extent.

The ***new products subsidiary*** requires less commitment from management, as it is a separate unit funded by the parent company (Fry, 1993). An organisation can therefore benefit from the results of intrapreneurial activities without those activities disrupting the rest of the parent company. In practice, this means that the organisation receives proposals from individuals within the organisation, and evaluates them and works with those individuals to develop them if they appear profitable. An example of this is *Xerox*, which is often viewed as being purely a large bureaucratic Fortune 100 company. However, *Xerox* has done something unique in trying to ensure that its best, most creative employees don’t leave to form their own businesses. After Steve Jobs left the organisation to form *Apple Computer Inc.* the organisation decided to set up *Xerox Technology Ventures (XTV)* in 1989 for the purpose of generating profits by investing in the promising technologies of the company, many of which would have otherwise been overlooked. Another example is *Sony Corporation*, which consists of 1068 consolidated subsidiaries worldwide. In 1994, the concept of ‘a company within a company’ was developed. The nineteen existing business groups were reorganised into eight divisional companies, each responsible for all operations from production to sales.

The ***venture capital company*** occurs when a corporate venture capital company solicits proposals within and outside the organisation (Fry, 1993). Some companies require that the proposals be related to the industry in which the organisation operates, whereas other

companies accept proposals in other industries or sectors in which the organisation would like to expand. A South African example of this is *Eskom Enterprises*, which was formed as part of the South African government's initiative to restructure its electricity supply utility. *Eskom Enterprises* functions as a holding company for various subsidiary companies and divisions around the country such as the *Rotek* group and the *Technology Services International* (TSI) group.

The final form of intrapreneurship is the ***training section***. This is when a section within the Human Resources Department is established, which encourages and trains individuals who show an interest in entrepreneurship. The training mainly consists of in-house seminars or off-site conferences (Fry, 1993). This form will have only a marginal impact on large organisations due to the limited commitment of top management and the lack of structure and incentives throughout the organisation. However, it may be a necessary first step in developing an intrapreneurial organisation.

## **2.7. Barriers to Intrapreneurship:**

In a competitive business environment, it is obvious that organisations need to seek out new business ideas and opportunities and make the necessary arrangements to bring them to a profitable conclusion (Bridge, O'Neill & Crombie, 1998). However, research reveals that many large organisations face various difficulties in doing this. According to Fry (1993), there are four clusters of factors which help to explain why large organisations have trouble becoming and staying intrapreneurial and why they have trouble regaining a level of intrapreneurship once it is lost.

### **2.7.1. Resistance to Change:**

Change implies an alteration in the status quo, and it is clear that there are strong individual and organisational reasons for resistance to change. Individuals often resist change because they have already invested a great deal of time and energy in mastering a

certain job, and fear that their investment will be wasted (Bridge, O'Neill & Crombie, 1998). According to Moerdyk and Fone (1987), resistance to change can generally be judged in terms of three different factors - the individual's self interest, his / her personality structure, and the social psychology of persuasion. Self-interest theories argue that people have vested interests in the status quo and that any changes that threaten these interests are resisted. This is due to the fact that established systems are viewed as stable and require effort to change. Change is also resisted because the future is unknown and failure could potentially cause risk to personal status and esteem, meaning that innovation could threaten existing power structures and relations. Because everyone is unique, not everyone resists change to the same extent. However, differences in personality means that many people view ambiguity and uncertainty as sources of threat and therefore have a tendency to defend the status quo based on ignorance and stereotypes.

The very existence of the social relationships that exist in society, "*serves as a brake on the social process of change because of the social cost and effort required to change the relationships*" (Moerdyk & Fone, 1987, p.16). Therefore people react against any attempts to restrict or control their choices. Finally, individuals often view change as 'imported' and not of relevance to them, which is often referred to as the 'not-invented-here' (NIH) syndrome. Mercer (1986 in Moerdyk & Fone, 1987) argues that this is the most important reason in accounting for resistance to change, which includes feelings of intellectual superiority, competitiveness, insecurity, low tolerance of uncertainty and personal generalisations. Winkler (2002) suggests four reasons for employees being resistant to change. These include the fear of losing something of value, misunderstanding, disagreement about the benefits of the change and concern about lack of skills or ability.

### **2.7.2. The Inherent Nature of Large Organisations:**

Large organisations have trouble being intrapreneurial simply because they are too large, meaning that managers are required to structure the organisation in order to be able to

control it. This results in multiple layers of management, which create too many levels of approval between the innovator and the person in charge of resources. Large organisations tend to have a need for control; with the result that management is forced to establish fixed, quantifiable performance standards, resulting in large quantities of paperwork (Fry, 1993). According to Hisrich and Peters (1992), the traditional corporate culture has a climate and reward system that favours conservatism and the status quo in decision-making.

Hisrich and Peters (1992, p.534) believe that the guiding principles in a traditional corporate culture are to:

*“follow the instructions given; do not make any mistakes; do not fail; do not take the initiative but wait for instructions; stay within your turf; and protect your backside. This restrictive environment is of course not conducive to creativity, flexibility, independence, and risk taking - the jargon of intrapreneurs”.*

Finally, large organisations differ from entrepreneurial ventures in terms of time dimensions, in that quarterly or monthly reports lead managers to have a short-term view of performance. It is therefore extremely difficult for individuals to be creative when results are measured in short-run cycles (Fry, 1993).

### **2.7.3. Lack of Entrepreneurial Talent:**

On the whole, one finds very few entrepreneurs in large organisations, as typically they are not attracted to large organisations, preferring the riskier life of small ventures to the more secure, but stilted, corporate life. Another reason is the fact that large organisations often do not encourage entrepreneurial behaviour, which results in entrepreneurs being viewed as *“cynics, rebels or free-spirits who are late and do sloppy work that does not conform to standards set by the corporation”* (Fry, 1993, p.376). This type of attitude

results in entrepreneurs feeling low levels of job satisfaction, which often leads to their departure from the organisation.

#### **2.7.4. Inappropriate Compensation Methods:**

Fry (1993, p.377) states that:

*“even though monetary rewards may not be especially important to entrepreneurial individuals, some mechanism of rewarding innovation must be evident if innovation is to continue”.*

Increases in remuneration and promotion are traditional methods of rewarding managers, but this seldom works for intrapreneurs as it removes them from the arena in which they are innovative, and typically they do not make good corporate managers. This is due to the fact that they have generally not been trained to be managers, but rather in the field that they have actually excelled in.

### **2.8. Measuring Intrapreneurial Intensity:**

It has been implied that because intrapreneurship is a quality that can vary in degree and intensity, intrapreneurial intensity can therefore be measured. Organisations need to find ways to measure and reward intrapreneurship, both in terms of its frequency and the rigour with which it is pursued. This can only be achieved if measures are developed to track an organisation's intrapreneurial performance variables. It is important that one measures this characteristic of an organisation at both an individual personality level, as well as at a structural and cultural level.

#### **2.8.1. Research on Intrapreneurship:**

Because intrapreneurship is a relatively new concept, only a small amount of research has been conducted in this area, particularly in the area of measuring intrapreneurship in

organisations. Most of the research that has been conducted in this area has focussed primarily on entrepreneurship and small business development. However, in recent years, entrepreneurship researchers have increasingly recognized that entrepreneurial activity can and does take place in large businesses (de Chambeau & Mackenzie, 1986; Adams, Wortman & Spann, 1988; Ellis & Taylor, 1988; Morris, Avila & Allen, 1993). Brandt (1986) has argued the position that the entrepreneurial process has applicability to organizations of all sizes.

Towards the end of the 1980s in South Africa, researchers' attention shifted away from intrapreneurship, as it had become clear that South African organisations needed to be more productive in order to compete both locally and globally. It was also argued that owing to authoritarian and paternalistic styles, large sectors of the workforce had never had the opportunity to act independently or innovatively, and that this situation had led to what is often referred to as learned helplessness. It was during this period that numerous organisations, consultants and academics began a process of trying to teach intrapreneurial thinking and behaviour. This was generally referred to as 'need for achievement', which was conceptualised as an alternative to 'need for affiliation'. Common wisdom suggested that most employees (especially black employees) were driven by 'need for affiliation' rather than 'need for achievement'.

One example of this is that of a South African organisation in the construction industry, which decided that an attempt had to be made to increase enterprising behaviour in its foremen. This group of employees was in a position where it was possible for them to make significant contributions to the productivity levels on building and construction sites by working with the notion that they were individually responsible for success of the enterprise. It was decided to develop a training course on achievement motivation for this particular group. Given the view that nothing could change a passive and un-enterprising individual to be actively enterprising, a decision was made to conduct a controlled study to attempt to increase the entrepreneurial behaviour of the site foremen (Boshoff, Cronje & Lange, 1987).

Boshoff and Boer (1988) reported a second South African study that was carried out to determine whether enterprising behaviour could be increased in middle and junior management of a large clothing manufacturer and retailer. Senior management felt that the middle managers were passive, un-enterprising and were not much concerned about organisational issues such as productivity improvement, labour turnover and employee absenteeism. Management consultants who had done an organisational audit also held this view of the lower levels of management. Since the organisation kept detailed records of the level of all these variables, it was possible to conduct a study to determine whether a systematic attempt to change the level of enterprising behaviour of middle and lower management would result in positive changes in the indices of organisational effectiveness.

In 1990, Lant and Mezias developed a simulation methodology to explore the effectiveness of several entrepreneurial strategies in established organisations. The organisations were characterised by high and low levels of entrepreneurial activity and three types of strategies: fixed, imitative and adaptive. The results of the study indicated that lessons learned from past experience often result in learning traps when the environment changes. Conceptualising organisations as characterised by different entrepreneurial strategies and different levels of entrepreneurship therefore offers a theoretically useful description of differential outcomes with respect to performance, growth and the probability of failure.

Marcus, Tesolowski and Isbell (1999) conducted a study to investigate the impact of intrapreneurial programmes on overall corporate performance. The investigation focussed on corporate intrapreneurial programs in Fortune 500 firms within the 10 categories of manufacturing industries in the United States of America. They used a self-reporting questionnaire technique to determine the presence of intrapreneurial programmes within the firms. Additional analyses were performed to determine the impact on company performance as measured sales, profit, and return to investors.



### **2.8.2. Research on Measuring Intrapreneurial Intensity:**

Although there is a relatively small amount of research that has been conducted in the area of intrapreneurship, there is a growing research foundation to support the concept of intrapreneurial intensity. Building on the work of Miller and Friesen (1983) on innovation in conservative and entrepreneurial organisations, a number of researchers have reported success in measuring a company's entrepreneurial orientation, and linking that orientation to various strategic and performance variables.

Kuratko, Montagno and Hornsby (1990) developed an intrapreneurial assessment instrument to determine the effectiveness of a corporate entrepreneurial environment. In this study they looked at how to best evaluate an environment that is conducive to corporate entrepreneurship, or intrapreneurship. According to Kuratko, Montagno and Hornsby (1990), this type of rationalizing is difficult because corporate entrepreneurial activity is behaviourally complex and very dynamic. However, they concluded that there are three key factors that affect the development of corporate entrepreneurial activity, namely: management support, organizational structure, and resource availability. The authors also stated that this type of research could be important for corporations that desire to implement an intrapreneurship programme within their corporate structure, so that they can evaluate their assets and shortcomings in being able to foster entrepreneurial activity.

The *Intrapreneurial Assessment Instrument* was developed to “provide for a psychometrically sound instrument that represented key entrepreneurial climate factors in the existing intrapreneurship literature” (Kuratko & Hodgetts, 1995, p.110). The responses to the *Intrapreneurial Assessment Instrument* were statistically analysed and resulted in five factors, which are aspects of the organisation over which management has some form of control. These factors include *management support, autonomy / work discretion, rewards / reinforcement, time availability* and *organisational boundaries*.

These factors form the foundation to ascertain whether or not an organisation has the climate that would support intrapreneurship (Kuratko & Hodgetts, 1995).

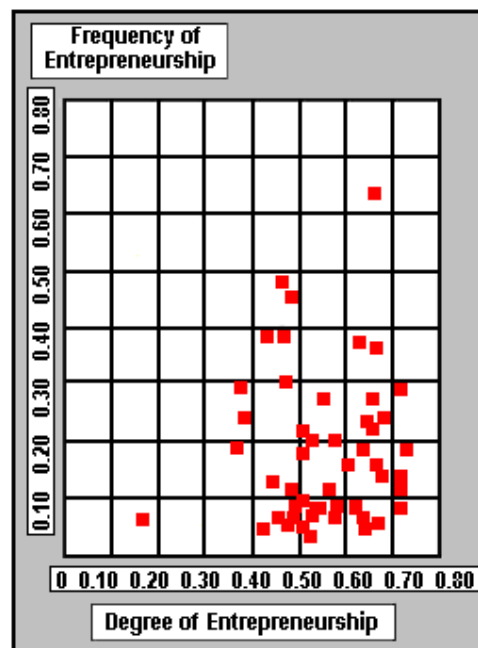
Pinchot and Pellman (1999) developed a similar instrument known as the *Innovative Climate Questionnaire*. This questionnaire consisted of nineteen Innovative Success Factors that together create the conditions for cost-effective innovation. They audited these factors in a large number of organisations and found them to be fundamental measures of organisational health as well as capacity for innovation. However, the *Innovative Climate Questionnaire* can again only be used to predict an organisations capacity to have an innovative climate, and does not measure whether or not an organisation is intrapreneurial in nature.

### **2.8.3. Entrepreneurial Performance Index:**

The University of Cape Town's Graduate School of Business, headed by Michael Morris, developed the *Entrepreneurial Performance Index* Survey in 1997. This study explored three aspects of entrepreneurship, namely *innovativeness*, *risk-taking* and *proactiveness* as a measure of entrepreneurial intensity, which is defined as a linear combination of these three factors, and the frequency with which entrepreneurial events occur (Morris, 2001). Described as the first initiative of its kind in the world, the *Entrepreneurial Performance Index* database was designed to examine the relationships between company entrepreneurial orientation and company strategy, structure, reward systems, performance, approaches to control, Human Resources policies, and related managerial variables.

A study was conducted in 1997 using the *Entrepreneurial Performance Index* on a sample of more than 30 South African companies. The sample represented various sectors, including publishing, financial services, manufacturing, high technology, energy and retail. The survey focused on two key elements. Firstly, the frequency of entrepreneurship, which was concerned with the numbers of new products, services and

process innovations implemented by a company over the past two years. Secondly, the degree of entrepreneurship, focused on the extent to which managerial efforts could be characterised as innovative, proactive and entailing calculated risk-taking. The top scoring firms included *Swissgarde*, *Home Choice* and *Xactics*. *Ziton* was the highest scorer for degree of entrepreneurship and *Swissgarde* the highest for frequency of entrepreneurship (Klein, no date). The companies involved in the survey were then mapped onto a two-way grid, showing the relationship between the frequency on entrepreneurship and the degree of entrepreneurship (Figure 2.2).



**Figure 2.2.** Where South African Companies Fall on the Entrepreneurial Grid according to the EPI Morris (1997, in (Klein, 1997))

This appears to be the most comprehensive study yet conducted with regard to measuring intrapreneurial intensity. However, at the same time, this study does not explore the specific structural and dynamic elements of an organisation, therefore failing to pinpoint areas of high or low performance. Identifying the specific behaviour-related aspects of intrapreneurial organisations allows for the identification of possible strengths and weaknesses in the various areas of an organisation, and by addressing each allows for the

improvement or development of the organisation's overall intrapreneurial capacity. Therefore this research aims at exploring how to measure the various identifiable variables that affect the degree of intrapreneurship in an organisation.

## 2.9. Intrapreneurial Model:

According to Morris (2001, p.95), the intrapreneurial spirit needs to be “*integrated into the mission, goals, strategies, structure, processes and values of the organisation*”. With this in mind, Tushman and Nadler's (1997) Congruence Model for Organisational Analysis (Figure 2.3), which examines the core elements of an effective organisation, can be used as a conceptual framework for examining intrapreneurship within an existing organisation.

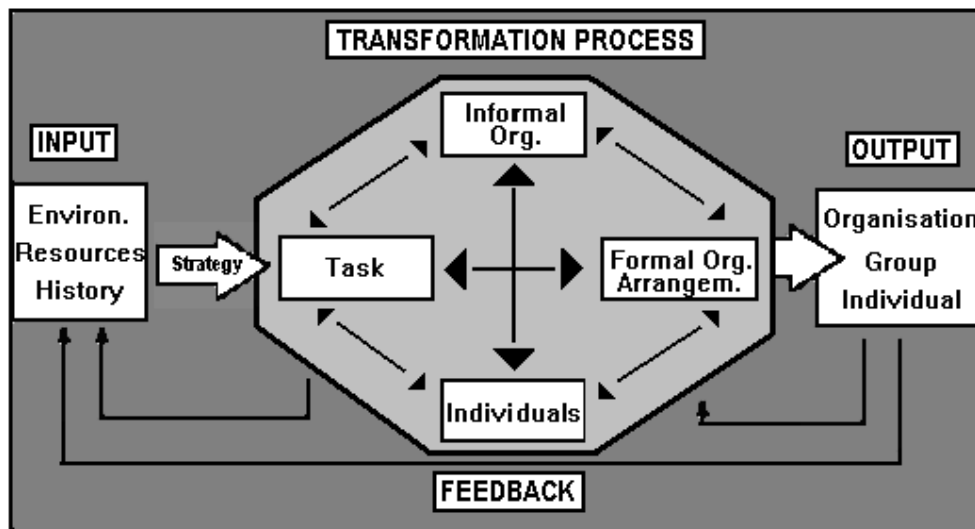


Figure 2.3. Tushman and Nadler (1997)  
Congruence Model for Organisational Analysis

Tushman and Nadler's (1997) Congruence Model for Organisational Analysis suggests that there are four interconnected elements of an organisation namely; *task, individuals, formal organisational arrangements* and *informal organisation*, which are ultimately affected by each other, as well as various external factors including the environment, resources available and the history of the organisation. This model is a general model,

which can be used as the basis for a more specific model, in this instance a model for intrapreneurship. Each of these four elements consists of various observable indicators, which can be related to intrapreneurial performance. In other words, if an organisation demonstrates these various characteristics, and if they are aligned with and mutually supportive of each other, the organisation will score highly in that area, allowing for the conclusion to be drawn that the organisation is intrapreneurial in nature.

### **2.9.1. Task:**

The first element is the *task* of the organisation, which is defined by Tushman and Nadler (1997) as the basic or inherent work to be done by the organisation, its sub-units and its people. This refers to the activity the organisation is engaged in, with emphasis on the specific work activities or functions that need to be done. The importance of this element for entrepreneurship is that in today's fast-paced, technology-driven economy, companies have been forced to shift gears - to develop new products and new strategies more frequently and more quickly. According to Breitenbach (2002), 80% of new products become obsolete in two years. In particular, large companies are learning that they too must remain creative and innovative or risk becoming obsolete. An example that illustrates this belief is the *Fleischmann's Company*, which originally consisted of only three brands in two mature markets. It was at this point that they came to the realisation that without new products, the company's prospects for significant growth were grim. Therefore the organisation established a strategic intent, which was to create innovative products in addition to encouraging would-be intrapreneurs to find ways to create and launch these products. Management supported many of them, allowing for the intrapreneurial new product teams to act without waiting for the normal multi-level approval process. In just one year, *Fleischmann's* intrapreneurs developed and commercialised four highly successful new products (Pinchot & Pellman, 1999).

It is important to note that task innovation be present at both the individual and organisational level. At the individual level, the task of an individual within an

intrapreneurial organisation is the identification, development and exploitation of new opportunities. The task of these individuals is therefore to see new opportunities and show new skills and ways of doing things. According to Macmillan and George (1985 in Van Aardt, Van Aardt & Bezuidenhout, 2000), intrapreneurship at the organisational level can manifest itself in various ways, which can be identified as the six levels of intrapreneurship (Table 2.1).

<b>Level 6</b>	New products / services that don't exist today but could be developed to replace current products / services in known markets, or entirely new markets that could be created for the new products / services.
<b>Level 5</b>	New products / services that are unfamiliar to the company but are already being produced and sold by others.
<b>Level 4</b>	New products / services that can be sold to current markets, or existing products / services that can be sold to new markets. These new ventures will take more than 2 years to reach the commercialised stage.
<b>Level 3</b>	Existing products / services that can be sold to <i>new</i> markets within 1-2 years
<b>Level 2</b>	New products / services that are to be sold to <i>current</i> markets within 1-2 years.
<b>Level 1</b>	Improving or changing current products / services.

**Table 2.1. The Six Levels of Intrapreneurship  
Macmillan and George (1985)**

Macmillan and George (1985 in Van Aardt, Van Aardt & Bezuidenhout, 2000) point out that very few companies can successfully manage level 4, 5, or 6 ventures at the same time as keeping up with current operating responsibilities. This therefore suggests that an organisation would be required to add new entrepreneurial dimensions to its normal operating and managerial tasks. Vesper (1984 in Van Aardt, Van Aardt & Bezuidenhout, 2000) identified three entrepreneurial dimensions of various corporate ventures, which include new strategic direction, initiative from below and autonomous business creation. Intrapreneurial organisations not only need to continuously look at developing new products and services, but also need to ensure that the quality of the current as well as the new products and services continues to develop.

Therefore the intrapreneurial organisation's task involves both managers and workers being deeply involved in a continuous integrated effort to improve the quality of the organisation's products and services at every level. Continuously improving quality will

maximise the customer's total satisfaction and minimise the organisation's total costs. Total Quality Management (TQM) is a total system approach that is an integral part of the organisation's high-level strategy. According to Oden (1997, p.5), TQM works "*horizontally across functions and departments, involving all employees, top to bottom, and extends backward and forward to include the supply chain and the customer chain*". TQM includes analysing every aspect of the organisation and changing how they work by cutting unnecessary levels of management, removing restrictive rules, and getting employees directly involved in doing what is best for the customer (Carrell, Jennings, Heavren, 1997).

### **2.9.2. Individuals:**

The second element of the Tushman and Nadler (1997) model (figure 2.3) concerns the people that make up the organisation and perform the organisational tasks. Wherever we find innovation in large organisations we find intrapreneurs making it happen. According to Pinchot and Pellman (1999, p.2), "*every innovation, large or small, requires some courage, some vision, and a willingness to take charge and make it happen*". The tireless persistence and practical imagination of the intrapreneur are essential to the success of any new idea. Therefore the key to intrapreneurship is to hire and retain the right type of people and develop a results-orientated reward system that encourages and supports individual initiative, idea generation and development. Organisations need 'intrapreneurs' and an intrapreneurial culture if they are to grow and prosper. This suggests that organisations do not have these qualities automatically, but require individuals who are willing to be exposed to situations with uncertain outcomes, who enjoy new and exciting, risk-taking activities, do not tire easily and are skilful in persuading others to achieve a certain goal (Van Aardt, Van Aardt, and Bezuidenhout, 2000). This does not mean that an organisation that has a single intrapreneurial leader is necessarily intrapreneurial in nature. Although it is vital to have an innovative and charismatic leader, it is just as important to instil an intrapreneurial philosophy in all employees within the organisation. *Texas Instruments* is well known for intrapreneurial

successes such as the digital signal processing (DSP) chip business, which is the main source of profit for the company today. The company studied fifty of its successful and unsuccessful new product efforts, and discovered that behind each of the successes was at least one dedicated intrapreneur who persisted despite great obstacles (Pinchot & Pellman, 1999).

Therefore in an intrapreneurial organisation, there should be evidence that innovative people are held up as examples and appropriately recognised, meaning that the need to be innovative and the need to explore new approaches in the future are an integral part of the company's culture. In other words, all employees at all levels of the organisation welcome new ideas and are extremely active in generating new approaches and new ways of doing things, with a willingness to take risks and an eagerness to break new ground (Oden, 1997). There are usually many ideas floating around any organisation, but ideas are useless unless they are put to use. The intrapreneur is the one who does this through innovation and looking at products, services, and markets with a fresh eye. Intrapreneurs reject the bureaucracy and take full responsibility for manoeuvring their projects through the organisation and into the marketplace (Burch, 1986). According to Pinchot (2000) intrapreneurs are those people who take hands-on responsibility for creating innovation of any kind within an organisation. They can be the creators or innovators but are always the dreamers who figure out how to turn an idea into a profitable reality.

### **2.9.3. Formal Organisational Arrangements:**

According to Tushman and Nadler (1997), the third element of the model (Figure 2.3) concerns the range of structures, methods and procedures within an organisation. When examining intrapreneurship in organisations, this element can be divided into two sub-elements, namely *organisational structure* and *organisational policies*.

#### **2.9.3.1. Organisational Structure:**

The term organisational structure refers to the “*formal configuration between individuals and groups with respect to the allocation of tasks, responsibilities and authority within the organisation*” (Greenberg & Baron, 1997, p.505). Intrapreneurial organisations reflect flatter hierarchies, wider divisions of labour, wider span of control and tend to be decentralised. In other words, information flows are broad and diffuse throughout the organisation.

### **i. Hierarchy of Authority:**

Clearly a traditional bureaucratic approach to management is not enough in today’s dynamic business environment. Therefore in recent years, organisations have been restructuring their workforces by flattening them out through downsizing and de-layering, often resulting in the elimination of entire layers of organisational structure. The underlying assumption behind these cutbacks is that fewer layers reduce waste and enable people to make better decisions by moving them closer to the problem at hand (Greenberg & Baron, 1997). This is because organisational hierarchies are what create the need to ask for permission. This implies that the steeper the hierarchy, the harder it is to get permission for anything new. Too often we observe frustrated intrapreneurs waiting for permission to act and seeing their best ideas rejected (Pinchot & Pellman, 1999). Hierarchies also tend to create narrow career paths and myopic thinking, further stifling creativity and innovation. People lower down in the hierarchy tend to have a tendency to become disempowered through having to ask permission, eventually developing ‘victim mentality’ that causes passive reactivity. Therefore, if hierarchy was central to traditional organisation, the lack of hierarchy is central to intrapreneurial organisations. According to Oden (1997), intrapreneurial organisations are much flatter, with fewer levels of managers, and multi-disciplinary teams perform most of the work.

Intrapreneurial organisations also tend to be more decentralised, with a smaller power distance, meaning that employees are viewed as being more equal and having equal opportunities to offer their opinions and views. This allows for all employees to feel valued and that they are making a meaningful contribution to the organisation as a whole.

Decentralisation refers to “*the extent to which authority and decision making are spread throughout all levels of an organisation rather than being reserved for top management*” (Greenberg & Baron, 1997, p.511). These organisations are taking the lead in implementing employee empowerment, which gives power and is the natural extension of employee participation concepts such as quality circles and task teams. This represents a high degree of involvement in which employees make decisions themselves and are responsible for their outcomes (Oden, 1997). An example of this is *International Business Machines Corporation* (IBM), who developed the independent business unit concept, which involves each business unit having a separate organisation with its own mini board of directors and autonomous decision-making authority on manufacturing and marketing issues. IBM has more than eleven business units, which have developed such products as the automatic teller machine (ATM machine) and the IBM personal computer. Intrapreneur Philip Estridge led his group to develop and market the personal computer (PC) through both IBM’s sales force and the retail market, breaking some of the most binding operational rules of IBM at the time. In simple terms, intrapreneurship decentralises the corporation and shifts attention from the hierarchy to the individual (Pinchot, 2000).

### **ii. Division of Labour:**

The division of labour refers to the process of dividing the many tasks performed within the organisation into more specialised jobs (Greenberg & Baron, 1997). The more that tasks are divided into separate jobs, the more those jobs are specialised and the narrower the range of activities that each employee is required to perform. In classical or scientific management theory, the fewer tasks a person performs, the better the person can be expected to perform them, freeing others to perform the tasks that they perform best. Therefore in terms of intrapreneurial thinking, the wider the division of labour, the more freedom and time the individual has to spend developing new ideas within their particular specialist area. However, on the other hand, if the individual loses sight of the big picture they will be less able to be innovative. Therefore there needs to be a balance of having

the expertise and freedom to work in a specialised area, but also have continual awareness of what is happening in the rest of the organisation. This refers back to the metaphor of the organisation as an organism, where each ‘part’ of the organisation functions independently, and yet is part of the overall ‘body’. Unless each ‘part’ is working effectively, the overall ‘body’ cannot be effective.

### **iii. Span of Control:**

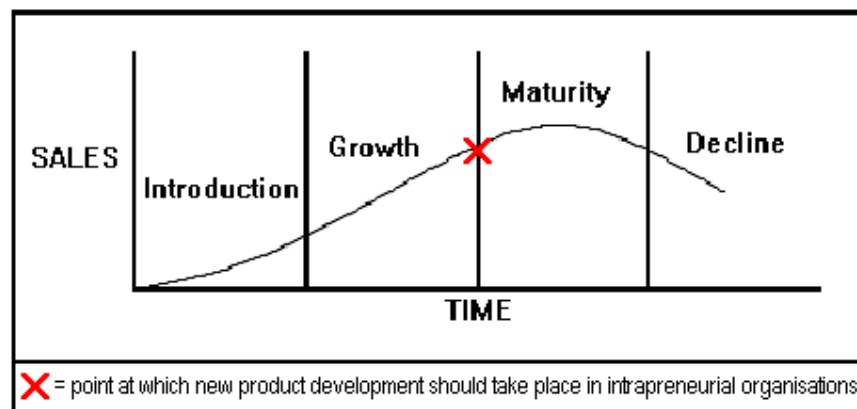
The span of control refers to the number of people formally required to report to each individual manager. Those responsible for many individuals are said to have a wide span of control, whereas those responsible for fewer are said to have a narrow span of control. When a manager’s span of control is wide, the organisation itself tends to have a flat hierarchy (Greenberg & Baron, 1997). Intrapreneurial organisations tend to have a wider span of control, due to the flatter hierarchy and greater equality between employees. Employees also have a greater say in what gets done and how, which requires conscientiousness and focus. This implies that the individuals themselves should demonstrate more responsibility and commitment to their work.

### **2.9.3.2. Organisational Policies:**

Most organisations are governed by implicit and explicit systems, and in many cases people are reluctant to change them, believing that ‘if it isn't broken, why fix it!’. Many organisations use their existing systems to prove that they already have the 'right answer', which effectively douses creativity. The product life cycle (PLC) concept states that *“products, like people, have a life cycle or go through a series of developmental stages, from birth to death”* (Du Plessis, Rousseau & Blem, 1994, p.219). The PLC identifies four stages of product evolution: introduction, growth, maturity and decline, which form a curve describing sales over time. Sales tend to pick up slowly over the introductory stage, accelerate significantly during the growth stage, peak at maturity and then decline. According to Du Plessis, Rousseau and Blem (1994, p.219), the introductory phase

should be followed by a stage of careful new product development and planning which may include “*new product idea generation, screening of new product ideas, product concept development and testing, actual product development and pre-testing*”. This is often viewed as having ‘competing’ paradigms, in the sense that one is trying to milk the system, whilst at the same time trying to develop the next generation somewhere else.

When it comes to intrapreneurship, there is never ‘one right answer’, meaning that there should be a constant search for different alternatives. Organisations should be constantly looking for new and more effective ways to be doing things. In terms of PLC, intrapreneurial companies should start developing new products or new versions of products between the growth and maturity phases, in other words, long before the decline of the product starts to occur (Figure 2.4).



**Figure 2.4. Reworking of the Product Life Cycle**  
(Du Plessis, Rousseau and Blem, 1994, p. 219)

Employees in intrapreneurial organisations are given the space in which to experiment and possibly fail. This is not to say that failure is simply condoned, but rather that organisations should begin to see these as learning opportunities, and punish or reward accordingly. Encouraging innovation requires a willingness not only to tolerate failure but also to learn from it (Kuratko & Hodgetts, 1995). An example of this type of practice occurred when the founder of *Minnesota Mining and Manufacturing* (3M), Francis Oakie, had an idea to replace razor blades with sandpaper. This particular idea failed, but

his ideas evolved until he developed waterproof sandpaper for the auto industry. Another firm committed to intrapreneurship is Hewlett-Packard (HP). After failing to recognise the potential of Steven Wozniak's proposal for a personal computer, HP learned from their mistake, and took steps to ensure that they would be recognised as a leader in innovation and not miss any future opportunities (Hisrich & Peters, 2002).

However, organisations cannot simply expect their employees to be creative and imaginative without any incentives, opportunities or encouragement. Incentive systems should be upgraded in order to encourage employees to take risks in order to achieve better end results. During his spare time, Art Fry, an employee at 3M invented the well-known 'Post-it™ Notes'. After this extremely successful invention, which provided the organisation with more than \$800 million worth of sales, they developed a standard policy that allows employees time to develop their own business ideas. If an idea can't find a home in one of 3M's divisions, employees can devote 15% of their time to prove it is workable, and if necessary they are provided with financial grants of up to \$50,000 per annum. According to Kuratko and Hodgetts (1995), this money is sometimes referred to as *intra-capital*. The objective is to tap the creative and intellectual energy of everybody in the company, and to provide everyone with the responsibility and resources to display real leadership within his / her own individual sphere of competence (Oden, 1997). Fry (1993) believes that the reward system for intrapreneurs should be both monetary and non-monetary. Monetary rewards may be in the form of bonuses or share in the profits of the newly developed product. Non-monetary rewards can be formal recognition of performance, the provision of discretionary funds, the establishment of support groups, or dual promotion systems based on performance in innovative project development (Fry, 1993).

#### **2.9.4. Informal Organisational Arrangements:**

The final element of the model (Figure 2.3) involves the informal organisational arrangements, which according to Tushman and Nadler (1997) can either aid or hinder

organisational performance. When examining intrapreneurship, this element can be divided into two sub-elements, namely *leadership* and *culture*.

#### **2.9.4.1. Leadership:**

This element focuses on the personality of the individuals who direct and inspire the organisation, as well as the type of leadership that these individuals display. This does not mean that an organisation that has a single intrapreneurial leader is necessarily intrapreneurial in nature. Although it is vital to have an innovative and charismatic leader, it is just as important to instil an intrapreneurial philosophy in all employees within the organisation and to create formal policies that support intrapreneurship. This can be achieved by means of the leader setting the tone, creating opportunities and giving support. Within the corporate environment, there are certain individual characteristics needed for a person to be a successful intrapreneurial leader. These include:

*“understanding the environment, being visionary and flexible, creating management options, encouraging teamwork while employing a multi-disciplined approach, encouraging open discussion, building a coalition of supporters, and persisting”* (Hisrich & Peters 1995, p.545).

As a company grows successful leaders get others to buy into the changes they have created, winning not just their involvement but also their commitment to managing that change. This requires clarification of direction and roles from the leader, along with the development of a reward system (Smilor & Sexton, 1996). According to Oden (1997), leaders in intrapreneurial companies take the long-range view, looking down the road and striving to anticipate every contingency. They develop a mission and vision that are consistent, challenging, but realistic. They also develop strategic plans to achieve the mission and cultural plans to achieve the vision. These leaders attract the voluntary commitment of followers to the company’s mission and vision through example and assertive, convincing persuasion. They *“take charge, make things happen, dream dreams,*

*and then translate them into reality*” (Oden, 1997, p.5), which results in decisions that serve long-term strategic and cultural purposes.

Often, the greatest challenge for the leader is not shifting from an entrepreneurial to a more managerial style as a company grows, but rather maintaining the intrapreneurial spirit and style while leading a growing and increasingly complex organisation (Smilor & Sexton, 1996). Unlike traditional leaders, intrapreneurial leaders start without a natural power base. In other words “*their source of authority is their vision of what could be and their ability to get others . . . to believe and follow that vision*” (Pinchot, 2000, p.85). Therefore the intrapreneurial manager must possess the skills of both an entrepreneur and a professional corporate manager. Their leadership skills typically include financial management, communication, vision, direction, focus, motivating others, and motivating oneself. Smilor and Sexton (1996) believe that a key skill is the ability to be extremely directive and persuasive yet able to delegate and let go of responsibility. Due to the fact that too much order in an organisation kills energy and creativity, the leader must find a way to hold on to the spirit, purpose, and direction of the company while simultaneously letting go through delegating, allocating responsibility, and letting others make their own mistakes (Smilor & Sexton, 1996).

#### **2.9.4.2. Culture:**

The culture of an organisation can be viewed as the entrenched personality of the organisation. It is an “*intangible, yet ever-present theme that provides meaning, direction, and the basis for action*” (Oden, 1997, p.3). Kreitner and Kinicki (2001, p.68) take this definition further by defining culture as the “*set of shared, taken-for-granted implicit assumptions that a group holds and that determines how it perceives, thinks about, and reacts to its various environments*”. In other words, it refers to ‘the way we do things around here’.

Hofstede (1980, in Cook & Hunsaker, 2001) provided an insightful look at the various dimensions of culture based on patterns of enduring values in national cultures, namely: ‘individualism’ versus ‘collectivism’, ‘low power distance’ versus ‘high power distance’, ‘low uncertainty avoidance’ versus ‘high uncertainty avoidance’ and ‘masculinity’ versus ‘femininity’, and later added a fifth dimension, namely, ‘long-term orientation’. These dimensions prove to be a useful framework for describing the culture of an intrapreneurial organisation.

### **i. Collectivism versus Individualism:**

The first dimension compares loosely knit individual relationships (*individualism*) with tightly knit relationships, where people look after each other and expect absolute loyalty (*collectivism*). Hofstede (2001) also refers to this in terms of corporate culture, as the level at which behaviour is appropriately regulated. In other words, are individuals rewarded / punished on an individual basis or as a whole group. Intrapreneurial organisations tend to be collectivistic due to the fact that there is a strong emphasis on the use of multi-functional teams, as well as the flatter hierarchy. Hirsch and Peters (2002) believe that these close working relationships help establish an atmosphere of trust and counsel that facilitates the accomplishment of visions and objectives. Although individual ideas and suggestions are greatly valued in an intrapreneurial organisation, these ideas all add to the greater (collective) whole of the organisation.

### **ii. Power Distance:**

The second dimension refers to *power distance*, which indicates the extent of acceptance of unequal distribution of power. In other words, this refers to the extent to which less powerful parties accept the existing distribution of power and the degree to which adherence to formal channels is maintained (Hofstede, 2001). This can be roughly equated to authoritarianism. Due to the flatter hierarchies of intrapreneurial organisations, intrapreneurial organisations tend to have a low power distance, meaning that employees

share more of the responsibility. This results in both superiors and subordinates seeing each other as people and accepting the hierarchy only as a necessary convenience (Carrell, Jennings, Heavrin, 1997). This diffused power plays down individual differences by sharing or decentralising power, meaning that a redistribution of power among the parties is possible and to a certain extent non-threatening nor authoritative.

### **iii. Uncertainty Avoidance:**

The third dimension refers to *uncertainty avoidance*, which indicates the extent of fear or threat as a result of uncertainty and intolerance of ambiguity. Hofstede (2001) refers to this as the degree to which employees are threatened by ambiguity, and the relative importance to employees of rule following or breaking, long-term employment and steady progression through well-defined career ladders. Intrapreneurial organisations are characterised by having low uncertainty avoidance, as they accept that uncertainty is inherent in life, particularly in the business world, and are more willing to accept the unknown future without being troubled by it (Carrell, Jennings, Heavrin, 1997). These organisations also take risks more easily and are tolerant of different behaviours, opinions and ideas.

### **iv. Masculinity versus Femininity:**

The fourth dimension compares *masculinity* with *femininity*, and is also referred to as Dominant-Values Orientation. The nature of the dominant (masculine) values includes assertiveness, monetary focus, well-defined gender roles and formal structure. Feminine values on the other hand tend to be concern for others, focus on quality of relationships and job satisfaction, and flexibility (Hofstede, 2001). Intrapreneurial organisations tend to be more feminine in character than traditional organisations, due to their creativity, strong focus on employees, and respect for the underdog. These organisations believe that quality of life is as important as people and the environment are (Carrell, Jennings, Heavrin, 1997). This results in more appreciation of work well done, and more

understanding and tolerance of failure, which are characteristics that intrapreneurial organisations are striving to achieve.

#### **v. Long-Term versus Short-Term Orientations:**

Hofstede and Bond (1988) added this dimension after conducting additional international studies using a survey instrument developed with Chinese employees and managers. ***Long-Term Orientation*** focuses on the degree to which an organisation embraces, or does not embrace, long-term devotion to traditional, and forward-thinking values. More specifically, Hofstede (2001) refers to long-term orientation as involving preserving status-based relationships, thrift, and deferred gratifications. Short-term orientation on the other hand refers to a stronger inclination toward consumption, and saving face by keeping up with the competition. Intrapreneurial organisations tend to have short-term orientations, as change and innovation can occur more rapidly as long-term traditions and commitments do not become impediments to change (Taylor, 2002).

According to Hofstede (2002), a separate research project into organizational culture differences was conducted by across 20 organizational units in Denmark and the Netherlands in the 1980s, which identified six independent dimensions of practices: *process-oriented versus results-oriented, job-oriented versus employee-oriented, professional versus parochial, open systems versus closed systems, tightly versus loosely controlled, and pragmatic versus normative*. The position of an organisation on these dimensions is partly determined by the business or industry the organisation is in. Although this study indicates interesting dimensions of organisational culture, Hofstede's five dimensions provides a more effective framework that can be used to describe the cultural dimensions of an intrapreneurial organisation (Figure 2.5).

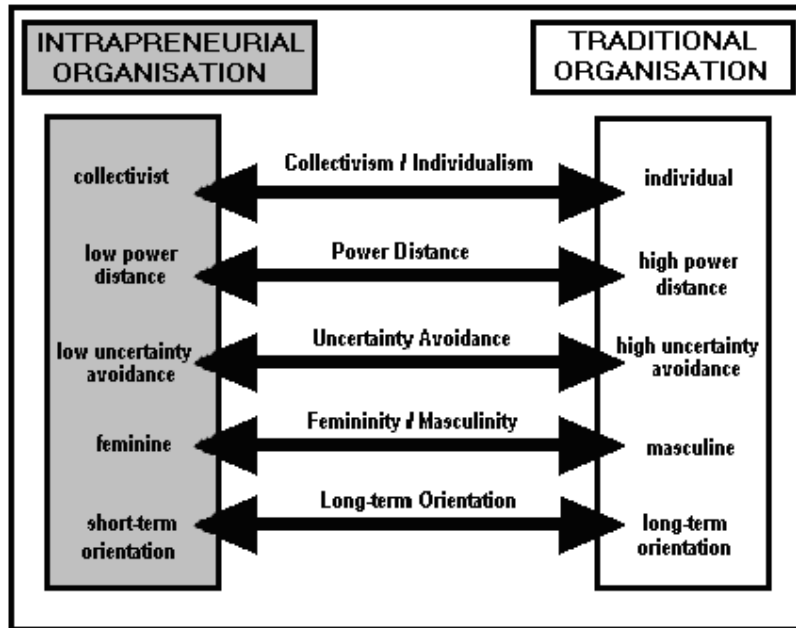


Figure 2.5. Adaptation of Hofstede's (1991 in Greenberg & Baron, 1997, p.43) Dimensions of Culture

An intrapreneurial culture is one in which entrepreneurship is allowed to flourish within the general constraints of the organisation (Fry, 1993). Organisations need to develop a culture, which embraces and nurtures intrapreneurship, in other words an environment that encourages innovation and creativity as well as calculated risk-taking. Unless the culture emphasises continuous innovation and product-market adaptation, a strong culture and ideology makes the introduction of change more difficult. Even *IBM* encountered this when it struggled to rid its mainframe mentality when the market for computers shifted to personal computers and then networks between the mid-1980s and mid-1990s (Cook & Hunsaker, 2001). In essence this is what Senge (1990, p.3) referred to as the *learning organisation*, which was discussed earlier.

### 2.9.5. External Inputs:

According to Tushman and Nadler (1997), external inputs are those factors that are, at any given point in time, the 'givens' that face the organisation. They are the materials

that the organisation has to work with. There are several different types of inputs, each of which presents a different set of ‘givens’ to the organisation. These include the ‘environment’, the ‘resources’ available to the organisation, and the ‘history’ of the organisation.

The first input is the *environment* or all of those factors outside of the boundaries of the organisation being examined. Every organisation exists within the context of a larger environment, which includes individuals, groups, other organisations, and even larger social forces, all of which have a potentially powerful impact on how the organisation performs (Tushman & Nadler, 1997). These include the so-called ‘PEST’ factors (Political, Economic, Social, and Technological) that constrain and shape organisations. Specifically, the environment includes markets, suppliers, governmental bodies, labour unions, competitors and financial institutions. Since research and development are key sources for successful new product ideas, the firm must operate on the cutting edge of the industry’s technology, encouraging and supporting new ideas instead of discouraging them, as frequently occurs in organisations that require rapid return on investment and high sales volume. Any organisation faces its environment with a range of different assets to which it has access and which it can employ. The type of environment in which both South Africa and international organisations are situated is extremely turbulent and ever changing (as discussed earlier). The discussion indicated that there is a strong need for organisations to be aware of this turbulent type of environment that they are working in, and to adapt to it accordingly, which is one of the vital characteristics of an intrapreneurial organisation.

The second input refers to the *resources* available to the organisation, which include the full range of accessible assets. These include the employees, technology, capital and information. Tushman and Nadler (1997) also point out that resources can also include certain less tangible assets, such as the perception of the organisation in the marketplace or a positive organisational climate. A set of resources can be shaped, deployed or configured in different ways by an organisation. In the current working environment, it is

crucial for organisations to be fully aware of what resources are available to them, constantly re-evaluating the situation.

Finally, the third input is the *history* of the organisation. There is growing evidence that the patterns of past behaviour, activity and effectiveness of the organisation, may have an effect on the current organisational functioning. Tushman and Nadler (1997) state that it is impossible to fully understand an organisation's capacity to act now or in the future without an appreciation for the developments that shaped it over time, such as the strategic decisions, behaviour of key leaders, responses to past crises, and the evolution of values and beliefs. Before an organisation can plan to make changes, it is vital that there is an awareness of where the organisation has 'come from'. In order for an organisation to become more intrapreneurial, there needs to be an acknowledgement of past and present functionings of the organisation. It is only after the history of the organisation has been recognised that the organisation is able to make changes to its structure, policies and culture.

#### **2.9.6. External Outputs:**

The ultimate purpose of the organisation is to produce an output. This can be defined as the pattern of activities, behaviour, and performance of the system at the various levels. According to Tushman and Nadler (1997), these include the organisational level, the group level, and the individual level. The term 'output' is therefore very broad as it describes what the organisation produces, how it performs and how effective it is. It not only refers to the organisation's ability to create products and services, but also the ability to achieve a certain level of individual and group performance within the group.

At the *organisational* level, the output is measured in terms of goods and services produced, revenues, profits, shareholder return, job creation, and community impact. In terms of an intrapreneurial organisation, there is a need for continual improvement in the product / service as well as the way in which it is produced and marketed. At the *group*

level, the output refers to the various units within the organisation. Therefore the outputs are measured in terms of the performance and behaviour of the various divisions, departments, and teams that make up the organisation. In terms of an intrapreneurial organisation, this is largely dependent on the organisational structure. An intrapreneurial organisation tends to place a large emphasis on teamwork and the specialisation of tasks within those groups. Finally, the *individual* level refers to the behaviour of the individual people within the organisation. An intrapreneurial organisation values each individual employee, and rewards and recognises the individual for their contribution and for the development and implementation of new ideas.

Another factor that needs to be considered is that of the impact of an organisation on the external environment. This can be referred to as the **external stakeholders**, who include the community in which it is located, clients / customers and suppliers. In terms of an intrapreneurial organisation, there is a strong emphasis on the customer / client relationship, as it is vital to know what they want from the organisation. Therefore making customer satisfaction and the adding of value another output of the organisation. Therefore this factor has been identified as a fourth output level that should be included in the Tushman and Nadler (1997) Congruence Model for Organisational Analysis (Figure 2.3).

The final elements that need to be considered are that of the environment consisting of two **separate levels**, namely: the *technical* level and the *social* level. In an intrapreneurial organisation there needs to be the awareness of the environment consisting of both the ‘harder’, more technical aspects of the job, as well as the ‘softer’, more social issues. Therefore these two additional elements have been added to the Tushman and Nadler (1997) model, thereby making this a *socio-technical* model. Firstly it considers the technical aspects such as the job or task of the organisation, the organisational design and structure, as well as the organisational policies. Secondly, it considers the social aspects, such as the individuals in the organisation, the organisational culture and the organisational leadership. In traditional, bureaucratic organisations these ‘softer’ social

elements are often neglected, whereas in intrapreneurial organisations, the importance of these elements is valued equally to that of the ‘harder’ technical elements.

### **2.9.7. The Concept of Congruence:**

The final element of the Tushman and Nadler (1997) Congruence Model for Organisational Analysis is the concept of ‘fit’ or congruence, which refers to the alignment of each of the components within the organisation. The components of an organisation exist in states of relative balance, consistency or ‘fit’ with each other, which indicate the performance level of the organisation. The model suggests that in some cases, the interaction between each set of organisational components is more important than the components themselves. Specifically, the congruence between two components is defined as:

*“the degree to which the needs, demands, goals, objectives and / or structures of one component are consistent with the needs, demands, objectives and / or structures of another component”* (Tushman & Nadler, 1997, p.119).

Congruence is therefore a measure of the goodness of fit between the pairs of components of an organisation. Therefore the measurement of the intensity of intrapreneurship in an organisation needs to include the evaluation of congruence between the six discussed constructs of an intrapreneurial organisation.

### **2.9.8. Adapted Model for Intrapreneurial Organisations:**

The various elements of intrapreneurial organisations, which have been discussed, can be visually represented in an adaptation of Tushman and Nadler’s (1997) Congruence Model for Organisational Analysis (Figure 2.6).

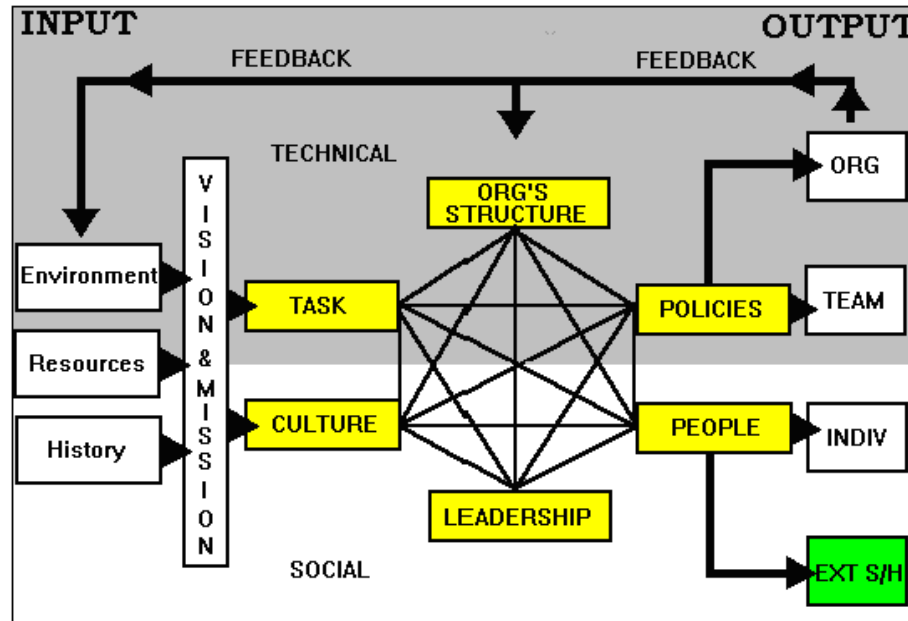


Figure 2.6. Adaptation of Tushman and Nadler's (1997) Congruence Model for Organisational Analysis (designed with the assistance of A. P Moerdyk)

This adapted model highlights the **six elements** (*task, organisational structure, policies, people, leadership and culture*), which were adapted from the original four elements (*task, individuals, formal organisational arrangements and informal organisational arrangements*). These six elements will be used as a basis for measuring intrapreneurial intensity in organisations. In addition, the fourth output level identified as the *stakeholders*, has also been included, as well as the inclusion of the differentiation between the *social* and *technical* levels of the organisation. Finally, the *vision and mission* of the organisation was added to the model in response to Morris' (2001) suggestion to integrate the intrapreneurial spirit into all aspects of the organisation. Pinchot (2000, p.37) believes that "*intrapreneurs ride to the discovery of successful ventures on the strength of their vision*". In other words, the intrapreneurial vision is a working model of all aspects of the business being created and the steps needed to make them happen.

## CHAPTER 3

### DESIGNING THE MEASURING INSTRUMENT

This section addresses how the researcher went about designing the measuring instrument and discusses the results that emerged from the various stages of the design process.

#### **3.1. Rationale for Methodology:**

It was decided that a quantitative methodology would be appropriate for this phase of the study, given the specific aims of the research. This phase of the research was concerned with the development of an instrument to measure the intensity of intrapreneurship within large South African organisations. The researcher wanted to gather a large amount of data from around the country, thus concluding that a quantitative questionnaire would be the most appropriate means of data collection. Questionnaires offer a cheaper, more convenient way of obtaining information from large numbers of people over a wide geographical area. According to Schultz and Schultz (2001), questionnaires are the most frequently used survey technique in Industrial Psychology for collecting information from employees. This is mainly due to the fact that employees can remain anonymous, and are therefore more likely to respond freely and openly. In addition, quantitative data tends to be preferred in the corporate world as it is easier to 'see the bottom line'. In other words, managements find a few numerical figures preferential to wading through pages of qualitative data to arrive at the same conclusion.

#### **3.2. Research Objective:**

The research objective was to develop a measuring instrument to determine the intensity of intrapreneurship within large South African organisations.

### **3.3. Conceptualisation and Operationalisation:**

Using an adaptation of Tushman & Nadler's (1997) Congruence Model for Organisational Analysis as a conceptual framework, together with the current literature, the researcher established the criteria of an intrapreneurial organisation and created six constructs based on Tushman and Nadler's (1997) four elements (including the two sub-elements previously discussed). These six constructs were conceptualised and defined in language by the researcher as follows:

**1. Task:**

*The basic or inherent work activities or functions that are performed by the organisation and its sub-units.*

**2. Individuals:**

*The people that make up the organisation and perform the various organisational tasks.*

**3. Structure:**

*The formal configuration of individuals and groups within the organisation with regard to the allocation of tasks, responsibilities and authority.*

**4. Organisational Policies:**

*The policies that provide employees with incentive, motivation and encouragement to perform their tasks effectively.*

**5. Leadership:**

*The characteristics of the individuals who direct and inspire the organisation, and the type of leadership that these individuals display.*

**6. Culture:**

*The set of shared, implicit assumptions that a group holds, which determines how it perceives, thinks about, and reacts to the environment.*

These constructs were then theoretically elaborated and defined in terms of how they relate in terms of intrapreneurship (TerreBlanche & Durrheim, 1999). The conceptual definitions of these six constructs were identified as the following:

**1. Task:**

*An organisation which demonstrates a high rate of new product and service introductions and innovations or different ways of tackling problems at the individual and organisational level, in terms of the identification, development and exploitation of new opportunities.*

**2. Individuals:**

*An organisation that consists of a high number of intrapreneurial individuals who have the innovative vision, courage and willingness to embrace new opportunities and demonstrate creative change.*

**3. Structure:**

*An organisation that reflects or attempts to achieve a flatter hierarchy, wider divisions of labour, wider spans of control and tends to be decentralised.*

**4. Organisational Policies:**

*An organisation that offers employees the opportunities, encouragement, motivation and incentive to experiment with new ideas without having the fear of being punished as a result of possible failure.*

**5. Leadership:**

*Organisational leadership that understands the environment, is visionary and flexible, encourages teamwork and encourages an intrapreneurial philosophy.*

**6. Culture:**

*An organisation that functions in an environment which is characterised by interdependence, low power distance, low uncertainty avoidance, and focuses on quality of life and short-term orientation.*

These constructs were then operationalised by “*translating the linguistic meaning of the conceptual definition into observable indicators*” for each of the constructs, to ensure that the operational definition correspond with the conceptual definition (TerreBlanche & Durrheim, 1999, p.80). These observable indicators for each of the constructs are the elements that are used to measure each aspect of the organisation. These indicators are summarised in point-form in Table 3.1 and were discussed in detail in Chapter 2.

**3.4. Sub-index Construction:**

Using these observable indicators discussed in Chapter 2 as the basis, the researcher designed the following six sub-indexes, which each consisted of various question items, that aimed to measure each of the six constructs (Table 3.1). Each of these sub-indexes was constructed using what Nachmias & Nachmias (1990) refer to as summated rating or Likert scaling. Likert scales are by far the most common type of scale, in which the usual response categories are “*strongly agree*,” “*agree*,” “*don’t know*,” “*disagree*,” and “*strongly disagree*”. According to Trochim (2002), scaling is the branch of measurement that involves the construction of an instrument that associates qualitative constructs with quantitative metric units. Scaling evolved out of efforts in Psychology and Education to measure so-called ‘unmeasurable’ concepts. Although the data resulting from Likert scales is ordinal, meaning it has an inherent order or sequence, one cannot assume that the respondent means that the difference between agreeing and strongly agreeing is the same as between agreeing and being undecided. However, the final score for all the respondents on the scale is the sum of all the ratings for all the items, which is why this method is often referred to as summative rating.

<b>CONSTRUCT</b>	<b>INDEX</b>	<b>MEASURES</b>
<b>1. TASK</b> (T = level of task innovation present in the organisation)	<i>Task Innovation Index</i>	<ul style="list-style-type: none"> <li>• Identification, development and exploitation of new ideas</li> <li>• Level of new product / service introductions</li> <li>• Improvement or revision of current products / services</li> <li>• Improvement of quality of current and future products / services</li> <li>• Demonstration of employee initiative</li> <li>• Level of competition with other organisations</li> </ul>
<b>2. INDIVIDUALS</b> (E = level of intrapreneurial employees in organisation)	<i>Intrapreneurial Employee Index</i>	<ul style="list-style-type: none"> <li>• Intrapreneurial qualities of employees</li> <li>• Employee attitudes towards change, risk and failure</li> <li>• Willingness of employees to embrace new opportunities</li> <li>• Levels of innovative and creative employees</li> <li>• Employees ability to deal with uncertainty</li> </ul>
<b>3. STRUCTURE</b> (S = level of structural flexibility in organisation)	<i>Structural Flexibility Index</i>	<ul style="list-style-type: none"> <li>• Flatness of organisational hierarchy</li> <li>• Level of permission required to perform task</li> <li>• Decentralisation of organisational structure</li> <li>• Flexible career paths</li> <li>• Recognition of lower level employees</li> <li>• Division of labour tasks</li> <li>• Span of control in organisation</li> </ul>
<b>4. POLICIES</b> (P = level of incentive policies present in organisation)	<i>Incentive Policies Index</i>	<ul style="list-style-type: none"> <li>• Policies encouraging creative and innovative approaches</li> <li>• Reward systems for intrapreneurial behaviour</li> <li>• Level of punishment / reward for taking calculated risks</li> <li>• Percentage of time available for working on feasibility of idea</li> <li>• Availability of intra-capital</li> </ul>
<b>5. LEADERSHIP</b> (L = level of intrapreneurial leadership in organisation)	<i>Intrapreneurial Leadership Index</i>	<ul style="list-style-type: none"> <li>• Presence of leadership in organisation</li> <li>• Innovativeness and charisma of leader</li> <li>• Leaders knowledge of the environment and competition</li> <li>• Encouragement of teamwork</li> <li>• Encouragement of open discussion and negotiation</li> <li>• Encouragement of intrapreneurial philosophy in organisation</li> </ul>
<b>6. CULTURE</b> (C = level of intrapreneurial culture within the organisation)	<i>Intrapreneurial Culture Index</i>	<ul style="list-style-type: none"> <li>• Evidence of interdependence and team work</li> <li>• Level of power distance / authoritarianism</li> <li>• Clearness of organisational vision</li> <li>• Acceptance of uncertainty</li> <li>• Attitude towards failure</li> <li>• Awareness of future opportunities</li> <li>• Encouragement of life-long learning</li> <li>• Recruitment of intrapreneurial employees</li> <li>• Encouragement of innovation and creativity and calculated risk-taking</li> </ul>

**Table 3.1. Six Intrapreneurial Sub-Indexes**

According to Nachmias and Nachmias (1990), this phase of construction consists of six main stages including; (i) compiling possible scale items, (ii) administering items, (iii)

computing a total score for each respondent, (iv) item analysis, (v) selecting the scale items, and (vi) testing validity and reliability. The researcher used these stages as a basis for the construction of the measuring instrument.

#### **3.4.1. Compiling Possible Sub-index Items:**

According to Mann (1985), it is vital to produce a pilot questionnaire in the early stages in order to determine the appropriateness of the questions asked. The researcher started this process by compiling a series of questions for each of the sub-indexes using factual questions. These questions were designed to elicit objective information from the respondents regarding various aspects of their working environment. Closed-ended questions were used, meaning that the respondents were offered a set of answers from which they were asked to choose the one that applied to them most. Closed-ended questions were chosen because they are easy to answer and their analysis is relatively straightforward. However, the researcher was aware that they might introduce some bias by forcing the respondent to choose from given alternatives.

Each item required the respondent to circle the most appropriate answer for each of the various questions on a five-point continuum. A five-point Likert scale was used which included an *extremely positive* response (5), a *positive* response (4), an *average / neutral* response (3), a *negative* response (2) and an *extremely negative* response (1) for each item. According to Nachmias and Nachmias (1990), these response categories are referred to as ‘quantifiers’, as they reflect the ‘intensity’ of the particular judgement involved. The numerical codes that accompany these categories were later used to represent the intensity of the response categories. The researcher randomly placed these scales in reverse directions on individual items, in order to prevent a response set from emerging or from contaminating the results.

The use of a five-point Likert scale proved to have been a sound decision, as it provided the respondents with a selection of options to choose from, but did not overwhelm them

with options. Feedback from the respondents in connection to the number of options provided confirmed this, with comments such as, “*I liked the number of options available to me*”, “*number of options was just right*”.

#### **3.4.1.1. Reviewing the Items:**

The compiling of the sub-index items proved to be a difficult task, as it was important to ensure that the questions that were developed would effectively measure the various constructs of intrapreneurship. It was for this reason that the initial pool of items were reviewed by a group of ‘experts’, as the researcher wanted confirmation that the items chosen did in fact represent the six constructs. These ‘experts’ consisted of people with a strong knowledge of intrapreneurial organisations (local and international), as well as individuals who are currently working in the corporate environment. These individuals were asked to judge whether the items sufficiently tapped the content domain of the constructs being measured. They were also asked to comment on the appropriateness and wording of the items. Based on these reviews, certain of the items were modified or removed from the pool of items. The response from the ‘experts’ regarding the possible items was exceptionally positive, and only a few items were modified or removed completely from the questionnaire. A few suggestions were also made to add a couple of additional items that had not been fully covered. On completion of this review, the researcher felt confident that a comprehensive collection of possible items had been developed.

#### **3.4.1.2. The Pilot Questionnaire:**

The researcher decided to make use of a ‘pen-and-paper’ pilot questionnaire at this stage in the development of the index, as it would allow for the respondent to provide written feedback on the questionnaire itself. According to Trochim (2002), it is desirable to have as large a set of potential items as possible, about 80-100 items, at this stage. At this stage the pilot questionnaire had a total of 104 items. The items for each sub-index were

grouped together in six sections in the pilot questionnaire (*task* = 16 items, *individual* = 21 items, *structure* = 19 items, *policies* = 12 items, *leadership* = 15 items, *culture* = 21 items). The researcher decided not to label the individual sub-indexes, as it was felt that this could create a response set and therefore possibly bias the participants' responses. In place of the sub-index labels, brief headings were given to provide a framework for the participant for each section of questions (Table 3.2).

<b>INDEX</b>	<b>HEADING</b>
Task Innovation Index	<i>About what the organisation does . . .</i>
Intrapreneurial Employee Index	<i>About myself as an employee . . .</i>
Structural Flexibility Index	<i>About the organisation and its systems . . .</i>
Incentive Policies Index	<i>About rewards in the organisation. . .</i>
Intrapreneurial Leadership Index	<i>About leadership of the organisation. . .</i>
Intrapreneurial Culture Index	<i>About organisational culture . . .</i>

Table 3.2. Six Intrapreneurial Sub-Index Headings

**3.4.1.3. The Design of the Logo:**

The researcher decided to name the index the *Intrapreneurial Intensity Index*, primarily as it is descriptive of the function of the instrument. Due to the index being primarily a corporate product, the researcher decided to design a logo to accompany the questionnaire, and all correspondence in connection with the index in order to appear more professional. The following logo (Figure 3.1) was decided on:



Figure 3.1. The Intrapreneurial Intensity Index Logo

The rationale behind the design of the logo was simply that the six constructs making up the *Intrapreneurial Intensity Index* are based on the foundations of an effective

organisation. Therefore the three 'I's' also symbolise the pillars or foundations on which the instrument is based.

### **3.4.2 Administering the Items:**

#### **3.4.2.1. Sampling:**

The researcher identified a sample of 500 employees working for various selected organisations in South Africa. The criteria for the inclusion in the sample stipulated that the individuals had to currently be working in one of the chosen organisations, and had to have a minimum NQF (National Qualifications Framework) Level 4 Education (equivalent of Grade 12). Because the sample being used was not aiming specifically to generalise or represent the population being investigated, convenience sampling was used to identify participants. According to Nachmias and Nachmias (1990, p.299), a convenience sample is obtained when the researcher "*selects whatever sampling units are conveniently available*". Therefore the sample consisted predominantly of individuals working in the Eastern Cape, as this where the researcher was based. However, organisations were also selected from Gauteng, the Western Cape and Kwa-Zulu Natal.

The final sample consisted of 30 different organisations including large corporations, governmental organisations, schools, universities and hospitals. When the researcher approached each of these 30 organisations, they claimed that they were 'forward-thinking' and aimed for an intrapreneurial 'type of thinking'. However, it is acceptable that the results generated during this phase of the research do not need to be generalised, as the focus of this point was on the items in the sub-indexes and not the individual participants or organisations involved.

### **3.4.2.2. Administration Process:**

The researcher contacted the 30 organisations identified in the sample and nominated a contact person from each of these organisations. This contact person was briefed about the study and the research process, and given a pack of the pilot questionnaires to distribute to individuals in the organisation who were willing to participate in the study. This contact person was given the responsibility and authority to distribute the questionnaires and supervise the administration process. The researcher had continual contact with these contact persons to ensure that the data collection process ran smoothly. Permission was obtained from each of the individuals involved by means of signing a letter of consent (**Appendix A**), before the study was conducted. This letter of consent also included a brief description of the research process, requesting the individuals' assistance and ensuring confidentiality.

The individuals were required to complete the pilot questionnaire (**Appendix B**) based on their experience of their current working environment. The contact persons then ensured that the completed questionnaires were safely and confidentially returned to the researcher. The individuals were also invited to provide the researcher or contact persons with any comments, corrections or suggestions regarding the construction of the questionnaire. Foxcroft and Roodt (2001) state that information, such as what items the respondents generally found difficult to answer or did not understand, could be invaluable during the item refinement and final item selection phase. Therefore the use of contact persons from each organisation to assist with the administration of the items proved to be an exceptionally useful exercise. Not only did these contact persons make the task less arduous and time consuming, they also provided valuable feedback on the administration process of the pilot questionnaire. This would not have been as effective if the researcher had done all the administration alone as the sample was large, and in addition, respondents might not have been as willing to provide feedback directly to the researcher. Most of the feedback that was received directly from the respondents appeared on the pilot questionnaire itself. This feedback involved the detection of minor

spelling or grammatical mistakes, minor formatting mistakes and misunderstanding of certain difficult terms.

### **3.4.2.3. Interviewing the Contact Persons:**

After the collection of all the returned questionnaires, the researcher conducted a short interview with each of the contact persons. This was done in order to gather any information regarding the administration process as well as any feedback from the respondents themselves. These interviews lasted approximately 10 to 20 minutes each, and consisted of face-to-face interviews, telephonic interviews and electronic interviews via email in the case of lack of time availability.

The brief interview with each of the contact persons resulted in interesting feedback on the pilot questionnaire. This feedback referred more to the reaction from respondents regarding the process, the length of the questionnaire and their understanding of the various questions. Some of the feedback received from the contact persons has been included below, with comments from the researcher regarding some of the items:

*“In connection with the questionnaires, most people found them a waste of time, the ‘yes’ / ‘no’ answers kept changing sides, trying to catch you out; the questions were very difficult for people in very big institutions to answer as most of the questions’ answers were unknown to them”.*

This first comment highlights the notion that people dislike filling out questionnaires, which is a difficult problem to get around, as questionnaires continually prove to be a convenient way to access large amount of data. This reaction to questionnaires is reflected in the typically low return rates on questionnaires. The comment regarding the fact that the questions *‘kept changing sides, trying to catch you out’* is not entirely accurate. It was not the intention of the researcher to ‘catch anyone out’, but rather to prevent a response set from emerging. The comment regarding the questions being too

difficult is a valid one, and the researcher made serious efforts to improve the understanding of the questionnaire. These efforts included, simplifying some of the questions, as well as inserting footnotes to define the more difficult terms. It was hoped that this would help respondents in understanding and completing the questionnaire.

The length of the questionnaire elicited many comments, as most people found it too long. The researcher acknowledged this as being valid, but felt it was unavoidable in the developmental stages. This is due to the fact that it was necessary to have as many items as possible to work from during the early index construction phases. Feedback received from contact persons also focussed on the process of completing the questionnaire:

*“Many people responded to this in terms of their department, not the organisation as a whole. It would be very different if the organisation was the focus”.*

In response to this comment, the researcher acknowledges that there was no clear explanation regarding whether it was departmentally or organisationally based. The initial feeling was that it was not really a concern. However, in hindsight, the researcher decided that firstly, the instructions should be more clearly stated, and secondly a separate questionnaire should be developed for the examination of departmental intrapreneurial qualities. In other words, there needs to be a distinction between analysing an organisation as a whole and that of analysing an individual department. Accordingly the instructions were modified to read:

*“Please select the **ONE** answer you believe best describes your current working environment / working conditions within your organisation as a whole”.*

In addition to feedback regarding the administration of the pilot questionnaire and the questionnaire itself, feedback was also provided regarding the ‘image’ of the pilot questionnaire. Comments were made about the professional look, the covering letter and the logo, which according to several of the respondents, “made it look like it was

*authentic / valid and worth filling in*". This was the intention of the researcher, who hoped it would help with the return rate of the pilot questionnaire. All this feedback provided valuable information, which was utilized in the refinement of the final questionnaire.

**3.4.3. Data Capture:**

The total of 30 organisations that were included in the sample are shown in the following graph (Graph 3.1.), indicating the return rates for each organisation:



**Graph 3.1. Return Rate of Pilot Questionnaires**

The major disadvantage of questionnaire surveys is that the response rate is typically quite low, around 20 – 30 %. In this case, a total of 500 pilot questionnaires was distributed, and a total of 151 questionnaires were returned, meaning that the response rate was **30%**. Of these returned questionnaires, 105 (**21%**) were fully completed and therefore usable in the study. The low response rate did not come as a surprise as the researcher was fully aware before the pilot questionnaires were sent out that questionnaires tend to have a low return rate. An additional reason for there being a low response rate could possibly be the length of the questionnaire, which was viewed as being very long and rather ‘off-putting’.

The data from each of the 105 completed questionnaires was captured in a spreadsheet, which separated each sub-index into an individual worksheet. This allowed for the researcher to analyse each sub-index separately, whilst at the same time being able to refer to all the data simultaneously. It also allowed for the researcher to get a visual representation of the data through the means of formulae and colour coding of data. The data was therefore also easily transferable into a statistical program for further, more complex analysis. The ‘*total score*’ for each respondent for each sub-index was then calculated by summing the value of each item that was checked, and was included as an additional variable in the correlation matrix computation. For this process, a formula was inserted into the spreadsheet to calculate the six sub-index ‘sub-total scores’. This numerical result also indicated the prevalence of each individual construct that was being measured.

#### **3.4.4. Item Analysis:**

According to Foxcroft and Roodt (2001, p.77), the item analysis phase “*adds value to the item development and the development of the measure in general*”. During this phase of the development of the instrument, the pool of possible items was subjected to various forms of analysis that indicated which items should be included in the final index.

##### **3.4.4.1 Internal Consistency:**

The researcher used the internal consistency method to determine a basis for the selection of items for the final version. The internal consistency method involves calculating Item-Total correlations between each item and the ‘total score’ and retaining those with the highest correlation. This method was conducted on each of the six sub-indexes to determine the most suitable items to include in the final questionnaire. According to Nachmias and Nachmias (1990, p.280), each item is “*subjected to a measurement of its ability to separate the ‘highs’ from the ‘lows’*”. In other words, internal consistency measures or estimates how consistently the individuals respond to the items within the

scale. The results of this method will be discussed in more detail under the following section on selecting the most suitable item for the final instrument.

**3.4.5. Selecting the Scale Items:**

**3.4.5.1. Selecting Suitable Items:**

Once the correlations for each of the possible items were computed, those with the highest correlations were selected for each of the sub-indexes. Foxcroft and Roodt (2001) believe that in general any item correlation below 0.20 is regarded as a low correlation to the phenomenon being measured, and should not be included. However, the researcher only selected items achieving an item correlation of equal to or above 0.45 in order to increase the chances of selecting valid and reliable items. The items, which demonstrated a low correlation with the ‘total score’, were then removed from the sub-indexes. Only the top 10 items (with the highest correlations above 0.45) were selected for each of the sub-indexes. In addition, the researcher ensured that the items selected did not have extreme means (close to 1 or 5) or have zero or near zero variances, as these items would not be suitable for the instrument.

Task Innovation Index																	
Item	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Total score
r =	0.72	0.56	0.42	0.67	0.56	0.58	0.50	0.11	0.52	0.60	0.61	0.65	0.73	0.74	0.60	0.62	1.00
Mean	3.40	3.04	3.17	3.35	2.38	3.78	3.55	2.80	2.81	3.25	3.86	3.25	3.63	3.47	3.44	4.15	53.40
Std.Dev.	1.19	1.28	1.32	1.03	1.11	1.27	1.36	1.39	1.07	1.28	1.29	1.27	1.07	1.15	1.31	1.07	11.16

**Table 3.3. Item-Total Correlation of Task Innovative Index**

In the Item-Total correlation conducted on the *Task Innovation Index* all items except *Item C* and *Item H* displayed r-values exceeding or equal to 0.45. These two items were therefore immediately discarded from the sub-scale. None of the items displayed extreme

means (near 1 or 5) or zero / near zero variance, which would be unsuitable for the final version of the questionnaire. Therefore each of the 14 remaining items had the potential to be included in the final questionnaire. Since the aim of this method was to select the most suitable items for the questionnaire, the items with the 10 highest r-values were selected. These items included *Item A*, *Item D*, *Item F*, *Item J*, *Item K*, *Item L*, *Item M*, *Item N*, *Item O*, and *Item P*, which are highlighted in the previous table (Table 3.3).

In the Item-Total correlation conducted on the *Intrapreneurial Employee Index* *Item A*, *Item C*, *Item D*, *Item E*, *Item I*, *Item O*, *Item P*, *Item Q*, *Item S* and *Item T* displayed r-values which did not exceed 0.45. These 10 items were therefore immediately discarded from the sub-scale. *Item A* displayed a mean of 4.67 that could be viewed as being extreme (near 5) as well as a variance of 0.67 (near zero). However this item had already been discarded from the sub-scale so was of no further relevance to the analysis. Therefore of the 11 items with r-values equal to or exceeding 0.45, the items with the 10 highest r-values were selected. These items included *Item F*, *Item G*, *Item H*, *Item J*, *Item K*, *Item L*, *Item M*, *Item N*, *Item R*, and *Item U*, which are highlighted in the table below (Table 3.4).

Intrapreneurial Employee Index													
Item	A	B	C	D	E	F	G	H	I	J	K	L	M
r =	0.33	0.47	0.23	0.12	0.34	0.53	0.50	0.48	0.33	0.59	0.52	0.56	0.48
Mean	4.67	4.40	4.46	2.83	4.36	4.06	4.27	4.07	2.48	3.93	4.15	4.23	4.32
Std.Dev.	0.67	0.68	0.99	1.37	1.00	0.82	0.79	0.88	1.11	0.86	0.88	0.89	0.98

Item	N	O	P	Q	R	S	T	U	Total score
r =	0.55	0.37	0.25	0.27	0.60	0.13	0.31	0.51	1.00
Mean	3.75	3.57	3.92	3.91	3.92	2.72	3.75	4.36	82.27
Std.Dev.	0.84	1.42	0.99	0.86	0.88	1.05	0.84	0.79	7.76

Table 3.4. Item-Total Correlation of Intrapreneurial Employee Index

In the Item-Total correlation conducted on the *Structural Flexibility Index* Item B, Item C, Item I, Item K, Item M, Item N, Item P and Item R displayed r-values which did not exceed 0.45. These eight items were therefore immediately discarded from the sub-scale. None of the items displayed extreme means (near 1 or 5) or zero / near zero variance, which would be unsuitable for the final version of the questionnaire. Therefore each of the 11 remaining items had the potential to be included in the final questionnaire. Again the items with the 10 highest r-values were selected, which included Item A, Item D, Item F, Item G, Item H, Item J, Item L, Item O, Item Q, and Item S, which are highlighted in the following table (Table 3.5).

Structural Flexibility Index											
Item	A	B	C	D	E	F	G	H	I	J	K
r =	0.60	0.30	0.44	0.62	0.50	0.70	0.52	0.56	0.43	0.66	0.39
Mean	2.77	2.33	2.92	3.46	3.15	3.30	2.93	3.34	2.47	2.86	3.00
Std.Dev.	1.40	1.38	1.16	1.41	1.49	1.20	1.08	1.45	1.23	1.40	1.28

Item	L	M	N	O	P	Q	R	S	Total score
r =	0.52	0.20	-0.07	0.72	0.24	0.62	-0.44	0.52	1.00
Mean	2.19	4.06	1.58	3.04	2.91	3.92	2.94	4.08	57.33
Std.Dev.	1.32	1.09	1.14	1.58	1.35	1.05	1.34	1.12	10.61

Table 3.5. Item-Total Correlation of Structural Flexibility Index

In the Item-Total correlation conducted on the *Incentive Policies Index* all items except Item F and Item J displayed r-values that exceeded 0.45. These two items were therefore immediately discarded from the sub-scale. None of the items displayed extreme means (near 1 or 5) or zero / near zero variance, which would be unsuitable for the final version of the questionnaire. Therefore the 10 remaining items were suitable to be included in the final questionnaire. These items included Item A, Item B, Item C, Item D, Item E, Item G, Item H, Item I, Item K, and Item L, which are highlighted in Table 3.6.

**Incentive Policies Index**

Item	A	B	C	D	E	F	G	H	I	J	K	L	Total score
r =	0.65	0.68	0.50	0.51	0.56	0.44	0.64	0.64	0.57	0.39	0.53	0.69	1.00
Mean	2.04	2.99	3.12	2.60	3.18	2.17	2.34	2.23	3.31	2.53	3.20	3.26	33.00
Std.Dev.	1.37	1.13	1.20	1.30	1.18	1.34	1.45	1.26	1.31	1.21	1.46	1.17	8.80

Table 3.6.

Item-Total Correlation of Incentive Policies Index

In the Item-Total correlation conducted on the *Intrapreneurial Leadership Index* all items except *Item G* and *Item O* displayed r-values that exceeded 0.45. These two items were therefore immediately discarded from the sub-scale. None of the items displayed extreme means (near 1 or 5) or zero / near zero variance, which would be unsuitable for the final version of the questionnaire. Therefore each of the 13 remaining items had the potential to be included in the final questionnaire. Therefore the items with the 10 highest r-values were selected. These items included *Item A*, *Item B*, *Item C*, *Item E*, *Item H*, *Item I*, *Item J*, *Item K*, *Item L*, and *Item M*, which are highlighted in the table below (Table 3.7).

**Intrapreneurial Leadership Index**

Item	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Total score
r =	0.72	0.72	0.67	0.61	0.68	0.58	-0.07	0.65	0.77	0.63	0.68	0.80	0.84	0.68	0.34	1.00
Mean	3.43	3.28	3.60	3.51	3.79	3.37	2.57	3.86	3.51	3.70	3.14	3.52	3.38	4.01	3.76	52.49
Std.Dev.	1.10	1.38	1.13	1.28	1.13	1.25	1.41	1.19	1.35	1.33	1.10	1.33	1.26	1.12	1.50	11.63

Table 3.7. Item-Total Correlation of Intrapreneurial Leadership Index

Finally, in the Item-Total correlation conducted on the *Intrapreneurial Culture Index* *Item A*, *Item C*, *Item D*, *Item E*, *Item F*, *Item G*, *Item N* and *Item U* displayed r-values which did not exceed 0.45. These eight items were therefore immediately discarded from the sub-scale. None of the items displayed extreme means (near 1 or 5) or zero / near zero

variance, which would be unsuitable for the final version of the questionnaire. Therefore each of the 13 remaining items had the potential to be included in the final questionnaire. Therefore the items with the 10 highest r-values were selected, which included *Item H*, *Item I*, *Item J*, *Item L*, *Item O*, *Item P*, *Item Q*, *Item R*, *Item S*, and *Item T*, which are highlighted in the following table (Table 3.8).

Intrapreneurial Culture Index												
Item	A	B	C	D	E	F	G	H	I	J	K	L
r =	0.35	0.46	0.01	0.42	0.25	0.41	0.11	0.63	0.56	0.66	0.48	0.53
Mean	2.97	3.33	2.43	2.84	3.41	3.37	2.53	3.68	3.73	3.71	4.22	3.91
Std.Dev.	1.22	1.40	0.90	1.28	1.05	1.00	1.30	1.28	1.12	1.14	0.97	1.07

Item	M	N	O	P	Q	R	S	T	U	Total score
r =	0.46	0.36	0.48	0.57	0.54	0.62	0.55	0.51	0.10	1.00
Mean	2.80	3.95	2.77	2.61	3.94	3.02	3.37	3.60	2.96	67.45
Std.Dev.	1.34	1.05	1.54	1.36	1.18	1.09	1.30	1.41	1.35	16.30

Table 3.8. Item-Total Correlation of Intrapreneurial Culture Index

**3.4.5.2. Verification of Selected items:**

The researcher then conducted an Item-Total correlation on the selected items in each of the six sub-indexes to ensure that the selected items still correlated with the ‘total-score’. In other words, this was conducted to confirm that the remaining items correlated with the ‘total score’ of the modified sub-index. In addition, the researcher again ensured that the items that were selected did not have extreme means (close to 1 or 5) or have zero / near zero variance.

Task Innovation Index											
Item	A	D	F	J	K	L	M	N	O	P	Total score
r =	0.69	0.61	0.60	0.61	0.68	0.71	0.77	0.77	0.70	0.71	1.00
Mean	3.40	3.35	3.78	3.25	3.86	3.25	3.63	3.47	3.44	4.15	35.62
Std.Dev.	1.19	1.03	1.27	1.28	1.29	1.27	1.07	1.15	1.31	1.07	8.24

Table 3.9. Item-Total Correlation of Selected Items in Task Innovative Index

As is indicated in the previous table (Table 3.9), the Item-Total correlation conducted on the *Task Innovation Index* confirmed that all 10 items displayed r-values equal to or exceeding **0.60**, no extreme means or zero / near zero variances, indicating that all selected items were suitable for the final index. These selected items can be seen as *Item A* to *Item J* in the *Task Innovation Index* in the final version of the questionnaire (**Appendix C**).

Intrapreneurial Employee Index											
Item	F	G	H	J	K	L	M	N	R	U	Total score
r =	0.50	0.48	0.54	0.75	0.63	0.62	0.58	0.56	0.73	0.60	1.00
Mean	4.06	4.27	4.07	3.93	4.15	4.23	4.32	3.75	3.92	4.16	41.10
Std.Dev.	0.82	0.79	0.88	0.86	0.88	0.89	0.98	0.84	0.88	0.79	5.23

**Table 3.10. Item-Total Correlation of Selected Items in Intrapreneurial Employee Index**

The Item-Total correlation conducted on the *Intrapreneurial Employee Index* confirmed that all 10 items displayed r-values equal to or exceeding **0.48**, no extreme means or zero / near zero variances, indicating that all selected items were suitable for the final index. These selected items indicated in the above table (Table 3.10) can be seen as *Item A* to *Item J* in the *Intrapreneurial Employee Index* in the final version of the questionnaire (**Appendix C**). The Item-Total correlation conducted on the *Structural Flexibility Index* confirmed that all 10 items displayed r-values equal to or exceeding **0.57**, no extreme means or zero / near zero variances, indicating that all selected items were suitable for the final index. These selected items indicated in the following table (Table 3.11) can be seen as *Item A* to *Item J* in the *Structural Flexibility Index* in the final version of the questionnaire (**Appendix C**).

Structural Flexibility Index											
Item	A	D	F	G	H	J	L	O	Q	S	Total score
r =	0.59	0.60	0.77	0.61	0.64	0.70	0.59	0.78	0.64	0.57	1.00
Mean	2.77	3.46	3.30	2.93	3.34	2.86	2.19	3.04	3.92	4.08	31.93
Std.Dev.	1.40	1.41	1.20	1.08	1.45	1.40	1.32	1.58	1.05	1.12	8.59

Table 3.11. Item-Total Correlation of Selected Items in Structural Flexibility Index

Incentive Policies Index											
Item	A	B	C	D	E	G	H	I	K	L	Total score
r =	0.70	0.71	0.45	0.54	0.56	0.64	0.60	0.60	0.56	0.71	1.00
Mean	2.04	2.99	3.12	2.60	3.18	2.34	2.23	3.31	3.20	3.26	28.30
Std.Dev.	1.37	1.13	1.20	1.30	1.18	1.45	1.26	1.31	1.46	1.17	7.85

Figure 3.12. Item-Total Correlation of Selected Items in Incentive Policies Index

The Item-Total correlation conducted on the *Incentive Policies Index* confirmed that all 10 items displayed r-values equal to or exceeding **0.45**, no extreme means or zero / near zero variances, indicating that all selected items were suitable for the final index. These selected items indicated in the above table (Table 3.12) can be seen as *Item A* to *Item J* in the *Incentive Policies Index* in the final version of the questionnaire (**Appendix C**).

Intrapreneurial Leadership Index											
Item	A	B	C	E	H	I	J	K	L	M	Total score
r =	0.72	0.75	0.67	0.69	0.69	0.77	0.68	0.72	0.79	0.84	1.00
Mean	3.43	3.28	3.60	3.79	3.86	3.51	3.70	3.14	3.52	3.38	35.25
Std.Dev.	1.10	1.38	1.13	1.13	1.19	1.35	1.33	1.10	1.33	1.26	9.12

Figure 3.13. Item-Total Correlation of Selected Items in Intrapreneurial Leadership Index

The Item-Total correlation conducted on the *Intrapreneurial Leadership Index* confirmed that all 10 items displayed r-values equal to or exceeding **0.67**, no extreme means or zero / near zero variances, indicating that all selected items were suitable for the final index. These selected items indicated in the above table (Table 3.13) can be seen as *Item A* to *Item J* in the *Intrapreneurial Leadership Index* in the final version of the questionnaire (**Appendix C**).

Finally, the Item-Total correlation conducted on the *Intrapreneurial Culture Index* confirmed that all 10 items displayed r-values equal to or exceeding **0.60**, no extreme means or zero / near zero variances, indicating that all selected items were suitable for the

final index. These selected items indicated in the table below (Table 3.14) can be seen as *Item A* to *Item J* in the *Intrapreneurial Culture Index* in the final version of the questionnaire (Appendix C).

Intrapreneurial Culture Index											
Item	H	I	J	L	O	P	Q	R	S	T	Total score
r =	0.72	0.65	0.77	0.64	0.58	0.60	0.62	0.71	0.68	0.64	1.00
Mean	3.68	3.73	3.71	3.91	2.80	2.61	3.94	3.02	3.37	3.60	33.80
Std.Dev.	1.28	1.12	1.14	1.07	1.34	1.36	1.18	1.09	1.30	1.41	9.29

Table 3.14. Item-Total Correlation of selected items in Intrapreneurial Culture Index

### 3.4.5.3. Analysis of Final Questionnaire:

The six sub-indexes were then combined together in order to strengthen the final index, which consisted of a total of 60 items. These 60 items constituted the *Intrapreneurial Intensity Index*. In other words, in the final questionnaire the six numerical results were added together resulting in a single number that is representative of the intrapreneurial intensity (I) present in the organisation.  $I = [T \text{ (level of task innovation)} + E \text{ (level of intrapreneurial employees)} + S \text{ (level of structural flexibility)} + P \text{ (level of incentive policies)} + L \text{ (level of intrapreneurial leadership)} + C \text{ (level of intrapreneurial culture)}]$ . The researcher combined the 60 remaining items into a single spreadsheet and calculated a new ‘total-score’ for the *Intrapreneurial Intensity Index*. An Item-Total correlation was then conducted to confirm that the selected items correlated with the ‘total score’ of the *Intrapreneurial Intensity Index*.

As mentioned above, Foxcroft and Roodt (2001) argue that any item correlation below 0.20 is regarded as a low correlation to the phenomenon being measured, and should not be included in the measure. Therefore the researcher checked to ensure that all the selected items had a correlation score (r-value) that was higher than 0.20. As can be seen

in the following table (Table 3.15), all selected items display an r-value which exceed the recommended 0.20.

<b>Item</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
<b>r =</b>	0.50	0.42	0.34	0.43	0.54	0.61	0.62	0.61	0.61	0.70	0.21	0.20	0.23	0.28	0.31	0.24	0.32	0.20	0.22	0.28
<b>Item</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>
<b>r =</b>	0.44	0.58	0.70	0.42	0.38	0.50	0.35	0.54	0.47	0.44	0.50	0.68	0.44	0.41	0.40	0.50	0.37	0.54	0.52	0.71
<b>Item</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>47</b>	<b>48</b>	<b>49</b>	<b>50</b>	<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>
<b>r =</b>	0.67	0.60	0.52	0.64	0.54	0.58	0.56	0.65	0.70	0.72	0.69	0.60	0.77	0.63	0.49	0.42	0.69	0.64	0.64	0.61

**Table 3.15. Item-Total Correlation on Selected Items in Intrapreneurial Intensity Index**

Since these elements are regarded as being interconnected in terms of the adaptation of Tushman and Nadler’s (1997) Congruence Model for Organisational Analysis (Figure 2.6), each construct was viewed as being equally important. Therefore the index was not weighted, meaning that each construct (sub-index) carried equal weight in the index.

#### **3.4.5.4. Redesigning the Questionnaire:**

Once the researcher was satisfied that suitable items had been selected, the items were examined and all the necessary final changes were made. Many of these changes were made in response to the feedback gained from the respondents of the pilot questionnaire. The changes included fixing minor mistakes, clearing up misunderstandings and inserting footnotes to define certain difficult terms. According to Nachmias and Nachmias (1990), it is important to have clear definitions of what is meant by the various concepts to avoid creating confusion. Therefore these changes were made in order to make the questionnaire more user-friendly and easier to understand.

#### **3.4.5.5. Designing an Electronic Version:**

As most large organisations rely on electronic mail in order to communicate with one another and the outside world, the researcher decided to design an electronic version of

the questionnaire (**Appendix D**). The most positive aspects regarding the use of electronic questionnaires include the reduction of costs (i.e. postage and telephone charges), the use of electronic mail for pre-notification or follow-up purposes, and the compatibility of data with existing software programs. The researcher also felt that using an electronic version could possibly improve the response rate of the questionnaires. Shannon, Johnson, Searcy, & Lott (2002) believe that these questionnaires are faster and require only moderate technological skill to develop as they are displayed in a basic-text format.

Electronic questionnaires are typically contained within an e-mail message or as an attached file. In this case, the instructions and all relevant information regarding the research were included in the email, with the actual questionnaire included as an attached document (an attachment). Detailed instructions were included in the email, explaining to the respondents how to complete the questionnaire and how to correctly return the completed and saved version back to the researcher. After the electronic version of the questionnaire had been designed, the questionnaire was 'locked'; meaning that the document was protected and no changes could be made to the questionnaire itself. Respondents were only able to complete the questionnaire by 'clicking' on the 'option boxes' available. As some employees are more computer-literate than others, participants were given the option to complete the electronic version or to print the questionnaire and return it to the researcher via post.

Respondents were asked to reply to the email and indicate their responses by clicking on the response *option buttons* or *check boxes*. The five-point Likert Scale numerical value, which the respondent originally circled to indicate their response to the question, was placed alongside each of the option boxes. One concern about electronic questionnaires concerns the privacy and anonymity of the responses, as the respondent's e-mail address is generally attached to his / her responses.

Since respondents were unable to ‘sign’ a confidentiality agreement in the electronic version, the researcher included the various aspects of the agreement in point form. The respondent then had the option to agree or disagree with each of the points by ticking the check box. This is illustrated in the following example:

<p><i>I am aware that strict confidentiality will be adhered to, with there being no reference to employee names or the name of the organisation.</i></p> <p><b>Agree:</b> <input type="checkbox"/> <b>Disagree:</b> <input type="checkbox"/></p>
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**Figure 3.2. Example of Electronic Confidentiality Agreement**

The full agreement between the researcher and the respondents can be seen in the copy of the electronic version of the questionnaire (**Appendix D**). In addition, this agreement also included questions about the organisation, such as the age of the organisation, the number of employees and type of industry in which the organisation is located.

#### **3.4.5.6. Designing an On-Line Internet-Based Version:**

It came to the researcher’s attention that some organisations would be unable to access this electronic version, in that it was 1MB in size, and this was too large for certain mail servers to handle. Therefore the researcher designed another type of electronic questionnaire that is posted on the World Wide Web (WWW). This on-line Internet-based version of the questionnaire (**Appendix E**), could be accessed more easily by simply typing in the URL (Uniform Resource Locator) address contained in the email sent to the respondents. This on-line questionnaire again contained a brief description of the study and a confidentiality agreement similar to that of the electronic version. Basic instructions were also included on how to complete and submit the questionnaire.

The questionnaire consisted of ‘*drop-down boxes*’ for each question with the five available options to choose from. The respondents therefore answered the questionnaire by selecting the most suitable or appropriate option for each question. Once the questionnaire was completed and ‘submitted’, the results were automatically returned to

the researcher, and a 'confirmation of delivery' was sent to the respondent. These results were then automatically captured in a database in numerical format ready for the researcher to analyse, making the process much more efficient. An additional benefit of this format is that the confidentiality of the individuals involved is completely assured. The only information the researcher receives from the automated electronic database is the age of the organisation, the number of employees, the type of industry and the responses to each of the items in the questionnaire. Of the three versions of the questionnaire discussed, this version requires the greatest amount of technological knowledge and skill of the researcher and respondents, but provides the most efficient and professional method of retrieving information from large organisations.

### **3.5. Methodological Concerns:**

#### **3.5.1. Body of Literature:**

As this is a relatively new field of study, there is not a large body of literature on which to base a study. This made the designing of the questionnaire items quite difficult as the researcher aimed to be as comprehensive as possible when conceptualising the six constructs. In addition, most of the existing research is based on international studies and experiences rather than South African. This again meant that the researcher had to adapt aspects of the literature in order to make it applicable to the South African context. However, in the process of reviewing the literature, many similarities between other nationalities and the South African context were identified. This confirmed the idea that intrapreneurship is not a country-specific phenomenon, and can be identified and utilised both locally and internationally.

#### **3.5.2. Response Rate:**

The researcher acknowledges that there is a difficulty in securing an acceptable response rate. In this case, a response rate of 30% was obtained, which is viewed as being an average response. However, the researcher acknowledges this as a concern of the study as

the data obtained from the questionnaire was the primary source of data on which to base the findings. The researcher used a number of strategies to try to improve the response rate. An inducement to respond was included by means of the covering letter (**Appendix A**), where the researcher appealed to the respondents to participate in the study by filling out the questionnaire. Another strategy used was to make the questionnaire as visually appealing as possible, so that the respondent did not feel that it would be a tedious task to complete it.

# CHAPTER 4

## PSYCHOMETRIC PROPERTIES OF THE MEASURING INSTRUMENT

This section addresses how the researcher went about testing the reliability and validity of the *Intrapreneurial Intensity Index* and discusses the results that emerged from the various stages of this process.

### 4.1. Rationale for Methodology:

This phase of the research was concerned with assessing the reliability and validity of the *Intrapreneurial Intensity Index*. This stage is vital as reliability and validity are crucial indicators of the objectivity and universality of the social-scientific research process.

### 4.2. Research Objective:

The research objective was to analyse the psychometric properties of the measuring instrument designed to measure the intensity of intrapreneurship within large South African organisations.

### 4.3. Testing Reliability:

The subject of reliability would not occupy a central place in the methodological literature if the measuring instruments used by social scientists were completely valid. Kirk and Miller (1986, p.68) define reliability as “*the degree to which the finding is independent of accidental circumstances of the research*”. In other words, reliability is an indication of the extent to which a measure is free of variable random error, that is, errors that affect outcomes from observation to observation. A researcher must be certain that results obtained from one administration of a measure will not differ greatly from another administration as a result of random factors. Nunnally and Bernstein (1993, p.262)

highlight that “*doing everything feasible to prevent measurement error from occurring is far better than assessing its effects after it has occurred*”. The researcher therefore paid careful attention to reducing measurement error throughout the design process of the *Intrapreneurial Intensity Index*. This was achieved by writing the items clearly, including clear instructions for the respondents, ensuring fair administration of the instrument and briefing the contact persons on distributing and returning of the questionnaire. Although these preventative measures were taken during the design phase, the researcher still felt that it was vital to assess the reliability of the instrument before continuing any further.

#### **4.3.1. Pilot Case Study:**

An organisation, which had heard about the research being done, volunteered to be involved in this pilot case study. This organisation markets itself to the public as being an innovative and creative company, and was interested to see whether the instrument would support their claims. The researcher therefore decided that this would be a suitable company to conduct a pilot case study on. Bromely (1986) argues that this method is the bedrock of scientific investigation, and provides an extremely useful basis for further research. The organisation that was used as the pilot case study is a large South African organisation, which is located in Gauteng. The organisation is over ten years old, consisting of approximately 175 employees, and is associated with the finance industry. In their vision and mission statement they aim to provide solutions for customers through “*creative people and effective technology*”, highlighting their focus on innovation. The final electronic version of the questionnaire (**Appendix D**) was distributed to 40 employees within the sample organisation, again with the assistance of a contact person from the organisation. The contact person then ensured that the completed questionnaires were safely and confidentially returned to the researcher. A total of 20 fully completed questionnaires were returned to the researcher, resulting in a response rate of 50%.

#### **4.3.2. Split-Half Reliability:**

In order to test the internal consistency of the *Intrapreneurial Intensity Index*, the researcher used the Split-Half Reliability method. According to Nachmias and Nachmias

(1990), this method estimates reliability by treating each of two parts of a measuring instrument as a separate scale. Within the questionnaire, each sub-index was separated into two sets consisting of five items each, using odd-numbered questions for one set (Group A) and the even-numbered questions for the other (Group B). Each of the two sets of questions were then treated separately and scored accordingly. The total scores for each respondent were calculated for both groups, and the mean of the total scores for both groups were compared by calculating the correlation between Group A and Group B. The correlation between the two sets was then adjusted upwards using the Spearman-Brown formula, in order to compensate for attenuation. In this way, estimates of the test's reliability will be more accurately assessed, as the Spearman-Brown formula effectively increases the length of the test.

As can be seen by the following results in Table 4.1, the average of the total scores were very similar in both groups, with very little difference between the scores. In addition, the r-values indicated a high correlation between the two groups (r-values were equal to or exceeded 0.68), indicating that both halves of the sub-indexes are providing the same results. The adjusted r-values indicate significant sub-scale homogeneity / internal consistency.

Sub-Index	Means		Correlation Scores	Attenuated Scores
	Group A	Group B		
Task Innovation Index	20.00	18.60	0.68	0.72
Intrapreneurial Employee Index	18.85	19.65	0.86	0.90
Structural Flexibility Index	16.20	16.75	0.75	0.94
Incentive Policies Index	15.85	16.40	0.71	0.76
Intrapreneurial Leadership Index	18.50	18.70	0.84	0.87
Intrapreneurial Culture Index	18.20	18.40	0.75	0.89

**Table 4.1. Mean, Correlation & Attenuated Scores for the 6 Sub-Indexes**

The two groups of items were then correlated and assessed by computing Cronbach's Alpha ( $C\alpha$ ). Cronbach's Alpha measures how well a set of items measures a single construct. Technically speaking, Cronbach's Alpha is not a statistical test - it is a coefficient of reliability or internal consistency. According to Nunnally and Bernstein (1993, p.251), internal consistency describes the "*estimates of reliability based on the*

average correlations amongst items within an instrument”, and should be applied to all new measurement methods. A reliability coefficient of 0.80 or higher is generally considered as ‘acceptable’ in most social science applications. In the following table (Table 4.2), it can be seen that the Cronbach’s Alpha scores do not all exceed the recommended 0.80 score. This is possibly due to the fact that only five items were included in each group. Nunnally and Bernstein (1993, p.265) point out the fact that “group research is often concerned with the size of correlations and with mean differences, for which a reliability co-efficient of 0.70 is adequate”. In addition, the Guttman’s split-half reliability scores appear to all predict a high level of reliability, with scores equal to or exceeding 0.79.

Sub-Index	Cronbach’s Alpha		Guttman’s score
	Group A	Group B	
Task Innovation Index	0.65	0.81	0.79
Intrapreneurial Employee Index	0.72	0.72	0.92
Structural Flexibility Index	0.79	0.80	0.85
Incentive Policies Index	0.57	0.63	0.81
Intrapreneurial Leadership Index	0.86	0.64	0.90
Intrapreneurial Culture Index	0.82	0.86	0.85

**Table 4.2. Cronbach’s Alpha & Guttman’s Split-Half Reliability Scores for the 6 Sub-Indexes**

The researcher therefore decided to conduct the same tests on the whole index to calculate the reliability of the whole *Intrapreneurial Intensity Index*, splitting the index into 30 items per group. These calculations resulted in a Cronbach’s Alpha of **0.89** (for Group A) and **0.89** (for Group B), a correlation (between Group A and Group B) score of **0.95** and a Guttman’s split half-reliability score of **0.97**, as is indicated in the following table (Table 4.3). These results suggest that the *Intrapreneurial Intensity Index* can be regarded as being a reliable (i.e. internally consistent) measuring instrument.

Sub-Index	Cronbach’s Alpha		Correlation between group A and group B	Guttman’s score
	Group A	Group B		
Intrapreneurial Intensity Index	0.89	0.89	0.95	0.97

**Table 4.3. Cronbach’s Alpha, Correlation & Guttman’s Split-Half Reliability scores for the Intrapreneurial Intensity Index**

### 4.3.3. Test-Retest Reliability:

In addition, it is important to calculate the Test-Retest Reliability of the *Intrapreneurial Intensity Index*, as this method corresponds most closely to the conceptual definition of reliability. According to Nachmias and Nachmias (1990), this method involves the administration of a measuring instrument to the same group of people at two different times. The correlation between the two sets of observations (scores) is computed and this coefficient is a measure of the reliability or consistency over time. Error is defined as anything that leads a person to get a different score on one measure from what was obtained on another occasion, all other things being equal. In this case, the *Intrapreneurial Intensity Index* was administered to the sample organisation (n = 20) discussed in the pilot case study (**Test 1**) and four months later the instrument was administered for the second time to the same sample (**Test 2**). The researcher felt that this was an adequate passage of time as respondents were unlikely to remember how they answered the questionnaire in the first administration. Correlations were conducted on each of the six sub-indexes, in which the relationship between each corresponding item from Test 1 and Test 2 was analysed. In other words, for each sub-index, each item (scored on a five-point scale) from Test 1 was correlated with the corresponding item in Test 2, to determine whether it was answered in the same manner on both occasions.

#### 4.3.3.1. Task Innovation Index:

The results of the Test-Retest conducted on the *Task Innovation Index* indicated a high correlation between how the items were answered in the first administration of the index (Test 1) and how the items were answered in the second administration (Test 2). This can be seen in the following table (Table 4.4), where the reliability coefficients (r-values) for each item are equal to or exceed **0.72**.

ITEMS	1	2	3	4	5	6	7	8	9	10	Total
r =	0.81	0.85	0.72	0.84	0.87	0.98	0.84	0.74	1.00	1.00	1.00

Table 4.4. Test-Retest Reliability Coefficients of Task Innovation Index

It is interesting to note that *Item 9* and *Item 10* demonstrate perfect correlations (1.00) meaning that these items were answered in an identical manner on both occasions. In addition the total scores for the *Task Innovation Index*, provided a perfect correlation ( $r = 1.00$ ) between Test 1 and Test 2.

#### 4.3.3.2. Intrapreneurial Employee Index:

The results of the Test-Retest conducted on the *Intrapreneurial Employee Index* indicated a high correlation between how the items were answered in Test 1 and Test 2. This can be seen in the table below (Table 4.5), where the reliability coefficients (r-values) for each item were very high except in the case of *Item 6*, which resulted in an r-value of 0.66. *Item 6* consisted of the following statement, “*I am excited and full of enthusiasm when new opportunities arise*”, which is an attitude related statement, which could change depending on how the participant is feeling on that particular day. This provides a possible explanation as to why *Item 6* scored a slightly lower correlation between Test 1 and Test 2. However the researcher still viewed this as being a satisfactory correlation between the two administrations. In the case of the total scores for the *Intrapreneurial Employee Index*, a high correlation ( $r = 0.86$ ) was obtained between Test 1 and Test 2.

ITEMS	1	2	3	4	5	6	7	8	9	10	Total
r =	0.95	0.95	0.78	0.83	0.72	0.66	0.99	0.97	0.87	0.92	0.86

Table 4.5. Test-Retest Reliability Coefficients of Intrapreneurial Employee Index

#### 4.3.3.3. Structural Flexibility Index:

The results of the Test-Retest conducted on the *Structural Flexibility Index* indicated a high correlation between how the items were answered in Test 1 and in Test 2. This can be seen in the following table (Table 4.6), where all item except *Item 5* demonstrate r-values equal to or exceeding **0.74**. *Item 5* consisted of the following statement, “*Our organisation has flexible job designs rather than formal job descriptions*”, which is a perception related statement, meaning that how one employee perceives the structure of

the organisation might be purely based on how they perceive their own job design on that particular occasion. This provides a possible explanation as to why *Item 5* scored a slightly lower correlation between Test 1 and Test 2. However the researcher still viewed this as being a satisfactory correlation between the two administrations. It is interesting to note that *Item 8* and *Item 10* had perfect correlations between Test 1 and Test 2 resulting in an r-value of 1.00. In the case of the total scores for the *Structural Flexibility Index*, a high correlation ( $r = 0.86$ ) was obtained between Test 1 and Test 2.

ITEMS	1	2	3	4	5	6	7	8	9	10	Total
r =	0.98	0.98	0.96	0.96	0.65	0.75	0.74	1.00	0.93	1.00	0.91

Table 4.6. Test-Retest Reliability Coefficients of Structural Flexibility Index

#### 4.3.3.4. Incentive Policies Index:

The results of the Test-Retest conducted on the *Incentive Policies Index* indicated a high correlation between how the items were answered in Test 1 and Test 2. This can be seen in the table below (Table 4.7), where all items except *Item 7* demonstrated r-values equal to or exceeding **0.87**. *Item 7*, which was the exception, resulted in an r-value of 0.74, which is still seen as a more than satisfactory correlation. *Item 3* and *Item 4* resulted in perfect correlations ( $r = 1.00$ ) indicating exact responses in both administrations of the questionnaire. In the case of the total scores for the *Incentive Policies Index*, an exceptionally high correlation ( $r = 0.93$ ) was obtained between Test 1 and Test 2.

ITEMS	1	2	3	4	5	6	7	8	9	10	Total
r =	0.98	0.98	1.00	1.00	0.98	0.98	0.74	0.98	0.87	0.90	0.93

Table 4.7. Test-Retest Reliability Coefficients of Incentive Policies Index

#### 4.3.3.5. Intrapreneurial Leadership Index:

The results of the Test-Retest conducted on the *Intrapreneurial Leadership Index* indicated a high correlation between Test 1 and Test 2. This can be seen in the following table (Table 4.8), where all items, except *Item 10*, indicate exceptionally high correlations

between Test 1 and Test 2. *Item 10* demonstrates a satisfactory correlation of 0.61. *Item 10* consisted of the following statement, “*Our leader’s enthusiasm rubs off on all employees within the organisation*”, which is a perception related statement, meaning that how one employee perceives the enthusiasm of the leader might be purely based on how they perceived the leader at that particular time. This provides a possible explanation as to why *Item 10* scored a slightly lower correlation between Test 1 and Test 2. *Item 3* and *Item 7* resulted in perfect correlations ( $r = 1.00$ ) between Test 1 and Test 2. In the case of the total scores for the *Intrapreneurial Leadership Index*, an exceptionally high correlation ( $r = 0.96$ ) was obtained between Test 1 and Test 2.

ITEMS	1	2	3	4	5	6	7	8	9	10	Total
r =	0.97	0.97	1.00	0.96	0.88	0.93	1.00	0.97	0.91	0.61	0.96

Table 4.8. Test-Retest Reliability Coefficients of Intrapreneurial Leadership Index

#### 4.3.3.6. Intrapreneurial Culture Index:

The results of the Test-Retest conducted on the *Intrapreneurial Culture Index* indicated a high correlation between Test 1 and Test 2. This can be seen in the table below (Table 4.9), where all items demonstrate r-values equal to or exceeding 0.72. *Item 9* and *Item 10* resulted in perfect correlations ( $r = 1.00$ ) between the two administrations of the questionnaire. In the case of the total scores for the *Intrapreneurial Culture Index*, a perfect correlation ( $r = 1.00$ ) was obtained between Test 1 and Test 2.

ITEMS	1	2	3	4	5	6	7	8	9	10	Total
r =	0.81	0.85	0.72	0.82	0.87	0.98	0.84	0.74	1.00	1.00	1.00

Table 4.9. Test-Retest Reliability Coefficients of Intrapreneurial Culture Index

These results thus indicated that there was a very high correlation between the administration of Test 1 and Test 2, with some items producing perfect correlations between the two administrations. The following table (Table 4.10) indicates the total sub-index correlations between Test 1 and Test 2. It is interesting to note that there was a

perfect correlation between the total scores of the *Intrapreneurial Intensity Index*, which suggests that that this instrument can be regarded as being reliable.

Sub-Index	Total Score
Task Innovation Index	1.00
Intrapreneurial Employee Index	0.86
Structural Flexibility Index	0.91
Incentive Policies Index	0.93
Intrapreneurial Leadership Index	0.96
Intrapreneurial Culture Index	1.00
<i>Intrapreneurial Intensity Index</i>	1.00

**Table 4.10. Test-Retest Reliability Coefficients of Intrapreneurial Intensity Index**

After conducting Split-Half Reliability and Test-Retest Reliability tests on the questionnaire, which both resulted in evidence of high reliability, the researcher felt it was safe to conclude that the *Intrapreneurial Intensity Index* could be viewed as being a reliable instrument, with respect to both its internal consistency / homogeneity and across time / different applications.

#### **4.4. Testing Validity:**

The issue of validity arises because measurement in the social sciences is, with very few exceptions, indirect. Under such circumstances, researchers are never completely certain that they are measuring the precise property that they intend to measure. According to Nachmias and Nachmias (1990), validity is concerned with the question ‘is one measuring what one thinks one is measuring?’. Therefore validity refers to the meaning of the measure, the accuracy with which it can be assessed, and the range of inference that can be made from knowledge of the score. According to Smither (1998), measures are evaluated in terms of their internal and external validity. Internal validity refers to the accuracy of a measure in measuring what it is supposed to measure. In other words, this type of validity focuses predominantly on the theoretical aspects of the research. As there is only a small body of research that has been conducted in the field of intrapreneurship, the testing of the validity of the *Intrapreneurial Intensity Index* therefore focussed largely

on internal validity. Forms of analysis included an inter-sub-index correlation and an exploratory factor analysis. External validity refers to the relevance of a measure to other factors, which in this case, involved the comparison of results from the Entrepreneurial Performance Index (EPI) with the results of the *Intrapreneurial Intensity Index*, using a ‘known group’. These various forms of analysis were conducted on the selected sample of intrapreneurial and non-intrapreneurial organisations in order to determine the validity of the *Intrapreneurial Intensity Index*.

#### **4.4.1. Types of Validity:**

According to Rymarchyk (2002), validity in social science research has several different components, which should ideally all be included in a research project in order to enhance the overall validity of the study. The researcher examined the following four types of validity, relating to the design of measuring instruments, when analysing the validity of the *Intrapreneurial Intensity Index*. Each of these types of validity is discussed below.

##### **4.4.1.1. Face Validity:**

*“Face validity requires that your measure appears relevant to your construct to an innocent bystander, or more specifically, to those you wish to measure”* (Rymarchyk, 2002, p.2). In order to establish face validity, the researcher gave the questionnaire to a group of people with no specific knowledge of intrapreneurship, but who were able to make a judgement regarding whether the questionnaire appeared to be valid. A covering letter was also attached to each of the questionnaires that were distributed, which explained the aim of the research and provided transparency of the process to the participants involved.

Finally, the use of a logo on the questionnaire and all correspondence relating to the study provided additional face validity, as it suggested that the study was legitimate, professional and worthwhile. This was confirmed in feedback from participants who felt

that the questionnaire *'looked very professional'*. Rymarchyk (2002) points out that one should never skip establishing face validity, as without it the other components of validity cannot be achieved. Nunnally and Bernstein (1993, p.110) reinforce this belief by saying that face validity often plays *"an important public relations role in applied settings"*, which in this case was vital in order to obtain and maintain organisations' co-operation in the study by gaining the participants' acceptance.

#### **4.4.1.2. Content Validity:**

*"Validity sometimes depends greatly on the adequacy with which a specified domain of content is sampled"* (Nunnally & Bernstein, 1993, p.101). In other words, content validity is very similar to that of face validity, with the only difference being that the study should appear to be valid to experts in the field. In order to ensure that the measuring instrument contained content validity, the researcher gave the questionnaire to a group of 'experts' with a strong knowledge of intrapreneurship and of local and international intrapreneurial organisations. These 'experts' reviewed the individual items and the questionnaire as a whole to ascertain whether they felt that the questionnaire contained content valid. They confirmed that the questionnaire appeared to be valid and relevant to the field of intrapreneurship. Nunnally and Bernstein (1993) point out that this is the least empirical of the main approaches and depends largely on the extend to which authorities or experts agree on how well the material was sampled in the design phases.

#### **4.4.1.3. Construct Validity:**

The most rigorous validity test is that of construct validity. Nachmias and Nachmias (1990, p.142) explain that construct validity involves:

*"relating a measuring instrument to an overall theoretical framework in order to determine whether the instrument is tied to the concepts and theoretical assumptions that are employed"*.

In order to demonstrate the construct validity of a measuring instrument, the researcher must show that these relationships do in fact hold true. According to Nunnally and Bernstein (1993) methods of investigating construct validity involve correlations and the comparison of the two curves. “*If all the proposed measures correlate highly with one another, it can be concluded that they all measure much the same thing*” (Nunnally & Bernstein, 1993, p.90). A technique commonly used to determine this is known as the ‘known-group’ technique, which is discussed in more detail later. This was conducted on the *Intrapreneurial Intensity Index*, resulting in a correlation co-efficient of 0.80, confirming the construct validity of the instrument.

#### **4.4.1.4. Predictive Validity:**

According to Nachmias and Nachmias (1990, p.140), predictive validity is characterised by “*prediction to an external measure referred to as a criterion and by checking a measuring instrument against some outcome*”. In other words, predictive validity is the correlation between the results of a given measurement and an external criterion. Once again the ‘known-group’ technique was used as a means of measuring the predictive validity of the measuring instrument, which provided evidence that the instrument is valid. In addition, an exploratory factor analysis was conducted on the data, which as Nunnally and Bernstein (1993) point out, is important to predictive validity in that it suggests predictors that work well in practice.

#### **4.4.2. Sampling:**

In order to test the validity of the *Intrapreneurial Intensity Index*, a sample of eight organisations was drawn using non-probability, criterion-related sampling. Miles and Huberman (1994) argue that this method is useful in terms of quality assurance. Six of the organisations that were identified for this sample were organisations that are regarded as being intrapreneurial by ‘experts’ in the field. In addition these organisations advertise and promote themselves to the public domain as being innovative, receptive to new ideas, adaptable to the environment and competitive within the industry. The majority of these

organisations were identified as being highly entrepreneurial in nature by means of the *Entrepreneurial Performance Index* (EPI) that was discussed in Chapter 2. The researcher therefore felt that the combination of these factor provided suitable evidence that these organisations could be regarded as intrapreneurial, and therefore could be used as a ‘known group’ of intrapreneurial organisations. An additional two organisations were included in the sample in order to serve as a means of comparison with the other six organisations. These two organisations are large traditional and bureaucratic organisations that are regarded by ‘experts’ and the general public as being far less intrapreneurial in nature. In addition these organisation do not promote themselves to the public domain as being innovative, receptive to new ideas, adaptable to the environment or competitive within the industry. Therefore these two organisations were used as the sample of non-intrapreneurial organisations. The researcher also specified further criterion for selection, stipulating that the organisations’ total number of employees should exceed fifty so as to be regarded as large (enough) organisations. In addition the organisations had to have reached a post-growth phase in terms of development in order to be differentiated from entrepreneurial ventures or small, medium and micro-enterprises (SMME’s). Finally, the respondents from the organisations needed to have a minimum NQF (National Qualifications Framework) Level 4 education (equivalent of Grade 12) to ensure that they were capable of competently completing the questionnaire, in order to prevent any possible skewing of the results from occurring due to factors such as illiteracy.

#### **4.4.3. The Sample Organisations:**

As has already been mentioned, six intrapreneurial organisations as well as two non-intrapreneurial organisations were selected to be included in the sample to serve as a ‘known group’ sample. It was mutually agreed that no mention of individual or organisation names would be mentioned in the research to ensure confidentiality of the organisations involved. Therefore the organisations shall be referred to as *Organisation A*, *Organisation B*, *Organisation C*, *Organisation D*, *Organisation E*, *Organisation F*,

*Organisation G* and *Organisation H* in all further discussions. A brief description of each organisation is discussed below, including the response rates yielded from each organisation. The information regarding each of the organisations was obtained from the consent form attached to the final questionnaires, which requested the age, number of employees and type of industry with which the organisation is associated (**Appendix C**, **Appendix D** or **Appendix E**).

#### **4.4.3.1. Organisation A:**

*Organisation A* is a large South African network marketing organisation associated with the health and beauty industry and is situated in Johannesburg. This multi-national organisation is approximately 10 years old, and consists of an estimated 150 employees. The entire organisation consists of over 200 000 independent distributors throughout Africa. This organisation was included in the study conducted by the University of Cape Town's Graduate School of Business study that made use of the Entrepreneurial Performance Index (EPI). According to this study, this organisation scored 0.65 (65%) with regard to 'degree of entrepreneurship' (Figure 2.2), suggesting that this organisation has relatively high levels of intrapreneurial qualities. The on-line version of the final questionnaire (**Appendix E**) was distributed to 50 employees within the organisation and a total of 14 fully completed questionnaires were returned to the researcher, resulting in a response rate of approximately 28%. These response rates will be discussed later in more detail.

#### **4.4.3.2. Organisation B:**

*Organisation B* is a large South African organisation associated with the mail order catalogue industry, currently consisting of six merchandise divisions, and is situated in Cape Town. The organisation is approximately 17 years old, and consists of an estimated 70 employees. This organisation was also included in the study that made use of the EPI. According to this study, this organisation scored 0.70 (70%) with regard to 'degree of

entrepreneurship' (Figure 2.2), suggesting that this organisation has high levels of intrapreneurial qualities. The on-line version of the final questionnaire (**Appendix E**) was distributed to 30 employees within the organisation and a total of 13 fully completed questionnaires were returned to the researcher, resulting in a response rate of approximately 43%.

#### **4.4.3.3. Organisation C:**

*Organisation C* is a large South African organisation associated with the fire detection industry and is situated just outside Cape Town. The organisation is approximately 33 years old, and consists of an estimated 100 employees. Again, this organisation was included in the study conducted by the University of Cape Town's Graduate School of Business study that made use of the EPI. According to this study, this organisation scored 0.75 (75%) with regard to 'degree of entrepreneurship' (Figure 2.2), suggesting that this organisation has very high levels of intrapreneurial qualities. The on-line version of the final questionnaire (**Appendix E**) was distributed to 40 employees within the organisation and total of 24 fully completed questionnaires were returned to the researcher, resulting in a response rate of approximately 60%.

#### **4.4.3.4. Organisation D:**

*Organisation D* is a large South African organisation associated with the finance industry and is situated in Johannesburg. The organisation is approximately eight years old, and consists of an estimated 90 employees. This organisation was also included in the same study conducted that made use of the EPI. According to this study, this organisation scored 0.70 (70%) with regard to 'degree of entrepreneurship' (Figure 2.2), suggesting that this organisation has high levels of intrapreneurial qualities. A copy of the on-line version of the final questionnaire (**Appendix E**) was distributed to 30 employees within the organisation and a total of 14 fully completed questionnaires were returned to the researcher, resulting in a response rate of approximately 46%.

**4.4.3.5. Organisation E:**

*Organisation E* is a large South African organisation associated with the finance industry and is situated in Johannesburg. The organisation is approximately 12 years old, and consists of an estimated 150 employees. A copy of the electronic version of the final questionnaire (**Appendix D**) was distributed to 50 employees within the organisation. A total of 20 fully completed questionnaires were returned to the researcher, resulting in a response rate of 40%.

**4.4.3.6. Organisation F:**

*Organisation F* is a capital venture company associated with a large South African organisation involved in the energy industry and is situated in Johannesburg. The organisation is approximately four years old, and consists of an estimated 200 employees. The on-line version of the final questionnaire (**Appendix E**) was distributed to 60 employees within the organisation and a total of 12 fully completed questionnaires were returned to the researcher, resulting in a response rate of approximately 20%.

**4.4.3.7. Organisation G:**

*Organisation G* is a large South African organisation involved in the education industry and is situated in East London. The organisation is approximately 15 years old, and consists of an estimated 60 employees. The paper version of the final questionnaire (**Appendix C**) was distributed to 40 employees within the organisation and a total of 17 fully completed questionnaires were returned to the researcher, resulting in a response rate of approximately 42%.

**4.4.3.8. Organisation H:**

*Organisation H* is a large South African organisation involved in the national security industry and is situated in Grahamstown. The organisation is approximately 60 years old, and consists of an estimated 920 employees. The paper version of the final questionnaire

(**Appendix C**) was distributed to 50 employees within the organisation and a total of 20 fully completed questionnaires were returned to the researcher, resulting in a response rate of approximately 40%.

#### **4.4.4. Administration Process:**

The researcher contacted the eight organisations identified in the sample and requested their participation in the research. On confirmation of their agreement to participate, a contact person from each of these organisations was once again nominated in order to assist with the distribution of the questionnaire. Three versions of the *Intrapreneurial Intensity Index* were available to the sample, namely the paper version (**Appendix C**), the electronic version (**Appendix D**) and the on-line Internet-based version (**Appendix E**), which were discussed in more detail in Chapter 3. The contact persons from each of the organisations were briefed about the study and the research process, and sent a copy of the questionnaire in their preferred format. This contact person then ‘forwarded’ the questionnaire to all the individuals in the organisation who were willing to participate in the study. The individuals were required to complete the questionnaire based on their experience of their current working environment, and return the completed questionnaire to the researcher, either via conventional post, email or automatically via the web site.

#### **4.4.5. Response Rate:**

A total of 370 questionnaires were distributed to the eight organisations and 134 fully completed questionnaires were returned, resulting in a total response rate of approximately 36%. The response rates from each organisation are illustrated in the following table (Table 4.11). As can be seen the response rates from the eight organisations all exceed 20%. The majority of the organisations indicate return rates of over 40%, with the total return rate being **36%**. The researcher believes that this improvement on the return rate (only 21% in the design phase) could be related to the fact that the organisations were given the option of selecting their preferred format of the questionnaire.

	INDUSTRY	LOCATION	SIZE	AGE	TEST FORMAT	No. DISTRUBUTED	No. RETURNED	RESPONSE RATE
A	Health	Johannesburg	150	10	On-line	50	14	28%
B	Mail order	Cape Town	70	17	On-line	30	13	43%
C	Fire	Cape Town	100	33	On-line	40	24	60%
D	Finance	Johannesburg	90	8	On-line	30	14	46%
E	Finance	Johannesburg	150	12	Electronic	50	20	40%
F	Energy	Johannesburg	200	4	On-line	60	12	20%
G	Education	East London	60	15	Paper	40	17	42%
H	Security	Grahamstown	920	60	Paper	50	20	40%
<b>Total</b>	-	-	-	-	-	<b>370</b>	<b>134</b>	<b>36%</b>

Table 4.11. Summary of the 8 Organisations

#### 4.4.6. Data Capture:

The researcher then captured the data from each of the organisations into eight separate spreadsheets (keeping the data from each of the eight organisations separate), each with six worksheets for each of the six constructs (in the same manner as discussed in Chapter 3). Since each test or analysis conducted on the data required different aspects of the data, the keeping of the data in this manner enabled the researcher to select the appropriate data from the spreadsheets as required. With the data captured and organised, the researcher then proceeded to analyse the validity of the instrument.

#### 4.4.7. Inter-Sub-Index Correlations:

The data from each organisation was then combined together into three different groups, namely, (i) ‘**total intrapreneurial sample**’ (*Organisation A, Organisation B, Organisation C, Organisation D, Organisation E and Organisation F*), (ii) ‘**total non-intrapreneurial sample**’ (*Organisation G and Organisation H*) and (iii) ‘**total sample**’ (all of the organisations). Correlations between each of the six sub-indexes in each of the three groups were then conducted in order to analyse the relationship between each of the six areas of an organisation. Tushman and Nadler’s (1997) Congruence Model for Organisational Analysis emphasised the concept of congruence or organisational ‘fit’, which was discussed in detail in Chapter 2.

Tushman and Nadler (1997, p.119) define congruence as:

*“the degree to which the needs, demands, goals, objectives and / or structures of one component are consistent with the needs, demands, objectives and / or structures of another component”.*

The following results, indicated in Table 4.12, were produced from the correlations conducted on the **total intrapreneurial sample**. As can be seen from these r-values, which all are equal to or exceed 0.45, high correlations exist between all six of the constructs. These relationships will be discussed in more detail further on.

SUB-INDEX	Task	Individuals	Structure	Policies	Leadership	Culture
Task	-	0.71	0.49	0.57	0.52	0.62
Individuals	-	-	0.45	0.54	0.57	0.61
Structure	-	-	-	0.82	0.74	0.66
Policies	-	-	-	-	0.67	0.62
Leadership	-	-	-	-	-	0.76
Culture	-	-	-	-	-	-

Table 4.12. Inter-Sub-Index Correlations (Intrapreneurial Sample)

The following results, indicated in Table 4.13, were produced from the correlations conducted on the **total non-intrapreneurial sample**. As can be seen from these r-values, the correlations between the six constructs are significantly lower than in the intrapreneurial group. These relationships will be discussed in more detail further on.

SUB-INDEX	Task	Individuals	Structure	Policies	Leadership	Culture
Task	-	0.75	0.10	0.14	0.26	0.51
Individuals	-	-	0.23	0.45	0.51	0.52
Structure	-	-	-	0.80	0.50	0.34
Policies	-	-	-	-	0.54	0.36
Leadership	-	-	-	-	-	0.66
Culture	-	-	-	-	-	-

Table 4.13. Inter-Sub-Index Correlations (Non-intrapreneurial Sample)

The following results, indicated in Table 4.14, were produced from the correlations conducted on the **total sample**. As can be seen from these r-values, which all are equal to or exceed 0.89, extremely high correlations exist between all six of the constructs. These relationships will be discussed in more detail below.

SUB-INDEX	Task	Individuals	Structure	Policies	Leadership	Culture
Task	-	0.97	0.89	0.91	0.92	0.95
Individuals	-	-	0.90	0.91	0.94	0.95
Structure	-	-	-	0.96	0.94	0.93
Policies	-	-	-	-	0.93	0.92
Leadership	-	-	-	-	-	0.96
Culture	-	-	-	-	-	-

Table 4.14. Inter-Sub-Index Correlations (Total Sample)

#### 4.4.7.1. Task – Individuals:

The correlations between the *Task* construct and the *Individuals* construct conducted on the three groups produced the following results (Table 4.15):

Sample Groups	n	r-value
‘total intrapreneurial sample’	97	0.71
‘total non-intrapreneurial sample’	37	0.75
‘total sample’	134	0.97

Table 4.15. Task – Individuals Inter-Sub-Index Correlations

These results indicate that there is a strong relationship between these two constructs particularly in the case of the total sample ( $r = 0.97$ ). From this the researcher could conclude that there is a strong relationship between the type of work that an organisation performs and the type of personality the individual possesses regardless of whether the organisation is intrapreneurial or not. In other words, the personality of an individual and the type of work they do must relate to each other, meaning that an intrapreneurial employee must do intrapreneurial type of work and visa versa. This is supported by the fact that the intrapreneurial group ( $r = 0.71$ ) and the non-intrapreneurial group ( $r = 0.75$ ) both produced a high correlation co-efficient, indicating a strong relationship between the two constructs.

#### 4.4.7.2. Task – Organisational Structure:

The correlation between the *Task* construct and the *Organisational Structure* construct conducted on the three groups produced the following results (Table 4.16):

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.49
'total non-intrapreneurial sample'	37	0.10
'total sample'	134	0.89

Table 4.16. Task – Organisational Structure Inter-Sub-Index Correlations

These results indicate that there is a strong relationship between these two constructs in the case of the total sample ( $r = 0.89$ ), meaning that the type of structure an organisation reflects has an effect on the type and quality of products and services that an organisation produces. The intrapreneurial group indicated that there was a strong relationship between the organisational structure and the products and services produced by the organisation ( $r = 0.49$ ). This suggests that if an organisation's structure is that which encourages intrapreneurial behaviour, then the products and services produced by the organisation will be more intrapreneurial in nature. The opposite applies to non-intrapreneurial organisations, as the organisational structure does not provide a framework to support intrapreneurial activities. The weak relationship between task and organisational structure in the non-intrapreneurial group ( $r = 0.10$ ) suggests that both of these constructs need to be intrapreneurial in order for the organisation to be regarded as intrapreneurial. It is therefore insufficient for only one of the constructs to indicate intrapreneurial behaviour as then the relationship is weakened.

#### 4.4.7.3. Task – Organisational Policies:

The correlation between the *Task* construct and the *Organisational Policies* construct conducted on the three groups produced the following results (Table 4.17). These results indicate that there is a noticeably strong relationship between these two constructs in the case of the total sample ( $r = 0.91$ ), meaning that the type of policies and reward systems

that an organisation provides has an effect on the type and quality of products and services that an organisation produces.

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.57
'total non-intrapreneurial sample'	37	0.14
'total sample'	134	0.91

**Table 4.17. Task – Organisational Policies Inter-Sub-Index Correlations**

The intrapreneurial group indicated that there was a strong relationship between the organisational policies and the products and services produced by the organisation ( $r = 0.57$ ), suggesting that if an organisation's policies and reward systems encourage intrapreneurial behaviour, then the products and services produced by the organisation will be more intrapreneurial in nature. The opposite applies to non-intrapreneurial organisations, as there are no organisational policies that provide motivation or encouragement for intrapreneurial activities. The weak relationship between task and organisational policies in the non-intrapreneurial group ( $r = 0.14$ ) suggests that both of these constructs need to be viewed as being intrapreneurial in order for the organisation to be regarded as intrapreneurial. Once again it is therefore insufficient for only one of the constructs to indicate intrapreneurial behaviour, as then the relationship is weakened.

#### **4.4.7.4. Task – Leadership:**

The correlation between the *Task* construct and the *Leadership* construct conducted on the three groups produced the following results (Table 4.18):

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.52
'total non-intrapreneurial sample'	37	0.26
'total sample'	134	0.92

**Table 4.18. Task – Leadership Inter-Sub-Index Correlations**

These results indicate that there is a noticeably strong relationship between these two constructs in the case of the total sample ( $r = 0.92$ ), meaning that the type of leadership that an organisation demonstrates has an effect on the type and quality of products and

services that an organisation produces. The intrapreneurial group indicated that there was a strong relationship between the organisation's leadership and the products and services produced by the organisation ( $r = 0.52$ ). This suggests that if an organisation's leader encourages intrapreneurial behaviour, then the products and services produced by the organisation will be more intrapreneurial in nature. The results again suggest that the opposite applies to non-intrapreneurial organisations, as the leader / corporate manager does not provide motivation or encouragement for intrapreneurial activities. The weak relationship between task and leadership in the non-intrapreneurial group ( $r = 0.26$ ) suggests that both of these constructs need to be intrapreneurial in order for the organisation to be regarded as intrapreneurial. In other words it is insufficient for an organisation to purely have an intrapreneurial leader whilst lacking evidence of new or improved products and services.

#### 4.4.7.5. Task – Culture:

The correlation between the *Task* construct and the *Culture* construct conducted on the three groups produced the following results (Table 4.19):

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.62
'total non-intrapreneurial sample'	37	0.51
'total sample'	134	0.95

Table 4.19. Task – Culture Inter-Sub-Index Correlations

These results indicate that there is a direct relationship between the type and quality of products and services produced and the culture of the organisation. All three groups demonstrate high r-values, with the non-intrapreneurial group ( $r = 0.51$ ) only being marginally lower than the intrapreneurial group ( $r = 0.62$ ). This suggests that the type of organisational culture evident in an organisation has an effect on the type and quality of products and services that an organisation produces. In other words, if an organisation has a culture that encourages and fosters the spirit of intrapreneurship, the type and quality of the products and services will be more intrapreneurial. On the other hand, if an

organisation's culture does not encourage intrapreneurship, the products and services will lack intrapreneurial qualities.

#### 4.4.7.6. Individuals – Organisational Structure:

The correlation between the *Individuals* construct and the *Organisational Structure* construct conducted on the three groups produced the following results (Table 4.20):

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.45
'total non-intrapreneurial sample'	37	0.23
'total sample'	134	0.90

Table 4.20. Individuals – Organisational Structure Inter-Sub-Index Correlations

These results indicate that there is a very strong relationship between these two constructs in the case of the total sample ( $r = 0.90$ ), meaning that the type of organisational structure has an effect on the personality type of individual employees that an organisation would attract. This suggests that an organisation with a flatter, more flexible structure attracts more creative and innovative individuals who are willing to take risks in their work. The low r-value ( $r = 0.23$ ) produced by the non-intrapreneurial group could suggest that a traditional bureaucratic organisation might have individuals who are creative and innovative but are stifled by the type of organisational structure and are therefore unable to demonstrate their intrapreneurial behaviour.

#### 4.4.7.7. Individuals – Organisational Policies:

The correlation between the *Individuals* construct and the *Organisational Policies* construct conducted on the three groups produced the following results (Table 4.21):

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.45
'total non-intrapreneurial sample'	37	0.45
'total sample'	134	0.91

Table 4.21. Individuals – Organisational Policies Inter-Sub-Index Correlations

These results indicate that there is a very strong relationship between the policies and reward systems of the organisation and the type of personalities of individual employees in the organisation ( $r = 0.91$ ). All three groups demonstrate high  $r$ -values, with the non-intrapreneurial group ( $r = 0.45$ ) being equal to that of the intrapreneurial group ( $r = 0.45$ ). This suggests that the type of policies and reward systems offered by the organisation could have an effect on the personality type of individual employees that the organisation attracts. This means that organisations with policies that reward and encourage intrapreneurial behaviour are more likely to attract creative and innovative individuals who are willing to take risks, as they know that they will be recognised and rewarded for their behaviour. On the other hand, organisations that do not have reward systems in place to encourage intrapreneurial behaviour could prevent or limit individuals from reaching their true intrapreneurial potential since no incentive is provided to motivate employees to be more intrapreneurial.

#### 4.4.7.8. Individuals – Leadership:

The correlation between the *Individuals* construct and the *Leadership* construct conducted on the three groups produced the following results (Table 4.22):

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.57
'total non-intrapreneurial sample'	37	0.51
'total sample'	134	0.94

Table 4.22. Individuals – Leadership Inter-Sub-Index Correlations

These results indicate that there is a noticeably strong relationship between the leadership of the organisation and the type of personalities of individual employees in the organisation ( $r = 0.94$ ). All three groups demonstrate high  $r$ -values, with the non-intrapreneurial group ( $r = 0.51$ ) only being marginally lower than that of the intrapreneurial group ( $r = 0.57$ ). This suggests that the type of leadership of the organisation could have an effect on the type of personalities that the organisation attracts. In addition, an intrapreneurial leader might also have a stronger tendency to recruit intrapreneurial employees. In a similar light, a traditional leader / corporate

manager would tend to hire ‘sensible’, ‘responsible’ people who do not take risks and who don’t ‘rock the boat’ by wanting to change the status quo.

#### 4.4.7.9. Individuals – Culture:

The correlation between the *Individuals* construct and the *Culture* construct conducted on the three groups produced the following results (Table 4.23):

Sample Groups	n	r-value
‘total intrapreneurial sample’	97	0.61
‘total non-intrapreneurial sample’	37	0.52
‘total sample’	134	0.95

Table 4.23. Individuals – Culture Inter-Sub-Index Correlations

These results indicate that there is a visibly strong relationship between the leadership of the organisation and the type of personalities of individual employees in the organisation ( $r = 0.95$ ). All three groups demonstrate high r-values, with the non-intrapreneurial group ( $r = 0.52$ ) only being marginally lower than that of the intrapreneurial group ( $r = 0.61$ ). This suggests that the type of organisation culture could have an effect on the type of personalities that the organisation attracts. Individuals who desire to work in an environment where creativity and flexibility is valued and encouraged are more likely to want to work for organisations that reflect these qualities. In addition, an organisation with an intrapreneurial culture is more likely to foster and nurture individuals into becoming more innovative and creative. The opposite applies to non-intrapreneurial organisations who do not foster an intrapreneurial culture and therefore do not attract or nurture intrapreneurial individuals.

#### 4.4.7.10. Organisational Structure – Policies:

The correlation between the *Organisational Structure* construct and the *Organisational Policies* construct conducted on the three groups produced the following results (Table 4.24):

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.82
'total non-intrapreneurial sample'	37	0.80
'total sample'	134	0.96

**Table 4.24. Organisational Structure – Policies Inter-Sub-Index Correlations**

These results indicate that there is a distinctly strong relationship between the structure of the organisation and the organisational policies ( $r = 0.96$ ). All three groups demonstrate high r-values, with the non-intrapreneurial group ( $r = 0.82$ ) only being marginally lower than that of the intrapreneurial group ( $r = 0.80$ ). This suggests that the structure of the organisation and the reward policies are directly related and deeply entrenched in one another, meaning that traditional bureaucratic organisations will have policies that support this lack of flexibility and resistance to alter the status quo. Flexible and flatter structures, which are typical of intrapreneurial organisations, are much more likely to have reward policies and incentives that recognise and encourage non-traditional, 'risky' thinking.

#### **4.4.7.11. Organisational Structure – Leadership:**

The correlation between the *Organisational Structure* construct and the *Leadership* construct conducted on the three groups produced the following results (Table 4.25):

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.74
'total non-intrapreneurial sample'	37	0.50
'total sample'	134	0.94

**Table 4.25. Organisational Structure – Leadership Inter-Sub-Index Correlations**

These results indicate that there is a noticeably strong relationship between the structure of the organisation and the organisational leadership ( $r = 0.94$ ). This suggests that the structure of the organisation and its leadership are directly related, meaning that traditional, bureaucratic organisations will tend to have leaders / corporate managers that support this lack of flexibility and demonstrate a resistance to alter the status quo. Flexible and flatter structures are much more likely to have been designed and implemented by intrapreneurial leaders who tend to lead by example and who recognise and encourage non-traditional, 'risky' behaviour. Both the intrapreneurial ( $r = 0.74$ ) and

non-intrapreneurial ( $r = 0.50$ ) groups indicated a strong correlation between the two constructs reinforcing this belief.

#### 4.4.7.12. Organisational Structure – Culture:

The correlation between the *Organisational Structure* construct and the *Culture* construct conducted on the three groups produced the following results (Table 4.26):

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.66
'total non-intrapreneurial sample'	37	0.34
'total sample'	134	0.93

Table 4.26. Organisational Structure – Culture Inter-Sub-Index Correlations

These results indicate that there is a direct relationship between the structure of the organisation and the organisational culture ( $r = 0.93$ ). This again suggests that the structure of the organisation and its culture are directly related, meaning that flexible and flatter structures are much more likely to have been designed and implemented based on the flexible organisational culture that recognises and encourages non-traditional, 'risky' behaviour. This belief is reinforced by the intrapreneurial group, which produced an r-value of 0.66. On the other hand, non-intrapreneurial organisations ( $r = 0.34$ ) will not necessarily demonstrate any relationship between the organisation structure and its culture.

#### 4.4.7.13. Organisational Policies – Leadership:

The correlation between the *Organisational Policies* construct and the *Leadership* construct conducted on the three groups produced the following results (Table 4.27):

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.67
'total non-intrapreneurial sample'	37	0.54
'total sample'	134	0.93

Table 4.27. Organisational Policies – Leadership Inter-Sub-Index Correlations

These results indicate that there is a distinct relationship between the organisation's policies and its type of leadership ( $r = 0.93$ ). All three groups demonstrate high  $r$ -values, with the non-intrapreneurial group ( $r = 0.54$ ) only being slightly lower than that of the intrapreneurial group ( $r = 0.67$ ). This suggests that the type of leadership and the reward policies are directly related and deeply entrenched in one another, meaning that traditional bureaucratic organisations will have leaders that implement policies that support this lack of flexibility and resistance to alter the status quo. Intrapreneurial leaders are much more likely to create and implement reward policies and incentives that recognise and encourage non-traditional, 'risky' thinking.

#### 4.4.7.14. Organisational Policies – Culture:

The correlation between the *Organisational Policies* construct and the *Culture* construct conducted on the three groups produced the following results (Table 4.28):

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.62
'total non-intrapreneurial sample'	37	0.36
'total sample'	134	0.92

Table 4.28. Organisational Policies – Culture Inter-Sub-Index Correlations

These results indicate that there is an evidently strong relationship between the organisational policies and the organisational culture ( $r = 0.92$ ). This suggests that the culture of the organisation and its policies are directly related, meaning that traditional bureaucratic organisations will tend to have a culture that supports this lack of flexibility and therefore implements policies that enforce this resistance to alter the status quo. The intrapreneurial group indicated that there was a strong relationship between the organisational culture and the policies produced and implemented by the organisation ( $r = 0.62$ ), suggesting that if an organisation's culture is that which encourages intrapreneurial behaviour, then the incentive policies and reward systems will aim to encourage intrapreneurial behaviour. The opposite applies to non-intrapreneurial organisations, as the organisational culture does not provide an environment that fosters intrapreneurial

activities. The weak relationship between culture and organisational policies in the non-intrapreneurial group ( $r = 0.36$ ) suggests that both of these constructs need to be intrapreneurial in order for the organisation to be regarded as intrapreneurial. It is therefore insufficient for only one of the constructs to indicate intrapreneurial behaviour as then the relationship is weakened.

#### 4.4.7.15. Leadership – Culture:

The correlation between the *Leadership* construct and the *Culture* construct conducted on the three groups produced the following results (Table 4.29):

Sample Groups	n	r-value
'total intrapreneurial sample'	97	0.76
'total non-intrapreneurial sample'	37	0.66
'total sample'	134	0.96

Table 4.29. Leadership – Culture Inter-Sub-Index Correlations

These results indicate that there is a visibly strong relationship between the leadership of the organisation and the organisational culture ( $r = 0.96$ ). All three groups demonstrate high r-values, with the non-intrapreneurial group ( $r = 0.66$ ) only being marginally lower than that of the intrapreneurial group ( $r = 0.76$ ). This suggests that the type of organisational culture is most likely influenced by the organisation's leader / corporate manager. Intrapreneurial leaders will attempt to create and nurture an environment where creativity and flexibility is valued and encouraged. The opposite applies to non-intrapreneurial organisations that do not have leaders that foster an intrapreneurial culture.

The aim of conducting the correlations between each of these constructs was to determine whether there were in fact relationships between the six constructs discussed in the adapted Intrapreneurial Model (Figure 2.6) in Chapter 2. According to Tushman and Nadler (1997, p.119), "*other things being equal, the greater the total degree of congruence or fit between the various components, the more effective will be the*

*organisation*". The results of these correlations, confirms that there are high levels of congruence between each of the constructs. This suggests that this instrument, which is based on the Tushman and Nadler (1997) Congruence Model for Organisational Analysis, is an effective and valid means of measuring intrapreneurship.

#### **4.4.8. Known-Group Technique:**

In this phase of the research the researcher used what has been called the 'known-group' technique to analyse the validity of the *Intrapreneurial Intensity Index*. According to Nachmias and Nachmias (1990), in this method, groups of people with known characteristics are administered an instrument, and the direction of differences is predicted. Cronbach and Meehl (1955 in Nachmias & Nachmias, 1990) describe the logical process of construct validation by taking the following steps. Firstly, a proposition that an instrument measures a certain property needs to be made. In this case, stating that the *Intrapreneurial Intensity Index* aims to measure the intensity of intrapreneurship in large organisations. The second step involves inserting this proposition into the present theory or literature relating to that property. In this case the literature was thoroughly examined to determine the constructs of intrapreneurship and ways in which these constructs could be operationalised and measured. The third step that Cronbach and Meehl (1955 in Nachmias & Nachmias, 1990) suggest is that by working through the theory or literature, the researcher should be able to predict other properties that should be related to the instrument. For example, in this study the researcher predicted that organisations that scored highly on the *Entrepreneurial Performance Index* (EPI), which was discussed in Chapter 2, should similarly score highly on the *Intrapreneurial Intensity Index*.

Finally, one collects data that empirically confirms or rejects the predicted relations. If the anticipated relationships are found, the instrument is considered valid. In the case of this study, the data obtained from the discussed sample was compared to the results obtained from the EPI grid. Four of the organisations included in this study obtained high

scores with regard to ‘degree of entrepreneurship’, which are represented on the EPI grid (*Organisation A, Organisation B, Organisation C* and *Organisation D*). These scores can be interpreted as being representative of their percentage with regard to their intrapreneurial nature. These scores are illustrated in Figure 2.2, which is located in Chapter 2. In terms of the results obtained from the *Intrapreneurial Intensity Index*, the total scores and sub-index total scores from each of the four intrapreneurial organisations were converted into a percentage format in order to make the analysis of the results from the two instruments comparative. The correlation between the total scores from the *Intrapreneurial Intensity Index* and the EPI total scores indicated a strong relationship ( $r = 0.80$ ) between the two instruments, meaning that both instruments are measuring the same factor. In addition the correlations between the sub-index total scores of the *Intrapreneurial Intensity Index* and the EPI total scores indicated relatively weak relationships. This is due to the fact that the sub-indexes are only measuring certain aspects of the EPI and are therefore insufficient on their own to measure the entire concept of intrapreneurship. These results are included in the following table (Table 4.30).

	EPI	I-I	T	E	S	P	L	C
<b>Organisation A</b>	0.65	0.96	0.88	0.86	0.85	0.85	0.86	0.89
<b>Organisation B</b>	0.70	0.86	0.79	0.77	0.76	0.70	0.77	0.81
<b>Organisation C</b>	0.75	0.87	0.87	0.83	0.85	0.85	0.86	0.86
<b>Organisation D</b>	0.70	0.88	0.88	0.84	0.85	0.85	0.88	0.87
<b>Correlation with EPI</b>	-	<b>0.80</b>	<b>0.39</b>	<b>0.39</b>	<b>0.32</b>	<b>0.45</b>	<b>0.42</b>	<b>0.36</b>

Table 4.30. Correlation between EPI and III Total Scores.

Therefore it can be concluded that since the Entrepreneurial Performance Index (EPI), which has been proven to be valid, and the *Intrapreneurial Intensity Index* both measure the same factor and produce similar results, it can be assumed that the *Intrapreneurial Intensity Index* is also valid.

#### 4.4.9. Exploratory Factor Analysis:

Factor analysis is a statistical approach that can be used to analyse inter-relationships between large quantities of variables and to explain these variables in terms of their

common underlying dimensions or factors (Hair, 1992). In essence factor analysis consist of methods for finding clusters of related variables. According to Nunnally and Bernstein (1993, p.111) “*each factor is thought of as a unitary attribute which is measured to a greater or lesser degree by particular instruments depending on their correlation with the factor*”. Nunnally and Bernstein (1993), point out that factor analysis is intimately involved in validation because the factorial composition of measures plays a part in all three types of validity discussed in this chapter. In other words, factor analysis provides helpful evidence about measures, such as the *Intrapreneurial Intensity Index* that are intended to have content validity. Factor analysis is mainly important to predictive validity in suggesting predictors that work well in practice.

An exploratory factor analysis was conducted on the 60 variables making up the *Intrapreneurial Intensity Index*. The method used for the factor analysis of these 60 items consisted of the principle factor analysis extraction method. The researcher made use of Cattell’s (1966 in Nunnally & Bernstein, 1993, p.482) ‘Scree’ Test to determine the number of factors by “*separating important early factors from the rubble or random error*”. The word ‘scree’ is derived from Geomorphology where it is used to describe the debris that falls off a mountain and builds up at its base. In this image, slopes greater than 45% are seen as part of the mountain and slopes less than 45% are part of the base. In factor analysis, Eigenvalues of 1.00 or greater are considered significant (part of the mountain) and Eigenvalues of less than 1.00 are not significant. By selecting factors with Eigenvalues greater than 1.00, the Scree test identified six factors that explained the variance, confirming the framework of six constructs on which the instrument was based. After trying to force the data into other structures of four, five and seven, the researcher concluded that six factors was in fact optimal. The data was rotated using the Varimax normalised factor rotation due to the fact that according to Nunnally and Bernstein (1993, p.506) “*varimax is the definitive orthogonal solution*”, which tends to produce some high correlations and some low correlations in each column of the matrix, which is an important aspect of simple structure. Loadings were set at 0.30, which was recommended by Mboya (1999), although the minimum loadings on each factor were in fact above 0.42.

The data was then organised into clusters based on the factor loadings, as can be seen in the Factor Analysis Table (**Appendix F**). These clusters were then matched to their appropriate constructs. These clusters of factor loadings are discussed below. A summary of the results is included in the following table (Table 4.31).

Factor	Items	Name	% Variance accounted for	Minimum Factor Loading
Factor 1	51 - 60	Culture	12.61	0.56
Factor 2	21 - 30	Organisational Structure	11.72	0.54
Factor 3	1 - 10	Task	9.40	0.52
Factor 4	41 - 50	Leadership	4.03	0.47
Factor 5	31 - 40	Organisational Policies	4.49	0.42
Factor 6	11 - 20	Individuals	7.23	0.46

Table 4.31. Summary of Factor Analysis

#### 4.4.9.1. Factor 1:

Factor 1 demonstrates an explained variance of 12.61, which is the highest of all the factors. By examining the questions associated with the variables, the researcher concluded that Factor 1 could be associated with the ‘**Culture**’ construct. This could explain why the explained variance of Factor 1 is higher than that of the other factors as each of the other constructs are directly affected by an organisation’s culture. All the variable’s loadings are equal to or exceed 0.56, as can be seen in the following table (Table 4.32). In addition, all items scoring above 90% of the minimum factor loading were highlighted in order to ascertain where else items were loading significantly. Since the instrument was based on Tushman and Nadler’s (1997) Congruence Model for Organisational Analysis (Figure 2.3), it was expected that some items would load significantly onto more than factor, due to the strong relationships between the various constructs. In this case the minimum factor loading was 0.56, therefore all items equal to or exceeding **0.50** were highlighted as being significant. *Item 54* loads significantly in Factor 3 (0.52) in addition to Factor 1. This is possibly due to the fact that *Item 54* consisted of the following statement, “*We are encouraged to continually look at things in*

*new ways*”, which although relates very much to culture (Factor 1), also strongly relates to task (Factor 3).

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Var51	0.62382	0.18851	0.480919	0.141757	0.383063	0.274020
Var52	0.66738	0.41037	0.314723	0.140757	0.210033	0.295192
Var53	0.65890	0.26884	0.201826	0.253934	0.285679	0.281724
Var54	0.58679	0.28650	0.524349	0.197477	0.276315	0.206940
Var55	0.66894	0.30160	0.456847	0.069480	-0.105574	0.333228
Var56	0.568172	0.43207	0.250279	0.108147	0.234862	0.45513
Var57	0.71328	0.39036	0.342801	-0.069736	0.218547	0.191172
Var58	0.585100	0.47597	0.232593	0.070929	0.178763	0.33084
Var59	0.62060	0.43953	0.183893	0.218974	0.084867	0.421834
Var60	0.66734	0.40787	0.268110	0.190677	0.183083	0.321864

Table 4.32. Factor 1 Loadings

#### 4.4.9.2. Factor 2:

Factor 2 demonstrates an explained variance of 11.72, which is the second highest of all the factors. By examining the questions associated with the variables, the researcher concluded that Factor 2 could be associated with the ‘**Organisational Structure**’ construct. All the variable’s loadings are equal to or exceed 0.54, as can be seen in the table below (Table 4.33).

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Var21	0.30135	0.63563	0.413045	-0.039859	0.235211	0.267232
Var22	0.48964	0.52482	0.324926	-0.002903	0.233598	0.360775
Var23	0.35910	0.57397	0.258281	0.108691	0.277312	0.336435
Var24	0.16939	0.67263	0.466005	0.132281	0.118177	0.209647
Var25	0.42866	0.58062	0.189973	0.281804	0.142569	0.456696
Var26	0.27079	0.74545	0.203680	0.159166	0.348188	0.203472
Var27	0.23343	0.80429	0.170592	0.213515	0.146999	0.186854
Var28	0.62671	0.56812	0.133684	0.122185	0.266650	0.142293
Var29	0.37914	0.548310	0.373295	0.208672	0.43475	0.292476
Var30	0.38208	0.65811	0.137870	0.081882	0.486135	0.282406

Table 4.33. Factor 2 Loadings

In the case of *Variable 28*, loadings fall into both Factor 1 and Factor 2, however the researcher was not overly concerned as the loading on Factor 2 still exceeded 0.56. *Variable 28* consisted of the following statement, “*In our organisation, people have to follow lines of authority and skipping levels is strongly discouraged*”, which relates to both culture (Factor 1) and organisational structure (Factor 2). No additional items scored above 90% of the minimum factor loading (**0.49**), meaning that no other factor loadings were significant.

#### 4.4.9.3. Factor 3:

Factor 3 demonstrates an explained variance of 9.40. Once again, by examining the questions associated with the variables, the researcher concluded that Factor 3 could be associated with the ‘**Task**’ construct. All the variable’s loadings are equal to or exceed 0.52, as can be seen in the table below (Table 4.34).

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
<b>Var1</b>	0.43946	0.31725	0.579357	-0.078167	0.164717	0.475583
<b>Var2</b>	0.31168	0.27875	0.688910	0.264145	-0.002965	0.444733
<b>Var3</b>	0.310877	0.34495	0.53606	0.205537	0.285978	0.244485
<b>Var4</b>	0.38915	0.27820	0.572812	0.127430	0.141655	0.504772
<b>Var5</b>	0.307295	0.39062	0.52725	0.421693	0.295993	0.197732
<b>Var6</b>	0.23017	0.49146	0.647616	0.333168	0.150408	0.132464
<b>Var7</b>	0.558531	0.18410	0.61880	0.193137	0.303082	0.218741
<b>Var8</b>	0.36142	0.37104	0.734439	-0.072312	0.160012	0.173040
<b>Var9</b>	0.429560	0.25367	0.56966	0.250242	0.227702	0.273174
<b>Var10</b>	0.431787	0.34814	0.60434	0.204858	0.367510	0.257909

Table 4.34. Factor 3 Loadings

In this case the minimum factor loading was 0.52, therefore all items equal to or exceeding 90% of the minimum factor loading (**0.47**) were highlighted as being significant. *Item 4* loads significantly in Factor 6 (0.50) in addition to Factor 3. This is possibly due to the fact that *Item 4* consisted of the following statement, “*Our organisation is primarily influenced by the potential of untapped opportunity*”, which

although relates very much to task (Factor 3), also strongly relates to individuals (Factor 6).

*Item 6* loads significantly in Factor 2 (0.49) in addition to Factor 3. This is possibly due to the fact that *Item 6* consisted of the following statement, “*In our organisation there is a strong relationship between the number of new ideas and the number of new ideas implemented*”, which although relates very much to task (Factor 3), also strongly relates to organisational structure (Factor 2). *Item 7* loads significantly in Factor 1 (0.55) in addition to Factor 3. This is possibly due to the fact that *Item 7* consisted of the following statement, “*Our organisation is continually pursuing new opportunities*”, which although relates very much to task (Factor 3), also strongly relates to culture (Factor 1).

#### 4.4.9.4. Factor 4:

Factor 4 demonstrates an explained variance of 4.03. The researcher examined the questions associated with the variables, and concluded that Factor 4 could be associated with the ‘**Leadership**’ construct. All the variable’s loadings are equal to or exceed 0.47, as can be seen in the table below (Table 4.35).

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Var41	0.39912	0.49964	0.272850	0.503494	0.058288	0.282168
Var42	0.33394	0.41736	0.407036	0.456657	0.104486	0.405042
Var43	0.58577	0.373930	0.157739	0.51678	0.183649	0.173038
Var44	0.098828	0.27010	0.445532	0.55531	0.412096	0.201871
Var45	0.187820	0.21692	0.414865	0.69589	0.155440	0.261716
Var46	0.067957	0.34658	0.330901	0.74045	0.055677	0.162970
Var47	0.47184	0.253288	0.292560	0.49763	0.324643	0.307436
Var48	0.182024	0.36905	0.336726	0.47403	0.149147	0.480396
Var49	0.025302	0.33616	0.260311	0.67555	0.234123	0.323376
Var50	0.155164	0.41389	0.088574	0.56538	0.202586	0.497581

Table 4.35. Factor 4 Loadings

In the case of *Variable 43*, loadings fall into both Factor 4 and Factor 1, however the researcher was not overly concerned as the loading on Factor 4 was only marginally lower than on Factor 1 and still exceeded 0.51. *Variable 43* consisted of the following statement, “*Our senior executives solve problems by brainstorming together*”, which relates to both leadership (Factor 4) and culture (Factor 1). In the case of *Variable 48*, loadings fall into both Factor 4 and Factor 6, however the researcher was again not overly concerned as the loading on Factor 4 was only marginally lower than that on Factor 6 and still exceeded 0.47. *Variable 48* consisted of the following statement, “*Our leader has instilled an entrepreneurial philosophy in all employees in the organisation*”, which relates to both leadership (Factor 4) and individuals (Factor 6).

In this case the minimum factor loading was 0.52, therefore all items equal to or exceeding 90% of the minimum factor loading (**0.42**) were highlighted as being significant. *Item 41* loads significantly in Factor 2 (0.49) in addition to Factor 4. This is possibly due to the fact that *Item 41* consisted of the following statement, “*Our leader takes calculated risks with regard to exploring and seizing growth opportunities*”, which although relates very much to leadership (Factor 4), also strongly relates to organisational structure (Factor 2). *Item 44* loads significantly in Factor 3 (0.44) in addition to Factor 4. This is possibly due to the fact that *Item 44* consisted of the following statement, “*Our leader continually examines potential new market opportunities*”, which although relates very much to leadership (Factor 4), also strongly relates to task (Factor 3). *Item 47* loads significantly in Factor 1 (0.47) in addition to Factor 4. This is possibly due to the fact that *Item 47* consisted of the following statement, “*Our leader does not encourage open discussion with all employees*”, which although relates very much to leadership (Factor 4), also strongly relates to culture (Factor 1). *Item 50* loads significantly in Factor 6 (0.49) in addition to Factor 4. This is possibly due to the fact that *Item 50* consisted of the following statement, “*Our leader’s enthusiasm rubs off on all employees within the organisation*”, which although relates very much to leadership (Factor 4), also strongly relates to individuals (Factor 6).

#### 4.4.9.5. Factor 5:

Factor 5 demonstrates an explained variance of 4.49. The researcher examined the questions associated with the variables, and concluded that Factor 5 could be associated with the ‘**Organisational Policies**’ construct. All the variable’s loadings are equal to or exceed 0.42, as can be seen in the table below (Table 4.36). In the case of *Variable 34*, loadings fall into both Factor 5 and Factor 1, however the researcher was not overly concerned as the loading on Factor 5 was only marginally lower than that on Factor 1 and still exceeded 0.42. *Variable 34* consisted of the following statement, “*The organisation sets and regularly evaluates goals related to innovative, risky and proactive behaviour*”, which relates to both organisational policies (Factor 5) and organisational structure (Factor 2). In the case of *Variable 40*, loadings fall into both Factor 5 and Factor 2, however the researcher was again not overly concerned as the loading on Factor 5 was only marginally lower than that on Factor 2 and still exceeded 0.46.

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Var31	0.34607	-0.080313	0.246618	0.177426	0.64728	0.279652
Var32	0.33708	0.027513	0.302508	0.413088	0.48786	0.263591
Var33	0.23942	0.129887	0.384281	0.026130	0.66002	0.100684
Var34	0.49319	-0.035460	0.338170	-0.088145	0.42510	0.313832
Var35	0.33049	0.50548	0.320729	-0.102073	0.512818	0.304941
Var36	0.33948	0.061540	0.270035	0.000687	0.68721	0.284102
Var37	0.27205	0.343247	0.191262	-0.008971	0.74468	0.207318
Var38	0.32237	0.37902	0.311493	0.082074	0.657781	0.213226
Var39	0.41538	0.39847	0.319647	0.017325	0.52941	0.379445
Var40	0.42171	0.50722	0.234075	0.052903	0.461249	0.374150

Table 4.36. Factor 5 Loadings

In this case the minimum factor loading was 0.42, therefore all items equal to or exceeding 90% of the minimum factor loading (**0.38**) were highlighted as being significant. *Item 35* loads significantly in Factor 2 (0.50) in addition to Factor 5. This is possibly due to the fact that *Item 35* consisted of the following statement, “*The organisation uses a broad range of evaluation criteria when considering support for new*

*initiatives*”, which although relates very much to organisational policies (Factor 5), also strongly relates to organisational structure (Factor 2). *Item 39* loads significantly in Factor 1 (0.41) in addition to Factor 5. This is possibly due to the fact that *Item 39* consisted of the following statement, “*Our organisation’s philosophy is ‘if it’s not broken, why fix it?’*”, which although relates very much to organisational policies (Factor 5), also strongly relates to culture (Factor 1). *Item 40* loads significantly in Factor 1 (0.42) in addition to Factor 5. This is possibly due to the fact that *Item 40* consisted of the following statement, “*Employees receive recognition from the organisation for innovative ideas and suggestions*”, which although relates very much to organisational policies (Factor 5), also strongly relates to culture (Factor 1).

#### 4.4.9.6. Factor 6:

Factor 6 accounts for 7.23% of the explained variance. The researcher examined the questions associated with the variables, and concluded that Factor 6 could be associated with the ‘**Individuals**’ construct. All the variable’s loadings are equal to or exceed 0.46, as can be seen in the table below (Table 4.37).

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
<b>Var11</b>	0.40079	0.32244	0.215007	0.154855	0.185108	<b>0.541753</b>
<b>Var12</b>	0.40874	0.27279	0.401638	0.042055	0.364084	<b>0.542676</b>
<b>Var13</b>	0.27323	0.26230	<b>0.471270</b>	0.134582	0.247399	<b>0.592087</b>
<b>Var14</b>	0.40262	0.34777	0.321651	0.059255	0.197218	<b>0.557083</b>
<b>Var15</b>	0.276072	0.25533	<b>0.452499</b>	-0.051891	0.302129	<b>0.55488</b>
<b>Var16</b>	0.389479	0.23728	0.388733	-0.037162	0.176346	<b>0.70343</b>
<b>Var17</b>	0.104670	0.31748	<b>0.557619</b>	0.221531	0.260324	<b>0.57873</b>
<b>Var18</b>	0.24607	0.40897	0.164412	0.340887	0.387032	<b>0.462883</b>
<b>Var19</b>	0.22316	0.24858	0.361869	0.403792	0.183750	<b>0.634148</b>
<b>Var20</b>	0.40878	0.18582	0.409742	0.123234	0.390465	<b>0.508971</b>

Table 4.37. Factor 6 Loadings

In this case the minimum factor loading was 0.46, therefore all items equal to or exceeding 90% of the minimum factor loading (**0.41**) were highlighted as being

significant. *Item 13* loads significantly in Factor 3 (0.47) in addition to Factor 6. This is possibly due to the fact that *Item 13* consisted of the following statement, “*My biggest successes have resulted from my refusal to give up*”, which although relates very much to individuals (Factor 6), also strongly relates to task (Factor 3). *Item 14* loads significantly in Factor 3 (0.45) in addition to Factor 6. This is possibly due to the fact that *Item 14* consisted of the following statement, “*I tackle problems with enthusiasm and zest*”, which although relates very much to individuals (Factor 6), also strongly relates to task (Factor 3). Finally, *Item 17* loads significantly in Factor 3 (0.55) in addition to Factor 6. This is possibly due to the fact that *Item 17* consisted of the following statement, “*I view change as an opportunity for improvement rather than as a threat to my identity*”, which although relates very much to individuals (Factor 6), also strongly relates to task (Factor 3).

#### **4.5. Methodological Concerns:**

##### **4.5.1. Response Rate:**

The researcher acknowledges the fact that there is a difficulty in securing an acceptable response rate when using questionnaires as the primary method for obtaining data. However, measures were taken to improve the response rate, including an inducement to respond included in the cover letter. In addition three versions of the questionnaire (paper, electronic and on-line Internet-based) were designed to meet the specific needs of the organisations, aiming to improve the overall response rate. The researcher was however disappointed by the apparent lack of interest indicated by the low response rate. The researcher believed that this could have been affected by the lack of knowledge and awareness of intrapreneurship within organisations resulting in employees not feeling the necessity to respond. This reinforced the researcher’s belief that there is a strong need for more research and education to create awareness and interest in this dynamic field of study.

#### **4.5.2. Size of Sample:**

Due to the lack of research that has been done in this field of study there is not a large pre-existing sample of South African intrapreneurial organisations. Since the term ‘intrapreneurship’ was coined in the United States of America, most of the examples of intrapreneurial organisations in the literature refer to American corporations. In South Africa, the term is almost unknown, which made accessing a large sample extremely difficult. The researcher acknowledges that this proved to be a concern in conducting the research. However, the researcher feels that for the requirements of this study, the sample was adequate to serve the purposes of this specific research objective.

#### **4.5.3. Sample of Non-Intrapreneurial Organisations:**

The researcher acknowledges that ideally a more comprehensive ‘known-group’ sample of non-intrapreneurial organisations should have been included in the phase of the study that aimed to determine the validity of the *Intrapreneurial Intensity Index*. This would have proven to be extremely useful, as it would have provided the researcher with additional data. In other words, the results obtained from the intrapreneurial organisations could be compared more accurately with the results obtained from the non-intrapreneurial organisations. However, this was not possible at the time that the research was being conducted, as only information regarding organisation that scored highly on the EPI was available. It was therefore the researcher’s decision to include two organisation that are regarded as traditional, bureaucratic organisations in order to provide some evidence of the results that potentially could be yielded from a non-intrapreneurial sample. However, the researcher does acknowledge that this analysis was purely experimental and cannot be included as conclusive evidence of validity in terms of non-intrapreneurial organisations.

## CHAPTER 5

### APPLICATION OF THE MEASURING INSTRUMENT

This section deals with the application of the measuring instrument, the development of a scoring system for the instrument and the results that emerged from a study conducted on a sample of intrapreneurial South African organisations using the *Intrapreneurial Intensity Index*.

#### **5.1. Application of the Instrument:**

As was discussed in Chapter 2, it has been implied that because intrapreneurship is an attribute that can vary in degree and intensity, intrapreneurial intensity can theoretically be measured. It has been made clear that organisations need to find ways to measure and reward intrapreneurship in order to foster the spirit of intrapreneurship throughout the organisation. Therefore the aim of this study was to begin to fulfil this requirement by designing an instrument that would measure some of the visible qualities and behaviours that are demonstrated by intrapreneurial organisations.

This study therefore set out to develop a measuring instrument, known as the *Intrapreneurial Intensity Index*, which can be used to ascertain the intensity of intrapreneurship present in large organisations. Specifically, this instrument can provide an overall view of the organisation's intrapreneurial ability. In addition, it is able to identify the specific areas in an organisation that lack the required levels of intrapreneurship, and that would benefit from change or modification in order to become more intrapreneurial. It is the researcher's belief that the instrument developed provides a valuable means of identifying areas in need of organisational change. The *Intrapreneurial Intensity Index* has the capability to determine an organisation's 'current position' in terms of its intrapreneurial properties as well as its intrapreneurial potential. The results produced by this instrument can provide a benchmark for the organisation as well as start to identify areas of strength in addition to 'problem areas' in the organisation. This is

achieved by means of the six key organisational areas identified in the Intrapreneurial Model (Figure 2.6) discussed in Chapter 2. By identifying the specific areas requiring attention, the organisation has the potential to develop and become more intrapreneurial, taking steps to improve the specific areas of activities as identified by the *Intrapreneurial Intensity Index*.

## **5.2. Development of a Scoring System:**

In order for the *Intrapreneurial Intensity Index* to be functional, a means of scoring and interpreting the results needed to be developed. In order to do this, the researcher assessed the frequency of responses for each sub-index based on the responses emerging from the sample of six intrapreneurial organisations and two non-intrapreneurial organisations (discussed in Chapter 4). The data contained in each of the six sub-indexes obtained from the eight organisations was combined and captured into six separate spreadsheets. Each of these spreadsheets contained two worksheets, one containing the data from the intrapreneurial organisations and one containing the data from the non-intrapreneurial organisations. This data was kept separate in order to get two average scores that could serve as a benchmark. As has already been mentioned, the responses for each item had a numerical code attached to them, which included *extremely positive* (5), *positive* (4), *average / neutral* (3), *negative* (2), and *extremely negative* (1). The total sub-index scores for each individual respondent were calculated by adding his or her response for each item together. The ‘total sub-index scores’ of all the respondents in the sample of the six intrapreneurial organisations (n = 97) and two non-intrapreneurial organisations (n = 37) were added together and divided by the number of respondents, resulting in an average ‘**Intrapreneurial Sub-Index Total Score**’ and an average ‘**Non-intrapreneurial Sub-Index Total Score**’ for each of the six sub-indexes. Since each sub-index consisted of a total of 10 items, these sub-index totals ranged between 10 and 50. The average ‘**Intrapreneurial Total Score**’ and ‘**Non-Intrapreneurial Total Score**’ for the entire *Intrapreneurial Intensity Index* were also calculated. In addition the average

‘**Total Score**’ for the total sample of eight organisations was also calculated. These scores can be seen in the following table (Table 5.1).

Sub- Index	Average Intrapreneurial Total Score	Average Non-intrapreneurial Total Score	Average Total Sample Score
Task Innovation Index	42	19	35.7
Intrapreneurial Employee Index	41	20	35.1
Structural Flexibility Index	41	23	35.6
Incentive Policy Index	40	23	35.1
Intrapreneurial Leadership Index	42	20	35.6
Intrapreneurial Culture Index	42	20	25.9
<i>Intrapreneurial Intensity Index</i>	247	119	211.7

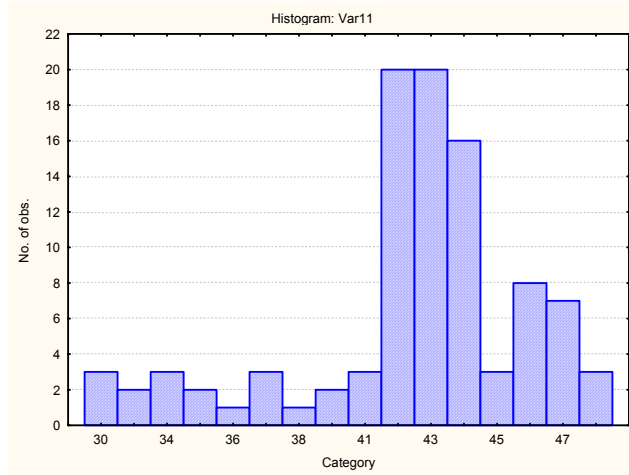
Table 5.1. Sub-Index Average Total Scores

### 5.2.1. Frequency Tables, Means and Standard Deviations:

The researcher produced frequency tables and histograms for each of the sub-indexes in order to analyse the pattern of responses emerging from the sample of intrapreneurial and of non-intrapreneurial organisations. In addition the researcher combined the sample of eight organisations into a single sample (referred to as the ‘**total sample**’) and calculated the mean and standard deviation of each sub-index. This was conducted in order to determine score categories based on the frequency of responses, in other words, ‘what does an organisation need to score in order to be classified as being extremely intrapreneurial?’

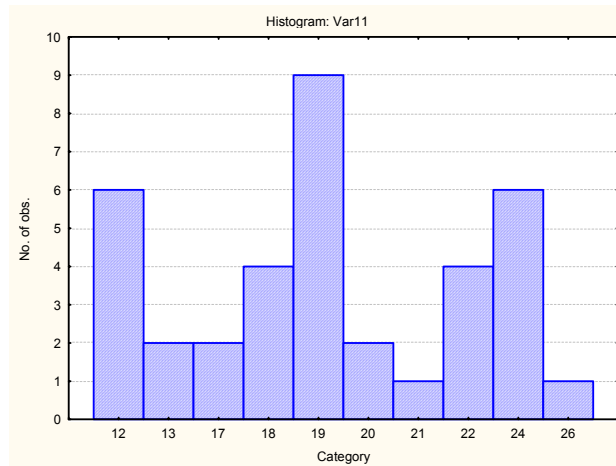
#### 5.2.1.1. Task Innovation Index:

The frequency histogram produced from data obtained from the *Task Innovation Index* for the **intrapreneurial** sample can be seen in the following chart (Graph 5.1). It can be seen that the average total responses for the intrapreneurial sample range between 30 and 48. The majority of responses (79%) range between 42 and 48, indicating that organisations should score above 42 in order to be classified as being intrapreneurial on this dimension.



**Graph 5.1. Task Innovation Index Frequency Histogram (Intrapreneurial Group)**

The frequency histogram produced from data obtained from the *Task Innovation Index* for the **non-intrapreneurial** sample can be seen in the following chart (Graph 5.2). It can be seen that the average total responses for the non-intrapreneurial sample range between 12 and 26. The majority of responses (62%) range between 12 and 19, indicating that organisations should ideally score below 20 in order to be classified as being non-intrapreneurial on this dimension.



**Graph 5.2. Task Innovation Index Frequency Histogram (Non-intrapreneurial Group)**

The following table (Table 5.2) indicates the mean and standard deviation of the ‘total sample’ of the *Task Innovation Index*.

	Valid N	Mean	Minimum	Maximum	Std.Dev.
<b>Total</b>	134	35.73134	12.00000	48.00000	11.27987

**Table 5.2. Mean and Standard Deviation of Task Innovation Index**

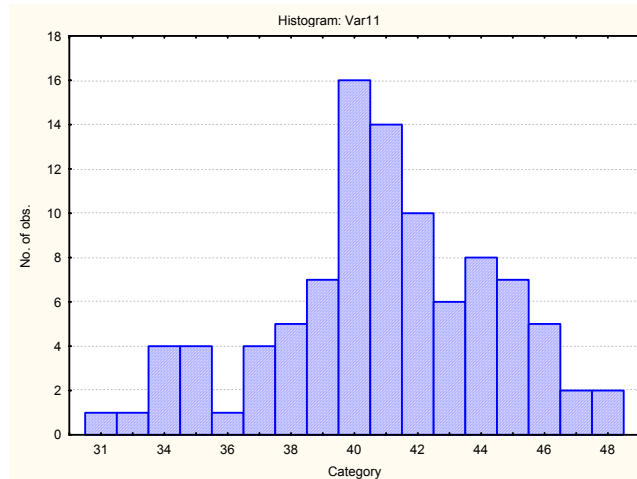
As can be seen, the mean ( $\bar{X}$ ) of the ‘total sample’ is equal to 35.7, indicating that this is the average response on this index. By adding one standard deviation ( $s = 11.2$ ) to the mean ( $\bar{X} = 35.7$ ), a total of **46.9** is obtained. This score indicates the entry point of the ‘extremely high’ score category. In the same manner, by subtracting one standard deviation ( $s = 11.2$ ) from the mean ( $\bar{X} = 35.7$ ) a total of **24.5** is obtained. This score indicates the entry point of the ‘extremely low’ score category. Therefore the following ‘score categories’ were compiled for the *Task Innovative Index*. As can be seen in the table below (Table 5.3), four score categories were identified for each sub-index, namely *Extremely Low*, *Low*, *High*, and *Extremely High*.

<b>SUB-INDEXES</b>	<b>Extremely Low</b>	<b>Low</b>	<b>High</b>	<b>Extremely High</b>
<b>Task Innovation Index</b>	10 - 24	25 - 35	36 - 46	47 - 50

**Table 5.3. Task Innovation Index Score Categories**

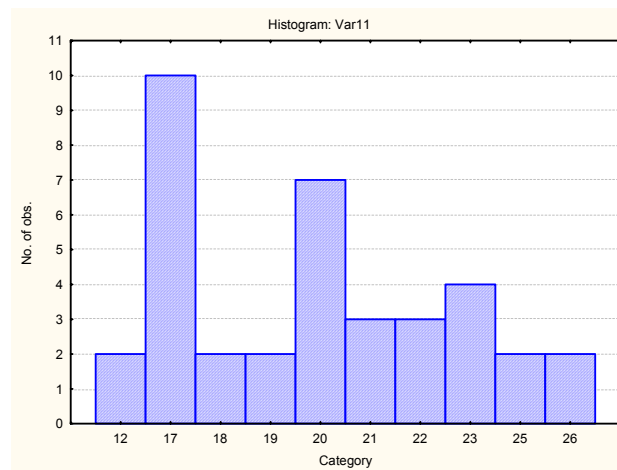
**5.2.1.2. Intrapreneurial Employee Index:**

The frequency histogram produced from data obtained from the *Intrapreneurial Employee Index* for the **intrapreneurial** sample can be seen in the following chart (Graph 5.3):



**Graph 5.3. Intrapreneurial Employee Index Frequency Histogram (Intrapreneurial Group)**

From the above frequency histogram (Graph 5.3), it can be seen that the average total responses for the intrapreneurial sample range between 31 and 48. The majority of responses (54%) range between 39 and 43, indicating that organisations should ideally score 39 or above in order to be classified as being intrapreneurial on this dimension.



**Graph 5.4. Intrapreneurial Employee Index Frequency Histogram (Non-intrapreneurial Group)**

The above frequency histogram (Graph 5.4) was produced from data obtained from the *Intrapreneurial Employee Index* for the non-intrapreneurial sample. This indicates that the average total responses for the **non-intrapreneurial** sample range between 12 and 26.

The majority of responses (62%) range between 12 and 20, indicating that organisations should ideally score 20 or lower in order to be classified as being non-intrapreneurial.

The following table (Table 5.4) indicates the mean and standard deviation of the ‘total sample’ of the *Intrapreneurial Employee Index*.

	Valid N	Mean	Minimum	Maximum	Std.Dev.
<b>Total</b>	134	35.05224	12.00000	48.00000	10.09378

**Table 5.4. Mean and Standard Deviation of Intrapreneurial Employee Index**

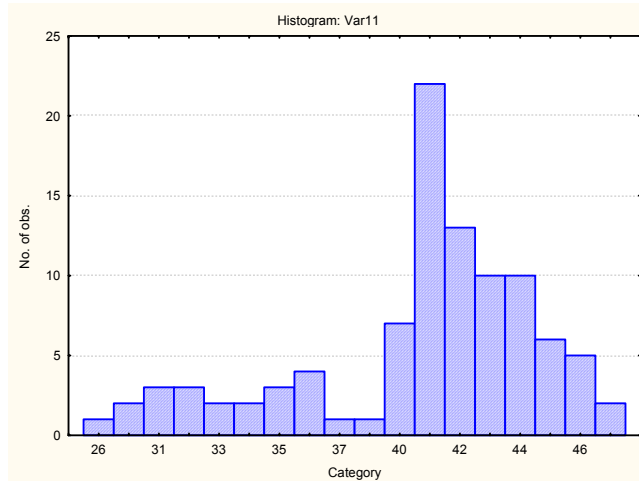
As can be seen, the mean ( $\bar{X}$ ) of the ‘total sample’ is equal to 35.1, indicating that this is the average response on this index. By adding one standard deviation ( $s = 10.1$ ) to the mean ( $\bar{X} = 35.1$ ), a total of **45.2** is obtained. This score indicates the entry point of the ‘extremely high’ score category. In the same manner, by subtracting one standard deviation ( $s = 10.1$ ) from the mean ( $\bar{X} = 35.1$ ) a total of **25** is obtained. This score indicates the entry point of the ‘extremely low’ score category. Therefore the following ‘score categories’ were compiled for the *Intrapreneurial Employee Index*, as can be seen in the table below (Table 5.5):

<b>SUB-INDEXES</b>	<b>Extremely Low</b>	<b>Low</b>	<b>High</b>	<b>Extremely High</b>
<b>Intrapreneurial Employee Index</b>	10 - 25	26 - 35	36 - 45	46 - 50

**Table 5.5. Intrapreneurial Employee Index Score Categories**

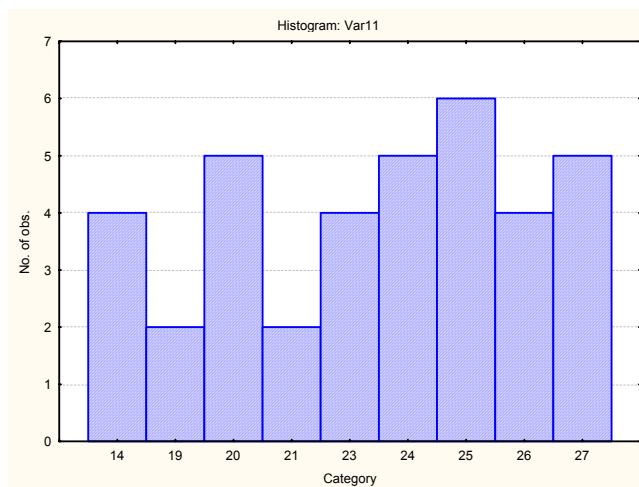
**5.2.1.3. Structural Flexibility Index:**

The frequency histogram produced from data obtained from the *Structural Flexibility Index* for the **intrapreneurial** sample can be seen in the following chart (Graph 5.5). It can be seen that the average total responses for the intrapreneurial sample range between 26 and 47. The majority of responses (86%) range between 40 and 45, indicating that organisations should ideally score 40 or above in order to be classified as being intrapreneurial on this dimension.



**Graph 5.5. Structural Flexibility Index Frequency Histogram (Intrapreneurial Group)**

The frequency histogram produced from data obtained from the *Structural Flexibility Index* for the **non-intrapreneurial** sample can be seen in the following chart (Graph 5.6). It can be seen that the average total responses for the non-intrapreneurial sample range between 14 and 27. The majority of responses (59%) range between 20 and 25, indicating that organisations should ideally score 25 or lower in order to be classified as being non-intrapreneurial on this dimension.



**Graph 5.6. Structural Flexibility Index Frequency Histogram (Non-intrapreneurial Group)**

The following table (Table 5.6) indicates the mean and standard deviation of the ‘total sample’ of the *Structural Flexibility Index*.

	Valid N	Mean	Minimum	Maximum	Std.Dev.
<b>Total</b>	134	35.57463	14.00000	49.00000	9.121055

**Table 5.6. Mean and Standard Deviation of Structural Flexibility Index**

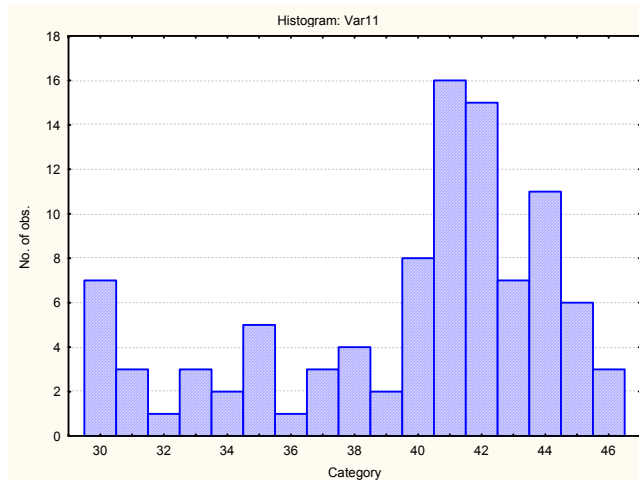
As can be seen, the mean ( $\bar{X}$ ) of the ‘total sample’ is equal to 35.6, indicating that this is the average response on this index. By adding one standard deviation ( $s = 9.1$ ) to the mean ( $\bar{X} = 35.6$ ), a total of **44.7** is obtained. This score indicates the entry point of the ‘extremely high’ score category. In the same manner, by subtracting one standard deviation ( $s = 9.1$ ) from the mean ( $\bar{X} = 35.6$ ) a total of **26.5** is obtained. This score indicates the entry point of the ‘extremely low’ score category. Therefore the following ‘score categories’ were compiled for the *Structural Flexibility Index*, as can be seen in the table below (Table 5.7):

<b>SUB-INDEXES</b>	<b>Extremely Low</b>	<b>Low</b>	<b>High</b>	<b>Extremely High</b>
<b>Structural Flexibility Index</b>	10 - 26	27 - 35	36 - 44	45 - 50

**Table 5.7. Structural Flexibility Index Score Categories**

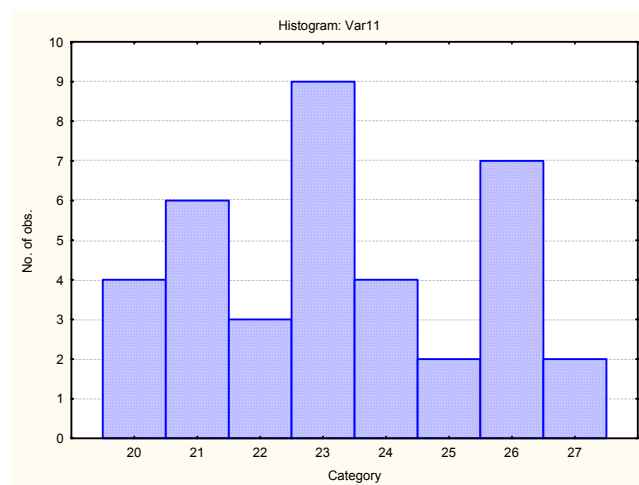
#### **5.2.1.4. Incentive Policies Index:**

The frequency histogram produced from data obtained from the *Incentive Policies Index* for the **intrapreneurial** sample can be seen in the following chart (Graph 5.7). It can be seen that the average total responses for the intrapreneurial sample range between 30 and 46. The majority of responses (72%) range between 40 and 44, indicating that organisations should ideally score 40 or greater in order to be classified as being intrapreneurial on this dimension.



**Graph 5.7. Incentive Policies Index Frequency Histogram (Intrapreneurial Group)**

The frequency histogram produced from data obtained from the *Incentive Policies Index* for the **non-intrapreneurial** sample can be seen in the following chart (Graph 5.8). It can be seen that the average total responses for the non-intrapreneurial sample range between 20 and 27. The majority of responses (59%) range between 20 and 23, indicating that organisations should ideally score 13 or less in order to be classified as being non-intrapreneurial on this dimension.



**Graph 5.8. Incentive Policies Index Frequency Histogram (Non-intrapreneurial Group)**

The following table (Table 5.8) indicates the mean and standard deviation of the ‘total sample’ of the *Incentive Policies Index*.

	Valid N	Mean	Minimum	Maximum	Std.Dev.
<b>Total</b>	134	35.17910	20.00000	46.00000	8.404126

**Table 5.8. Mean and Standard Deviation of Incentive Policies Index**

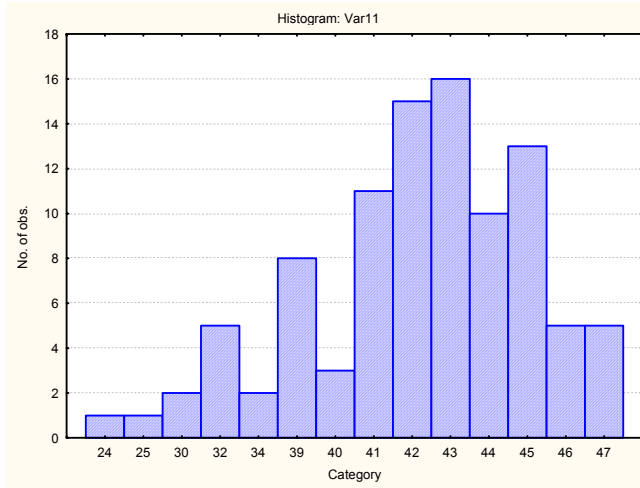
As can be seen, the mean ( $\bar{X}$ ) of the ‘total sample’ is equal to 35.1, indicating that this is the average response on this index. By adding one standard deviation ( $s = 8.4$ ) to the mean ( $\bar{X} = 35.1$ ), a total of **43.5** is obtained. This score indicates the entry point of the ‘extremely high’ score category. In the same manner, by subtracting one standard deviation ( $s = 8.4$ ) from the mean ( $\bar{X} = 35.1$ ) a total of **26.7** is obtained. This score indicates the entry point of the ‘extremely low’ score category. Therefore the following ‘score categories’ were compiled for the *Structural Flexibility Index*, as can be seen in the table below (Table 5.9):

<b>SUB-INDEXES</b>	<b>Extremely Low</b>	<b>Low</b>	<b>High</b>	<b>Extremely High</b>
<b>Incentive Policies Index</b>	10 - 26	27 - 35	36 - 43	44 - 50

**Table 5.9. Incentive Policies Index Score Categories**

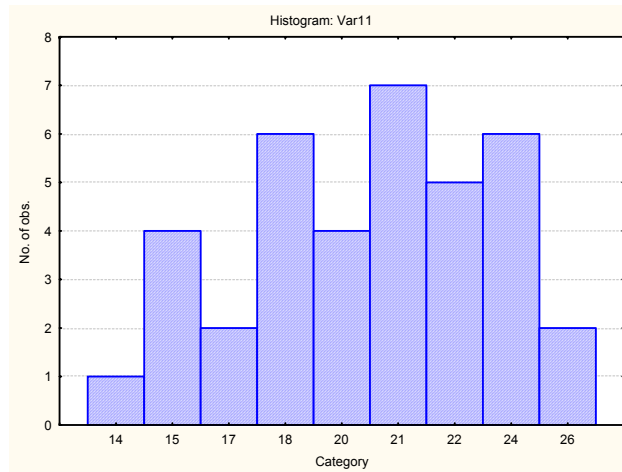
### **5.2.1.5. Intrapreneurial Leadership Index:**

The frequency histogram produced from data obtained from the *Intrapreneurial Leadership Index* for the **intrapreneurial** sample can be seen in the following chart (Graph 5.9). It can be seen that the average total responses for the intrapreneurial sample range between 24 and 47. The majority of responses (82%) range between 41 and 45, indicating that organisations should ideally score 41 or greater in order to be classified as being intrapreneurial on this dimension.



**Graph 5.9. Intrapreneurial Leadership Index Frequency Histogram (Intrapreneurial Group)**

From the following frequency histogram (Graph 5.10), it can be seen that the average total responses for the **non-intrapreneurial** sample range between 14 and 26. The majority of responses (59%) range between 18 and 22, indicating that organisations should ideally score 22 or lower in order to be classified as being non-intrapreneurial on this dimension.



**Graph 5.10. Intrapreneurial Leadership Index Frequency Histogram (Non-intrapreneurial Group)**

The following table (Table 5.10) indicates the mean and standard deviation of the ‘total sample’ of the *Intrapreneurial Leadership Index*.

	Valid N	Mean	Minimum	Maximum	Std.Dev.
<b>Total</b>	134	35.64925	14.00000	47.00000	10.43509

**Table 5.10. Mean and Standard Deviation of Intrapreneurial Leadership Index**

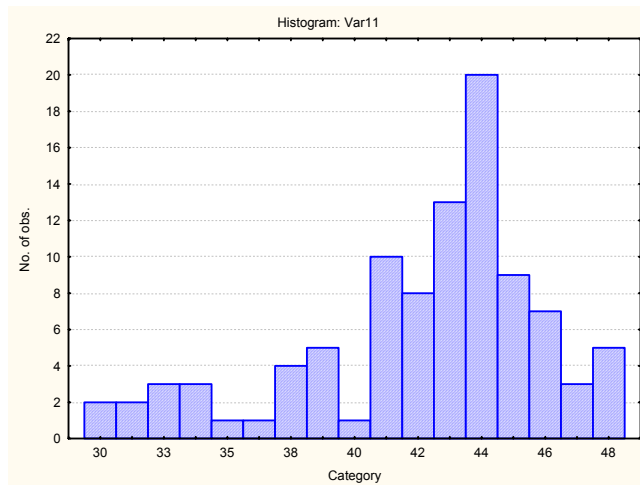
As can be seen, the mean ( $\bar{X}$ ) of the ‘total sample’ is equal to 35.6, indicating that this is the average response on this index. By adding one standard deviation ( $s = 10.4$ ) to the mean ( $\bar{X} = 35.6$ ), a total of **46** is obtained. This score indicates the entry point of the ‘extremely high’ score category. In the same manner, by subtracting one standard deviation ( $s = 10.4$ ) from the mean ( $\bar{X} = 35.6$ ) a total of **25.2** is obtained. This score indicates the entry point of the ‘extremely low’ score category. Therefore the following ‘score categories’ were compiled for the *Structural Flexibility Index*, as can be seen in the table below (Table 5.11):

<b>SUB-INDEXES</b>	<b>Extremely Low</b>	<b>Low</b>	<b>High</b>	<b>Extremely High</b>
<b>Intrapreneurial Leadership Index</b>	10 - 25	26 - 35	36 - 45	46 - 50

**Table 5.11. Intrapreneurial Leadership Index Score Categories**

**5.2.1.6. Intrapreneurial Culture Index:**

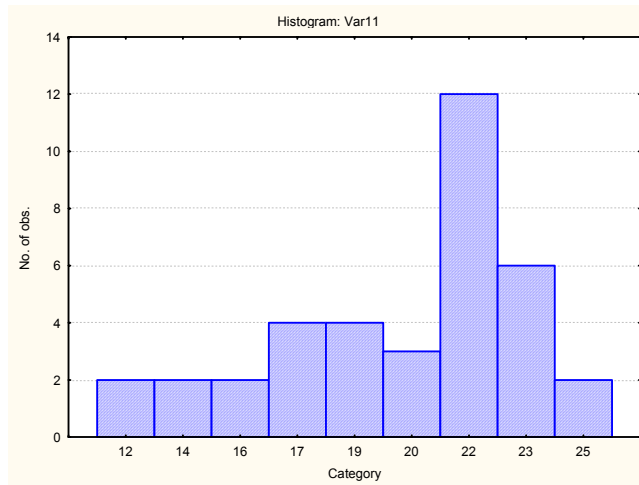
The frequency histogram produced from data obtained from the *Intrapreneurial Culture Index* for the **intrapreneurial** sample can be seen in the following chart (Graph 5.11):



**Graph 5.11. Intrapreneurial Culture Index Frequency Histogram (Intrapreneurial Group)**

From the above frequency histogram (Graph 5.11), it can be seen that the average total responses for the intrapreneurial sample range between 30 and 48. The majority of responses (61%) range between 41 and 45, indicating that organisations should ideally score 41 or higher in order to be classified as being intrapreneurial on this dimension.

The frequency histogram produced from data obtained from the *Intrapreneurial Culture Index* for the **non-intrapreneurial** sample can be seen in the following chart (Graph 5.12). It can be seen that the average total responses for the non-intrapreneurial sample range between 12 and 25. The majority of responses (62%) range between 17 and 22, indicating that organisations should ideally score 22 or lower in order to be classified as being non-intrapreneurial on this dimension.



**Graph 5.12. Intrapreneurial Culture Index Frequency Histogram (Non-intrapreneurial Group)**

The following table (Table 5.12) indicates the mean and standard deviation of the ‘total sample’ of the *Intrapreneurial Culture Index*.

	Valid N	Mean	Minimum	Maximum	Std.Dev.
<b>Total</b>	134	35.93284	12.00000	48.00000	10.65607

**Table 5.12. Mean and Standard Deviation of Intrapreneurial Culture Index**

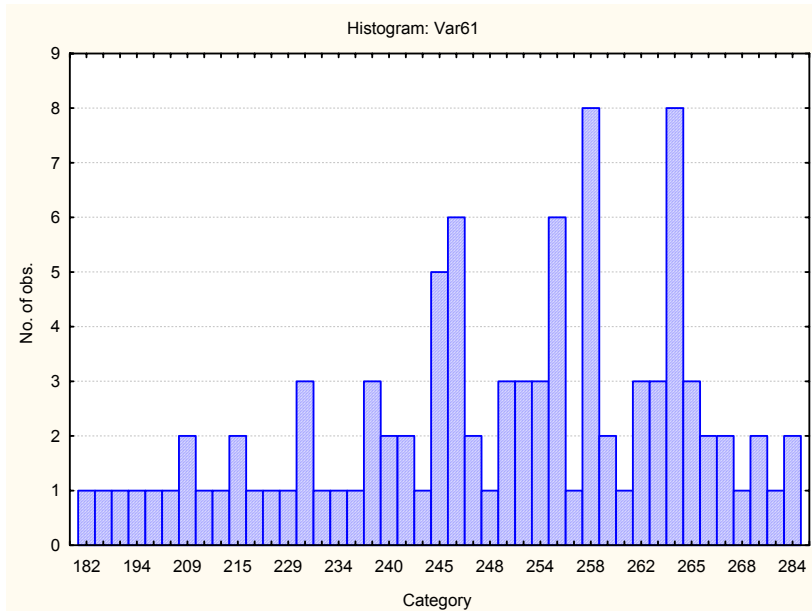
As can be seen, the mean ( $\bar{X}$ ) of the ‘total sample’ is equal to 35.9, indicating that this is the average response on this index. By adding one standard deviation ( $s = 10.7$ ) to the mean ( $\bar{X} = 35.9$ ), a total of **46.6** is obtained. This score indicates the entry point of the ‘extremely high’ score category. In the same manner, by subtracting one standard deviation ( $s = 10.7$ ) from the mean ( $\bar{X} = 35.9$ ) a total of **25.2** is obtained. This score indicates the entry point of the ‘extremely low’ score category. Therefore the following ‘score categories’ were compiled for the *Intrapreneurial Culture Index*. As can be seen in the table below (Table 5.13), the following score categories were identified:

<b>SUB-INDEXES</b>	<b>Extremely Low</b>	<b>Low</b>	<b>High</b>	<b>Extremely High</b>
<b>Intrapreneurial Culture Index</b>	10 - 25	26 - 35	36 - 46	47 - 50

Table 5.13. Intrapreneurial Culture Index Score Categories

**5.2.1.7. Intrapreneurial Intensity Index:**

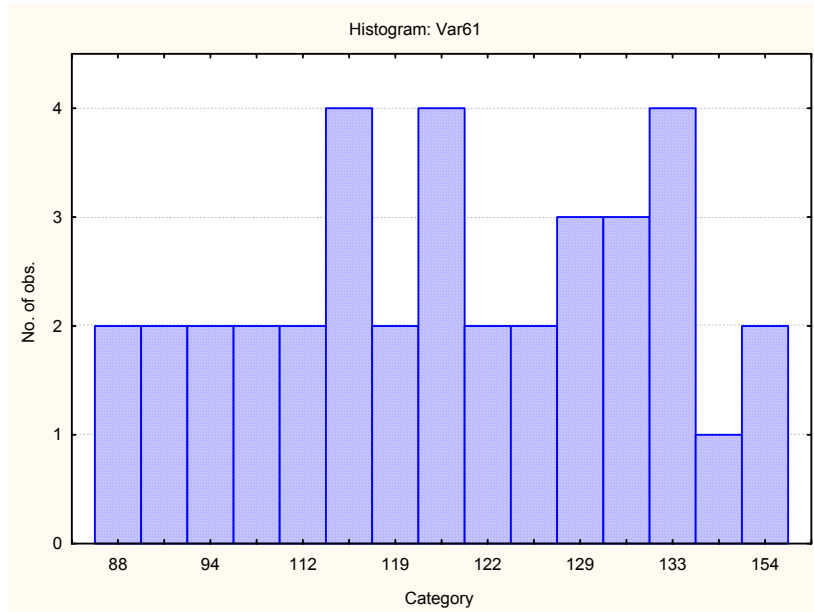
The frequency histogram produced from data obtained from the complete *Intrapreneurial Intensity Index* for the intrapreneurial sample can be seen in the following chart (Graph 5.13):



Graph 5.13. Intrapreneurial Intensity Index Frequency Histogram (Intrapreneurial Group)

From the previous frequency histogram (Graph 5.13), it can be seen that the average total responses for the **intrapreneurial** sample range between 182 and 284. The majority of responses (72%) range between 245 and 265, indicating that organisations should ideally score 245 or higher in order to be classified as being intrapreneurial on the overall scale.

The frequency histogram produced from data obtained from the *Intrapreneurial Intensity Index* for the **non-intrapreneurial** sample can be seen in the following frequency histogram (Graph 5.14). It can be seen that the average total responses for the non-intrapreneurial sample range between 88 and 154. The majority of responses (59%) range between 88 and 122, indicating that organisations should ideally score 122 or less in order to be classified as being non-intrapreneurial on the total scale score.



**Graph 5.14. Intrapreneurial Intensity Index Frequency Histogram (Non-intrapreneurial Group)**

The following table (Table 5.14) indicates the mean and standard deviation of the ‘total sample’ of the *Intrapreneurial Intensity Index*.

	Valid N	Mean	Minimum	Maximum	Std.Dev.
<b>Total</b>	134	211.6866	88.00000	284.0000	60.51836

**Table 5.14. Mean and Standard Deviation of Intrapreneurial Intensity Index**

As can be seen, the mean ( $\bar{X}$ ) of the ‘total sample’ is equal to 211.7, indicating that this is the average response on this index. By adding one standard deviation ( $s = 60.5$ ) to the mean ( $\bar{X} = 211.7$ ), a total of **271.7** is obtained. This score indicates the entry point of the ‘extremely high’ score category. In the same manner, by subtracting one standard deviation ( $s = 60.5$ ) from the mean ( $\bar{X} = 211.7$ ) a total of **151.2** is obtained. This score indicates the entry point of the ‘extremely low’ score category. Therefore the following ‘score categories’ were compiled for the *Intrapreneurial Intensity Index*, as can be seen in the table below (Table 5.15):

<b>SUB-INDEXES</b>	<b>Extremely Low</b>	<b>Low</b>	<b>High</b>	<b>Extremely High</b>
<b>Intrapreneurial Intensity Index</b>	60 - 151	152 - 211	212 - 271	272 - 300

Table 5.15. Intrapreneurial Intensity Index Score Categories

### 5.2.2. Score Categories:

From the information obtained from the frequency tables the researcher was able to categorise the scores for each of the six sub-indexes into ‘score categories’. As can be seen in the table below (Table 5.16), four score categories were identified for each sub-index, namely *Extremely Low*, *Low*, *High*, and *Extremely High*. A scoring chart was therefore established, which indicates how an organisation could score on each sub-index.

<b>Intrapreneurial Intensity Index Score Categories</b>				
<b>INDEXES</b>	<b>Extremely Low</b>	<b>Low</b>	<b>High</b>	<b>Extremely High</b>
<b>Task Innovation Index</b>	10 - 24	25 - 35	36 - 47	48 - 50
<b>Intrapreneurial Employee Index</b>	10 - 25	26 - 35	36 - 46	46 - 50
<b>Structural Flexibility Index</b>	10 - 26	27 - 35	36 - 45	45 - 50
<b>Incentive Policies Index</b>	10 - 26	27 - 35	36 - 44	44 - 50
<b>Intrapreneurial Leadership Index</b>	10 - 25	26 - 35	36 - 46	46 - 50
<b>Intrapreneurial Culture Index</b>	10 - 25	26 - 35	36 - 47	47 - 50
<b>Total Intrapreneurial Intensity Index</b>	<b>60 - 151</b>	<b>152 - 211</b>	<b>212 - 271</b>	<b>272 - 300</b>

Table 5.16. Score Categories

### **5.2.3. Score Responses:**

For each of the score categories in each of the six sub-indexes a qualitative ‘*score response*’ was written to provide a basic interpretation of what the quantitative score suggests about each area of the organisation. This was included in the *Intrapreneurial Intensity Score Interpretation* sheet (**Appendix G**), which was designed to give to the organisation on completion of the assessment. In addition a scoring sheet (**Appendix H**) was designed to give an overall summary of how the organisation scored in each of the various areas. This included the calculation of the *Intrapreneurial Intensity Formula*, an overall score interpretation and an organisation ‘snapshot’ referred to as the *Intrapreneurial Intensity ‘Snapshot’*. Again, this information sheet was designed to be returned to the organisation on completion of the analysis in order to provide the organisation with feedback on areas of strength and weakness.

### **5.3. Application of the Instrument:**

As was discussed in Chapter 4, six intrapreneurial organisations and two non-intrapreneurial organisations were involved in the measuring of the validity of the *Intrapreneurial Intensity Index*. The results of this indicated that the instrument was valid and therefore could be used as an instrument to measure intrapreneurship in large organisations. These eight organisations were therefore used to demonstrate the application of this measuring instrument.

#### **5.3.1. Organisation A:**

*Organisation A* is a large South African network marketing organisation associated with the health and beauty industry and is situated in Johannesburg. The results indicated by the *Intrapreneurial Intensity Index* suggest that this organisation demonstrates ‘high’ levels of intrapreneurial intensity (I) in all areas of the organisation. This evaluation was made after looking at the results from the data obtained from this organisation, which indicate a total average score of **260** as can be seen in the following *Intrapreneurial*

*Intensity Formula* (Figure 5.1). As already mentioned, this score suggests that the organisation demonstrates ‘high’ levels of intrapreneurial intensity in most areas of the organisation. This organisation requires minor improvements or changes in some areas of the organisation in order to be defined as a highly intrapreneurial organisation.

$$\mathbf{I} = [\mathbf{T} = 44 + \mathbf{E} = 43 + \mathbf{S} = 43 + \mathbf{P} = 42 + \mathbf{L} = 43 + \mathbf{C} = 45] = \mathbf{260}$$

**Figure 5.1. Intrapreneurial Intensity Formula (Organisation A)**

The above formula demonstrates how each sub-index score is combined to provide a total score for the organisation. In addition, the sub-index scores for each area of the organisation provide invaluable information regarding which areas of the organisation (if any) require improvement in order to be more intrapreneurial.

In the case of *Organisation A*, the *Task Innovation Index* indicates a score of **44**, which according to the *Intrapreneurial Intensity Score Interpretation (Appendix G)* reveals that the organisation obtains a ‘high’ score on this index, meaning that this organisation demonstrates evidence of new product and service introductions and innovations at the individual and the organisational level, in terms of identifying, developing and exploiting new opportunities. The *Intrapreneurial Employee Index* produces a score of **43**, indicating that the organisation obtains a ‘high’ score on this index. This indicates that the organisation consists of many individuals who demonstrate innovative vision, courage and willingness to embrace new opportunities and demonstrate creative change. The *Structural Flexibility Index* indicates a score of **43**, which indicates that the organisation again obtains a ‘high’ score on this index, and suggests that this organisation demonstrates attempts to achieve a flatter hierarchy, wider divisions of labour, and wider spans of control and tends to be quite decentralised in its nature.

In terms of the *Incentive Policies Index*, this organisation obtains a ‘high’ score on this index, with a score of **42**, indicating that this organisation offers employees the

opportunities, encouragement and incentives to experiment with new ideas without having the fear of being punished as a result of possible failure. The *Intrapreneurial Leadership Index* indicates that the organisation scores **43**, indicating once again that the organisation obtains a ‘high’ score on this index. This suggests that the organisation has a leader who understands the environment, is visionary and flexible, encourages teamwork and a multi-disciplined approach and encourages an intrapreneurial philosophy in the organisation. Finally, the *Intrapreneurial Culture Index* indicates that the organisation obtains a ‘high’ score of **45**, which suggests that the organisation functions in an environment that is characterised mostly by collectivism (i.e. collaboration and team work), low power distance (i.e. participative involvement), low uncertainty avoidance (i.e. tolerance of uncertainty and ambiguity), with focus on quality of life and short-term results orientation. These results can be visually demonstrated by plotting the results on the *Intrapreneurial Intensity ‘Snapshot’* (Figure 5.2).

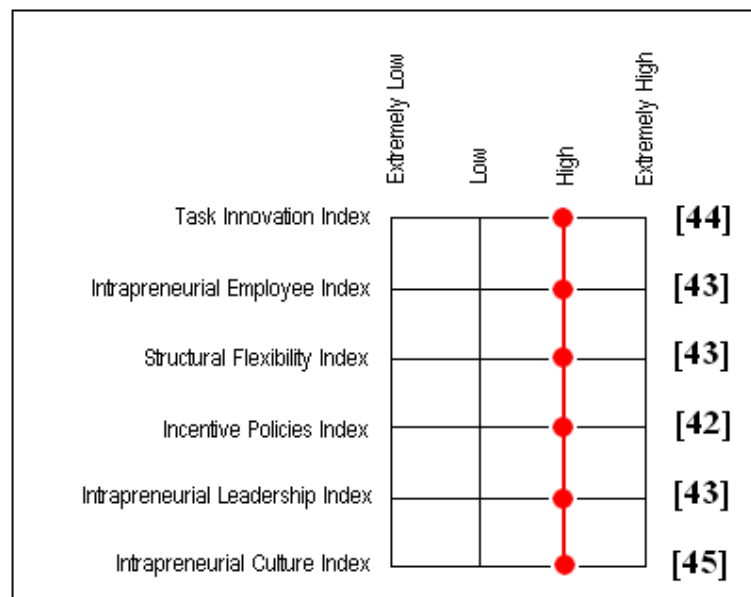


Figure 5.2. Intrapreneurial Intensity ‘Snapshot’ (Organisation A)

### 5.3.2. Organisation B:

*Organisation B* is a large South African organisation associated with the mail order catalogue industry, currently consisting of six merchandise divisions, and is situated in

Cape Town. The results indicated by the *Intrapreneurial Intensity Index* suggest that this organisation demonstrates ‘high’ levels of intrapreneurial intensity (I) in most areas of the organisation. This evaluation was made after looking at the results from the data obtained from this organisation, which indicate a total average score of **231** as can be seen in the following *Intrapreneurial Intensity Formula* (Figure 5.3).

$$\mathbf{I} = [\mathbf{T} = 40 + \mathbf{E} = 38 + \mathbf{S} = 38 + \mathbf{P} = 35 + \mathbf{L} = 39 + \mathbf{C} = 41] = \mathbf{231}$$

**Figure 5.3. Intrapreneurial Intensity Formula (Organisation B)**

As mentioned, this score suggests that the organisation demonstrates ‘high’ levels of intrapreneurial intensity in most areas of the organisation. This organisation requires minor improvements or changes in some areas of the organisation in order to be defined as a highly intrapreneurial organisation.

In the case of **Organisation B**, the *Task Innovation Index* indicates a score of **40**. The *Intrapreneurial Intensity Score Interpretation (Appendix G)*, reveals that the organisation obtains a ‘high’ score in this area, and suggests that the organisation demonstrates evidence of new product and service introductions and innovations at the individual and the organisational level, in terms of identifying, developing and exploiting new opportunities. The *Intrapreneurial Employee Index* produces a score of **38**, indicating that the organisation obtains a ‘high’ score on this index, which suggests that the organisation consists of many individuals who demonstrate innovative vision, courage and willingness to embrace new opportunities and demonstrate creative change. The *Structural Flexibility Index* indicates a score of **38**, which indicates that the organisation again obtains a ‘high’ score on this index, and suggests that this organisation demonstrates attempts to achieve a flatter hierarchy, wider divisions of labour, wider spans of control and tends to be quite decentralised in its nature.

In terms of the *Incentive Policies Index*, this organisation obtains a ‘low’ score of **35** on this index, which indicates that this organisation rarely offers employees the opportunities, the encouragement or the incentives to experiment with new ideas and instils the fear of being punished as a result of possible failure. The *Intrapreneurial Leadership Index* indicates that the organisation scores **39**, indicating once again that the organisation obtains a ‘high’ score on this index. This suggests that the organisation has a leader who understands the environment, is visionary and flexible, encourages teamwork and a multi-disciplined approach and encourages an intrapreneurial philosophy in the organisation.

Finally, the *Intrapreneurial Culture Index* indicates that the organisation scores a ‘high’ score of **41**, which suggests that the organisation functions in an environment which is characterised mostly by collectivism, low power distance, low uncertainty avoidance, with focus on quality of life and short-term orientation. These results can be visually demonstrated by plotting the results on the *Intrapreneurial Intensity ‘Snapshot’* (Figure 5.4).

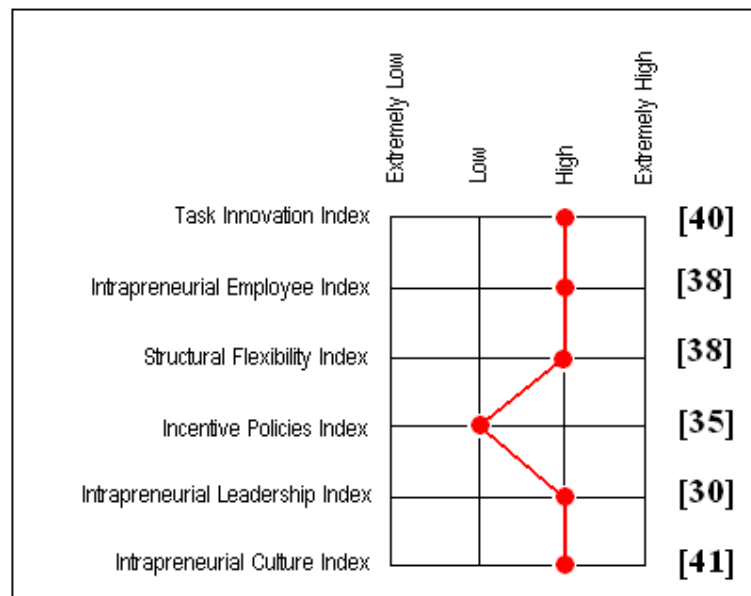


Figure 5.4. Intrapreneurial Intensity ‘Snapshot’ (Organisation B)

### 5.3.3. Organisation C:

*Organisation C* is a large South African organisation associated with the fire detection industry and is situated just outside Cape Town. The results indicated by the *Intrapreneurial Intensity Index* suggest that this organisation demonstrates ‘high’ levels of intrapreneurial intensity (I) in most areas of the organisation. This evaluation was made after looking at the results from the data obtained from this organisation, which indicate a total average score of **254** as can be seen in the following *Intrapreneurial Intensity Formula* (Figure 5.27).

$$I = [T = 43 + E = 41 + S = 42 + P = 42 + L = 43 + C = 43] = 254$$

Figure 5.5. Intrapreneurial Intensity Formula (Organisation C)

As mentioned, this score suggests that the organisation demonstrates ‘high’ levels of intrapreneurial intensity in most areas of the organisation. This organisation requires minor improvements or changes in some areas of the organisation in order to be defined as a highly intrapreneurial organisation.

In the case of *Organisation C*, the *Task Innovation Index* indicates a score of **43**, which according to the *Intrapreneurial Intensity Score Interpretation (Appendix G)* reveals that the organisation obtains a ‘high’ score on this index, meaning that this organisation demonstrates evidence of new product and service introductions and innovations at the individual and the organisational level, in terms of identifying, developing and exploiting new opportunities. The *Intrapreneurial Employee Index* produces a score of **41**, indicating that the organisation obtains a ‘high’ score on this index. This indicates that the organisation consists of many individuals who demonstrate innovative vision, courage and willingness to embrace new opportunities and demonstrate creative change.

The *Structural Flexibility Index* produces a score of **42**, which indicates that the organisation again obtains a ‘high’ score on this index, and suggests that this organisation

demonstrates attempts to achieve a flatter hierarchy, wider divisions of labour, and wider spans of control and tends to be quite decentralised in its nature. According to the *Incentive Policies Index*, this organisation obtains a ‘high’ score on this index, with a score of **42**, indicating that this organisation offers employees the opportunities, encouragement and incentives to experiment with new ideas without having the fear of being punished as a result of possible failure. The *Intrapreneurial Leadership Index* indicates that the organisation scores **43**, indicating once again that the organisation obtains a ‘high’ score on this index. This suggests that the organisation has a leader who understands the environment, is visionary and flexible, encourages teamwork and a multi-disciplined approach and encourages an intrapreneurial philosophy in the organisation. Finally, the *Intrapreneurial Culture Index* indicates that the organisation scores a ‘high’ score of **43**, which suggests that the organisation functions in an environment which is characterised mostly by collectivism, low power distance, low uncertainty avoidance, with focus on quality of life and short-term orientation. These results can be visually demonstrated by plotting the results on the *Intrapreneurial Intensity ‘Snapshot’* (Figure 5.6).

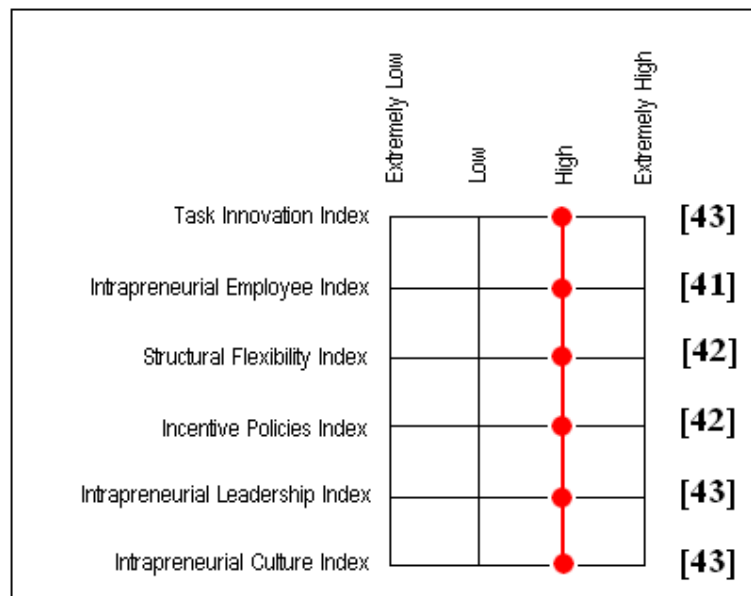


Figure 5.6. Intrapreneurial Intensity ‘Snapshot’ (Organisation C)

### 5.3.4. Organisation D:

*Organisation D* is a large South African organisation associated with the finance industry and is situated in Johannesburg. The results indicated by the *Intrapreneurial Intensity Index* suggest that this organisation demonstrates ‘high’ levels of intrapreneurial intensity (I) in most areas of the organisation. This evaluation was made after looking at the results from the data obtained from this organisation, which indicate a total average score of **260** as can be seen in the following *Intrapreneurial Intensity Formula* (Figure 5.7).

$$\mathbf{I} = [\mathbf{T} = 44 + \mathbf{E} = 42 + \mathbf{S} = 42 + \mathbf{P} = 44 + \mathbf{L} = 44 + \mathbf{C} = 44] = \mathbf{260}$$

Figure 5.7. Intrapreneurial Intensity Formula (Organisation D)

As mentioned, this score suggests that the organisation demonstrates ‘high’ levels of intrapreneurial intensity in most areas of the organisation. This organisation requires minor improvements or changes in some areas of the organisation in order to be defined as a highly intrapreneurial organisation.

In the case of **Organisation D**, the *Task Innovation Index* indicates a score of **44**, which according to the *Intrapreneurial Intensity Score Interpretation (Appendix G)* reveals that the organisation obtains a ‘high’ score on the index, meaning that this organisation demonstrates evidence of new product and service introductions and innovations at the individual and the organisational level, in terms of identifying, developing and exploiting new opportunities. The *Intrapreneurial Employee Index* produces a score of **42**, indicating that the organisation obtains a ‘high’ score on this index. This suggests that the organisation consists of many individuals who demonstrate innovative vision, courage and willingness to embrace new opportunities and demonstrate creative change. The *Structural Flexibility Index* produces a score of **42**, which indicates that the organisation again obtains a ‘high’ score on this index, and suggests that this organisation

demonstrates attempts to achieve a flatter hierarchy, wider divisions of labour, and wider spans of control and tends to be quite decentralised in its nature.

In terms of the *Incentive Policies Index*, this organisation obtains an ‘extremely high’ score of **44** on this index, suggesting that this organisation readily offers employees the opportunities, encouragement and incentives to experiment with new ideas with no fear of being punished as a result of possible failure. The *Intrapreneurial Leadership Index* indicates that the organisation scores **44**, indicating once again that the organisation obtains a ‘high’ score on this index. This suggests that the organisation has a leader who understands the environment, is visionary and flexible, encourages teamwork and a multi-disciplined approach and encourages an intrapreneurial philosophy in all employees in the organisation. Finally, the *Intrapreneurial Culture Index* indicates that the organisation scores a ‘high’ **44**, which suggests that the organisation functions in an environment which is characterised mostly by collectivism, low power distance, low uncertainty avoidance, with focus on quality of life and short-term orientation. These results can be visually demonstrated by plotting the results on the *Intrapreneurial Intensity ‘Snapshot’* (Figure 5.8).

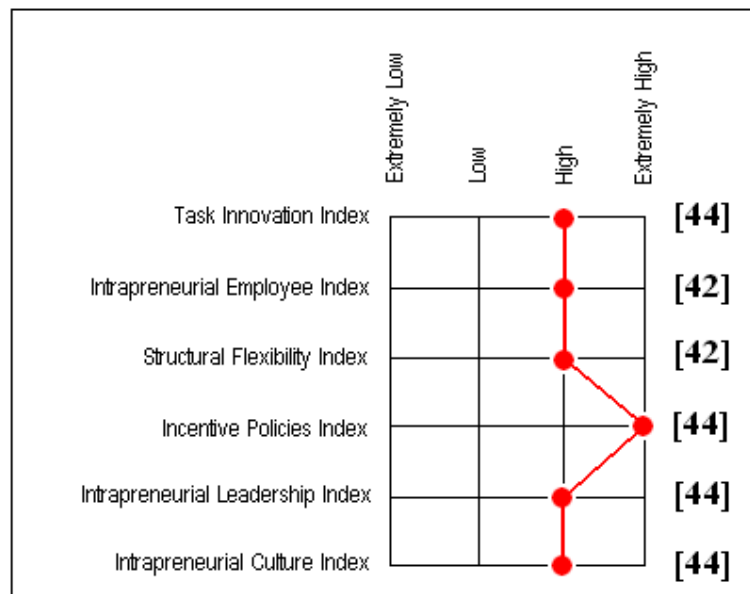


Figure 5.8. Intrapreneurial Intensity ‘Snapshot’ (Organisation D)

### 5.3.5. Organisation E:

*Organisation E* is a large South African organisation associated with the finance industry and is situated in Johannesburg. The results indicated by the *Intrapreneurial Intensity Index* suggest that this organisation demonstrates ‘high’ levels of intrapreneurial intensity (I) in most areas of the organisation. This evaluation was made after looking at the results from the data obtained from this organisation, which indicate a total average score of **223** as can be seen in the following *Intrapreneurial Intensity Formula* (Figure 5.9).

$$\mathbf{I} = [\mathbf{T} = 39 + \mathbf{E} = 39 + \mathbf{S} = 35 + \mathbf{P} = 34 + \mathbf{L} = 38 + \mathbf{C} = 38] = \mathbf{223}$$

Figure 5.9. Intrapreneurial Intensity Formula (Organisation E)

As mentioned, this score suggests that the organisation demonstrates ‘high’ levels of intrapreneurial intensity in most areas of the organisation. This organisation requires minor improvements or changes in some areas of the organisation in order to be defined as a highly intrapreneurial organisation.

In the case of *Organisation E*, the *Task Innovation Index* indicates a score of **39**, which according to the *Intrapreneurial Intensity Score Interpretation (Appendix G)* reveals that the organisation obtains a ‘high’ score on this index, meaning that this organisation demonstrates evidence of new product and service introductions and innovations at the individual and the organisational level, in terms of identifying, developing and exploiting new opportunities. The *Intrapreneurial Employee Index* produces a score of **39**, indicating that the organisation obtains a ‘high’ score on this index. This suggests that the organisation consists of many individuals who demonstrate innovative vision, courage and willingness to embrace new opportunities and demonstrate creative change. The *Structural Flexibility Index* produces a score of **35**, which indicates that the organisation again obtains a ‘low’ score on this index, and suggests that this organisation demonstrates little attempt to achieve a flatter hierarchy, wider divisions of labour, or wider spans of

control and tends to be quite centralised in its nature. According to the *Incentive Policies Index*, this organisation obtains a ‘low’ score of **34** on this index, indicating that this organisation rarely offers employees the opportunities, the encouragement or the incentives to experiment with new ideas and instils the fear of being punished as a result of possible failure.

The *Intrapreneurial Leadership Index* indicates that the organisation obtains a ‘high’ score of **38**. This suggests that the organisation has a leader who understands the environment, is visionary and flexible, encourages teamwork and a multi-disciplined approach and encourages an intrapreneurial philosophy in the organisation. Finally, the *Intrapreneurial Culture Index* indicates that the organisation scores a ‘high’ **44**, which suggests that the organisation functions in an environment which is characterised mostly by collectivism, low power distance, low uncertainty avoidance, with focus on quality of life and short-term orientation. These results can be visually demonstrated by plotting the results on the *Intrapreneurial Intensity ‘Snapshot’* (Figure 5.10).

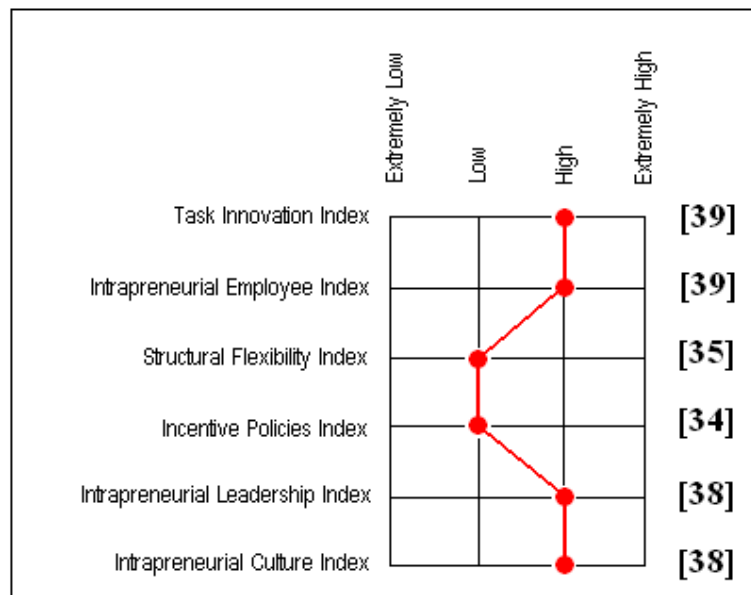


Figure 5.10. Intrapreneurial Intensity ‘Snapshot’ (Organisation E)

### 5.3.6. Organisation F:

*Organisation F* is a capital venture company associated with a large South African organisation involved in the energy industry and is situated in Johannesburg. The results indicated by the *Intrapreneurial Intensity Index* suggest that this organisation demonstrates ‘high’ levels of intrapreneurial intensity (I) in all areas of the organisation. This evaluation was made after looking at the results from the data obtained from this organisation, which indicate a total average score of **256** as can be seen in the following *Intrapreneurial Intensity Formula* (Figure 5.11).

$$\mathbf{I} = [\mathbf{T} = 44 + \mathbf{E} = 41 + \mathbf{S} = 43 + \mathbf{P} = 42 + \mathbf{L} = 43 + \mathbf{C} = 43] = \mathbf{256}$$

Figure 5.11. Intrapreneurial Intensity Formula (Organisation F)

As mentioned, this score suggests that the organisation demonstrates ‘high’ levels of intrapreneurial intensity in most areas of the organisation. This organisation requires minor improvements or changes in some areas of the organisation in order to be defined as a highly intrapreneurial organisation.

In the case of **Organisation F**, the *Task Innovation Index* indicates a score of **44**, which according to the *Intrapreneurial Intensity Score Interpretation (Appendix G)* reveals that the organisation obtains a ‘high’ score on the index, meaning that this organisation demonstrates evidence of new product and service introductions and innovations at the individual and the organisational level, in terms of identifying, developing and exploiting new opportunities. The *Intrapreneurial Employee Index* indicates a ‘high’ score of **41** on this index. This suggests that the organisation consists of many individuals who demonstrate innovative vision, courage and willingness to embrace new opportunities and demonstrate creative change. The *Structural Flexibility Index* produces a score of **43**, which indicates that the organisation again obtains a ‘high’ score on this index, and suggests that this organisation demonstrates attempts to achieve a flatter hierarchy, wider

divisions of labour, and wider spans of control and tends to be quite decentralised in its nature.

In terms of the *Incentive Policies Index*, this organisation obtains a ‘high’ score of **42** on this index, indicating that this organisation offers employees the opportunities, encouragement and incentives to experiment with new ideas without having the fear of being punished as a result of possible failure. The *Intrapreneurial Leadership Index* indicates that the organisation scores **43**, indicating once again that the organisation obtains a ‘high’ score on this index. This suggests that the organisation has a leader who understands the environment, is visionary and flexible, encourages teamwork and a multi-disciplined approach and encourages an intrapreneurial philosophy in the organisation. Finally, the *Intrapreneurial Culture Index* indicates that the organisation scores a ‘high’ **43**, which suggests that the organisation functions in an environment which is characterised mainly by collectivism, low power distance, low uncertainty avoidance, with focus on quality of life and short-term orientation. These results can be visually demonstrated by plotting the results on the *Intrapreneurial Intensity ‘Snapshot’* (Figure 5.12).

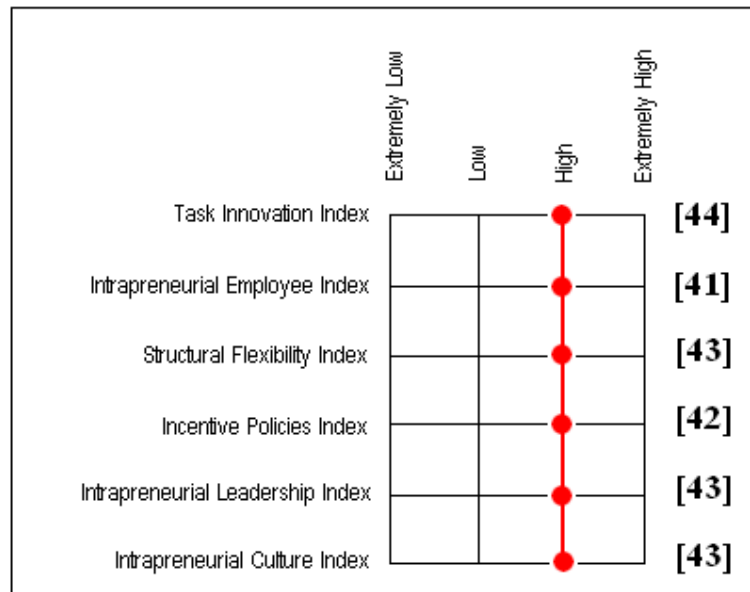


Figure 5.12. Intrapreneurial Intensity ‘Snapshot’ (Organisation F)

### 5.3.7. Organisation G:

*Organisation G* is a large South African organisation involved in the education industry and is situated in East London. The results indicated by the *Intrapreneurial Intensity Index* suggest that this organisation demonstrates ‘extremely low’ levels of intrapreneurial intensity (I) in most areas of the organisation. This evaluation was made after looking at the results from the data obtained from this organisation, which indicate a total average score of **130** as can be seen in the following *Intrapreneurial Intensity Formula* (Figure 5.13).

$$\mathbf{I} = [\mathbf{T} = 20 + \mathbf{E} = 20 + \mathbf{S} = 23 + \mathbf{P} = 24 + \mathbf{L} = 22 + \mathbf{C} = 21] = \mathbf{130}$$

Figure 5.13. Intrapreneurial Intensity Formula (Organisation G)

As mentioned, this score suggests that the organisation demonstrates ‘extremely low’ levels of intrapreneurial intensity in all areas of the organisation. This organisation cannot be defined as an intrapreneurial organisation.

In the case of **Organisation G**, the *Task Innovation Index* indicates a score of **20**, which according to the *Intrapreneurial Intensity Score Interpretation (Appendix G)* reveals that the organisation obtains an ‘extremely low’ score on the index, meaning that this organisation demonstrates no evidence of new product or service introductions or innovations at the individual or the organisational level, in terms of identifying, developing and exploiting new opportunities. The *Intrapreneurial Employee Index* produces a score of **20** indicating that the organisation obtains an ‘extremely low’ score on this index. This suggests that the organisation consists mainly of individuals who lack the innovative vision, courage and willingness to embrace new opportunities and demonstrate creative change. The *Structural Flexibility Index* produces a score of **23**, which indicates that the organisation again obtains an ‘extremely low’ score on this index, and suggests that this organisation demonstrates no attempt to achieve a flatter hierarchy, wider divisions of labour, wider spans of control and tends to be centralised in

its nature. According to the *Incentive Policies Index*, this organisation obtains an ‘extremely low’ score on this index, with a score of **24**, indicating that this organisation does not offer employees the opportunities, the encouragement or the incentives to experiment with new ideas, and instills the fear of being punished as a result of possible failure.

The *Intrapreneurial Leadership Index* indicates that the organisation scores **22** once again indicating that the organisation obtains an ‘extremely low’ score on this index. This suggests that the organisation has a leader who has little understanding of the environment, is not visionary or flexible, who fails to encourage teamwork or a multi-disciplined approach and does not encourage an intrapreneurial philosophy in the organisation. Finally, the *Intrapreneurial Culture Index* indicates that the organisation scores an ‘extremely low’ score of **21**, which suggests that the organisation functions in an environment which is characterised by individualism, high power distance, high uncertainty avoidance, with no focus on quality of life or short-term orientation. These results can be visually demonstrated by plotting the results on the *Intrapreneurial Intensity ‘Snapshot’* (Figure 5.14).

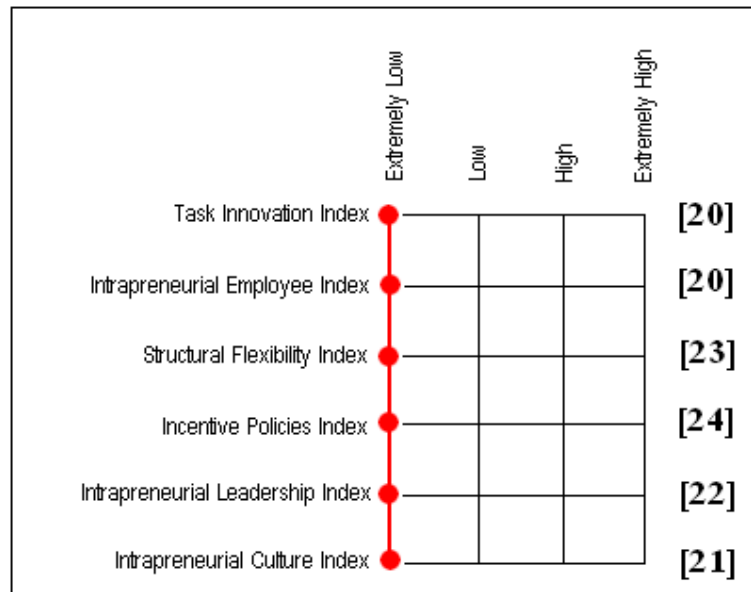


Figure 5.14. Intrapreneurial Intensity ‘Snapshot’ (Organisation G)

### 5.3.8. Organisation H:

*Organisation H* is a large South African organisation involved in the national security industry and is situated in Grahamstown. The results indicated by the *Intrapreneurial Intensity Index* suggest that this organisation demonstrates ‘extremely low’ levels of intrapreneurial intensity (I) in all areas of the organisation. This evaluation was made after looking at the results from the data obtained from this organisation, which indicate a total average score of **126** as can be seen in the following *Intrapreneurial Intensity Formula* (Figure 5.15). This organisation cannot be defined as an intrapreneurial organisation.

$$\mathbf{I} = [\mathbf{T} = 19 + \mathbf{E} = 20 + \mathbf{S} = 23 + \mathbf{P} = 23 + \mathbf{L} = 21 + \mathbf{C} = 20] = \mathbf{126}$$

Figure 5.15. Intrapreneurial Intensity Formula (Organisation H)

In the case of *Organisation H*, the *Task Innovation Index* indicates a score of **19**, which according to the *Intrapreneurial Intensity Score Interpretation (Appendix G)* reveals that the organisation obtains an ‘extremely low’ score on the index, meaning that this organisation demonstrates no evidence of new product or service introductions or innovations at the individual or the organisational level, in terms of identifying, developing and exploiting new opportunities. The *Intrapreneurial Employee Index* produces a score of **20**, indicating that the organisation obtains an ‘extremely low’ score on this index. This suggests that the organisation consists mainly of individuals who lack the innovative vision, courage and willingness to embrace new opportunities and demonstrate creative change. The *Structural Flexibility Index* produces a score of **23**, which indicates that the organisation again obtains an ‘extremely low’ score on this index, and suggests that this organisation demonstrates no attempt to achieve a flatter hierarchy, wider divisions of labour, wider spans of control and tends to be centralised in its nature.

In terms of the *Incentive Policies Index*, this organisation obtains an ‘extremely low’ score of **23** on this index, indicating that this organisation does not offer employees the opportunities, the encouragement or the incentives to experiment with new ideas, and instils the fear of being punished as a result of possible failure. The *Intrapreneurial Leadership Index* indicates that the organisation scores **21**, once again indicating that the organisation obtains an ‘extremely low’ score on this index. This suggests that the organisation has a leader who has little understanding of the environment, is not visionary or flexible, who fails to encourage teamwork or a multi-disciplined approach and does not encourage an intrapreneurial philosophy in the organisation. Finally, the *Intrapreneurial Culture Index* indicates that the organisation obtains an ‘extremely low’ score of **20**, which suggests that the organisation functions in an environment which is characterised by individualism, high power distance, high uncertainty avoidance, with no focus on quality of life or short-term orientation. These results can be visually demonstrated by plotting the results on the *Intrapreneurial Intensity ‘Snapshot’* (Figure 5.16).

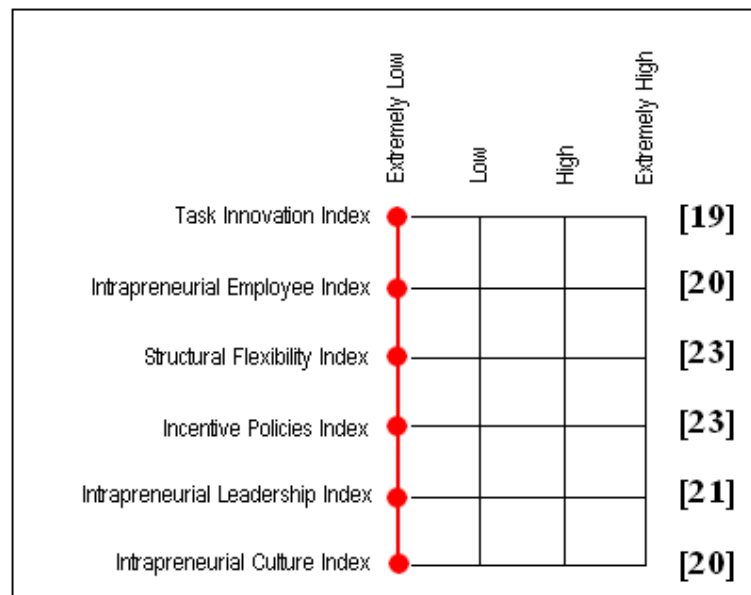


Figure 5.16. Intrapreneurial Intensity ‘Snapshot’ (Organisation H)

## **5.4. Methodological Concerns:**

### **5.4.1. Sample:**

The main area of concern regarding this phase of the research involves the fact that although the organisations included in the sample agreed and were willing to participate in the study, there was no sense of obligation to respond. In other words, although they were a sound sample to utilise in order to evaluate the validity of the instrument, there was no sense of urgency or requirement to be completely involved in the process. As a result the researcher felt that the results emerging from the application phase of this research should only be viewed as serving an illustrative purpose. In the case of an organisation requesting a measurement of their intrapreneurial intensity, the researcher strongly believes that there would be a greater level of commitment in terms of the involvement of the employees in the organisation.

### **5.4.2. Additional Organisational Evidence:**

Finally, since questionnaires are structured instruments, they allow very little flexibility to the respondents with respect to the response format. In essence, they often lose the 'flavour of the response'. Therefore the researcher feels that it is important to stress that in an authentic requested assessment of the intrapreneurial intensity of an organisation, additional measures should be included. Although the instrument provides a quantitative evaluation of the entire organisation with specific emphasis on the six core areas of the organisation, the researcher suggests that it is also vital to examine some organisational documents such as organisational charts, vision and mission statements, written policies and production figures. This should be included in order to provide additional evidence of intrapreneurial intensity and indicate that the results are not purely based on the subjective opinions of the employees' responses to the questionnaire.

## CHAPTER 6

### DISCUSSION

This section of the research forms a platform for the overall consideration and discussion of the results of the research that were obtained from the various stages in the development of the *Intrapreneurial Intensity Index*. It will therefore examine some of the main issues yielded from the research. In addition recommendations and suggestions for further research in this field will be discussed.

#### **6.1. The Need for Intrapreneurial Research:**

From the commencement of this research project, the researcher was fully aware that the area of intrapreneurship was a highly under-researched field that most people have not even heard about. This was illustrated in the early phases of the research when feedback from participants included comments such as “*you have spelt the word ‘entrepreneurship’ incorrectly*”. It was this extensive void in the literature and lack of public knowledge that inspired the researcher to continue with the research and which made the research project appear to be worthwhile. Since the term ‘intrapreneurship’ was coined in the United States of America, the concept and understanding of the term has more public knowledge in the United States of America than it has in South Africa. Since little research has been done into this field in South Africa, there is a very low awareness of intrapreneurship in South Africa, even in academic circles. However, the researcher was convinced that South African organisations would demonstrate a high level of intrapreneurial behaviour due to our dynamic and sometimes turbulent social, political and economic environment.

This belief was also reinforced by the willingness and openness of management to advertise and promote their organisations as being innovative, competitive and on the ‘cutting-edge’ of technology. This is evident in the slogans, visions and mission statements that organisations advertise to the public. Examples of such slogans include

*Standard Corporate Merchant Bank (SCMB)* that advertises that “*great ideas don’t keep business hours*”, or *Rand Merchant Bank (RMB)* that promotes the image of “*Traditional values. Innovative Ideas*”, emphasizing their aim to be intrapreneurial (probably without even knowing it). The researcher was therefore convinced that there was an authentic need for an instrument for measuring this ‘phenomenon’ in South African organisations and in so doing help the public towards becoming a more intrapreneurial society.

## 6.2. Designing the Intrapreneurial Intensity Index:

In designing the *Intrapreneurial Intensity Index*, the researcher proceeded in an orderly and specific manner, which is illustrated in the following flowchart (Figure 6.1). As can be seen, each step in the flow chart depends upon the successful completion of all the previous steps. Detailed information regarding each of these steps can be found in the appropriate chapters indicated alongside the flowchart.

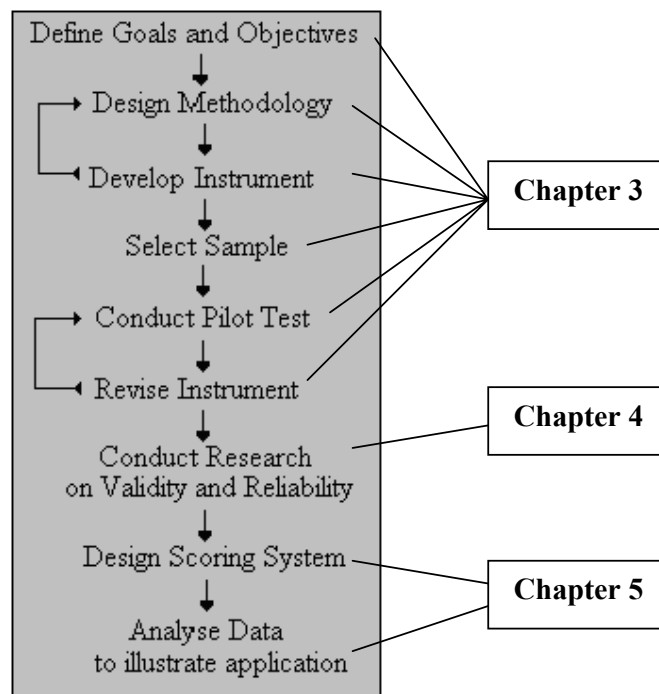


Figure 6.1. Questionnaire Design Flowchart

The researcher was under no illusion that this would prove to be an easy task. As with any social science measurement, these concepts are extremely difficult to define and hence even more difficult to measure. According to Nachmias and Nachmias (1990), the combination of two or more items or indicators yields a composite measure, usually referred to as an index. Since the measurement of intrapreneurship involves six key areas, which were based on Tushman and Nadler's (1997) Congruence Model for Organisational Analysis (discussed in Chapter 2), this instrument and the six sub-scales can all be referred to as indexes.

Nachmias and Nachmias (1990) point out that the major problems in the construction of an index include clarifying the definition of the purpose, the selection of sources of data and determining methods of aggregating and weighting the items in the index. The researcher faced each of these problems and appropriate solutions were identified, discussed in detail in Chapters 3, 4 and 5. After overcoming these various problems, the *Intrapreneurial Intensity Index* was completed and made available in three different formats, namely a paper version (**Appendix C**), and electronic version (**Appendix D**) and an on-line Internet-based version (**Appendix E**), allowing for organisations to choose the format most suitable in terms of their needs and technological capabilities.

### **6.3. The Completed Instrument:**

The results emerging from the development of the *Intrapreneurial Intensity Index* indicated that the research project has been successful on many levels, particularly since the tests conducted on the instrument indicated that the instrument is both valid and reliable. Tests indicated that the instrument demonstrated high levels of split-half reliability as well as test-retest reliability, allowing the researcher to conclude that the instrument could be regarded as being reliable. In addition, inter-sub-index correlations, 'known-group' technique and an exploratory factor analysis indicated that the instrument demonstrates face validity, content validity, construct validity and predictive validity.

#### **6.4. Application of the Instrument:**

Not only do the results indicate that the instrument is both reliable and valid, but in addition the instrument also provides an indication that South African organisations have the potential to be highly intrapreneurial, as was initially suggested by Morris (1997). In an article in the *Business Times* (Klein, 1997), Morris (who developed the Entrepreneurial Performance Index) was quoted as saying that he was not in agreement with “*the criticism you sometimes hear about South African companies being too insular, non-innovative and reactive*”. However, this cannot be discussed in great detail at this stage, as the current project is only a preliminary study, focussing primarily on the development of the instrument and not on the results of an extensive application of the instrument. However, since the final instrument was developed in an electronic form, which automatically captures the data in a database, the prospect of measuring a large sample of South African organisation is now much more feasible.

#### **6.5. Further Research Recommendations:**

##### **6.5.1. Further Normative Studies:**

Since the prospect of measuring a much larger sample of South African organisations is now much more feasible due to the development of the electronic version, the researcher believes that it is crucial for more organisations to be assessed using the *Intrapreneurial Intensity Index* as was demonstrated with the eight organisations used in the application phase of this study (discussed in Chapter 5). This would allow for a stronger indication of how intrapreneurial South African organisations are and provide data that could be used for comparative purposes. Therefore the main recommendation for further research stems from the belief that further, more intensive, research needs to be conducted on the intrapreneurial status of South African organisations.

### **6.5.1. Development of an Intrapreneurial Database:**

In so far as there is so little public awareness and barely any research done in this area, the researcher suggests that a database of intrapreneurial organisations in South Africa be created as a benchmark against which organisations can compare themselves both diachronically and synchronically. In other words, organisations would be able to compare themselves globally with other organisations as well as with their own performance over time. This could be achieved by using the *Intrapreneurial Intensity Index* to measure the intensity of intrapreneurship in South African organisations as discussed above. The results of this would enable more research to be conducted in the area of intrapreneurship, as researchers would have easier access to a large sample with known attributes.

### **6.5.3. Development of a Computerised Version:**

It has already been mentioned in Chapter 3 that the final version of the *Intrapreneurial Intensity Index* was developed into an on-line Internet-based format. This allowed for the participants (in the organisation being assessed) to access the questionnaire by typing in the URL (Uniform Resource Locator) address contained in the email sent to the employees. Once the questionnaire had been completed and ‘submitted’, the results were automatically returned to the researcher. These results were then automatically captured in a database in a numerical format ready for the researcher to analyse, making the process much more efficient. The researcher believes that this analysis process could also be computerised, through the development of a computer program that takes the raw data obtained from the questionnaire and calculates and analyses the results, based on the results produced from this study. A print-out of the *Intrapreneurial Intensity Score Interpretation Sheet (Appendix G)* as well as the *Intrapreneurial Intensity Scoring Sheet (Appendix H)* could then be automatically produced and given to the organisation on completion of the assessment in order to provide the organisation with feedback on areas of strength and weakness. This would make the process far less arduous and time

consuming, and would allow for more organisations to be assessed in a much shorter space of time.

#### **6.5.4. Link Instrument to Market Information:**

One of the most important features of the *Intrapreneurial Intensity Index* is that it serves as a key indicator of organisational effectiveness. According to KPMG consulting (2002), organisational effectiveness is about “*aligning organisational structure, culture and governance to improve business performance through people*” as well as looking at people, their performance in teams, individually, and with technology. The *Intrapreneurial Intensity Index* has the capability of determining an organisation’s ‘current position’ in terms of its intrapreneurial properties as well as its intrapreneurial potential, thus providing a benchmark for the organisation. It is therefore the researcher’s belief that the *Intrapreneurial Intensity Index* can be linked to market information regarding an organisation’s ‘real world’ success criteria, such as return on investment and corporate turn-around over a set period of time. In other words, it could be used as an ongoing annual survey that maps an organisation’s performance over the years, thus serving as an overall organisational performance assessment system.

#### **6.5.5. Development of an Instrument for Departments / Units:**

It was suggested in Chapter 3 that a separate questionnaire should be developed for the examination of departmental intrapreneurial qualities. In other words, there needs to be a distinction between analysing an organisation as a whole and that of analysing an individual department within an organisation. This idea stemmed from feedback received during the design phase of the research that pointed out that:

*“Many people responded to this in terms of their department, not the organisation as a whole. It would be very different if the organisation was the focus”.*

The researcher acknowledges that there is a strong possibility that an organisation could be viewed as being intrapreneurial but have individual departments that are more intrapreneurial than others. For example the marketing department might be more innovative and take more risks than the Finance department. The development of another instrument, focusing purely on departments or units of an organisation, would allow for an organisation to not only pinpoint certain areas requiring improvement, but also specific departments or units within the organisation. The same framework could be used for this instrument with the difference being a specific focus on the individual department. In other words, the 60 items would require minor adjustments to refocus the questions. In addition separate norms could be developed for different departments, suggesting that for example, the norms for a finance department could be developed, allowing for finance departments in different organisations to be compared to one another.

## CHAPTER 7

### CONCLUSION

*“We now stand on the threshold of a new age – the age of revolution.*

*In our minds, we know the new age has already arrived:*

*in our bellies, we’re not sure we like it.*

*For we know it is going to be an age of upheaval, of tumult,  
of fortunes made and unmade at head-snapping speed.*

*For change has changed. No longer is it additive.*

*No longer does it move in a straight line.*

*In the twenty-first century, change is discontinuous,  
abrupt, seditious”*

(Hamel, 2000, in Kirby, 2003, p. 299).

Throughout this study, it has been made clear that our current corporate environment is somewhat hostile and threatening in many ways, but is also filled with enormous opportunity. It is an age of conflict, turbulence and paradox, but most importantly it is the age of entrepreneurship, therefore making it the ‘age of intrapreneurship’ in the corporate setting. It has been emphasized throughout the study that in order to survive, the corporation of the future must radically change from today’s corporation and become more intrapreneurial in nature. According to Morris (2001), there is a growing body of empirical evidence that indicates that intrapreneurship is closely associated with higher levels of company performance. Unfortunately, few guidelines exist regarding ways in which large firms can begin to move in this intrapreneurial direction.

However, research does suggest that a starting point would be for managers to consider making their company’s intrapreneurial performance a key activity that is monitored and measured on an ongoing basis. Therefore the aim of this research was to develop a measuring instrument to determine the intensity of intrapreneurship within large South African organisations.

An instrument known as the *Intrapreneurial Intensity Index* was designed in order to fulfill the need for an instrument to measure intrapreneurship in large organisations. The instrument was designed in the form of a structured questionnaire divided into six sub-indexes consisting of 60 closed-ended questions. The questionnaire is available in three different formats, namely a paper format, an electronic format and an on-line Internet-based format, which allows for organisations to choose the format which best suits their needs and technological capabilities. The completed instrument was assessed in terms of its psychometric properties, and the results emerging from the various test indicated that it is both valid and reliable.

In order for the instrument to be fully functional a means of scoring and interpreting the results was also developed. The instrument produces a score for each of the six sub-indexes as well as a total index score, by calculating the sum of all the items in each sub-index. These numerical scores correspond to written ‘score interpretations’, which provide the organisation with meaningful feedback regarding its current and potential intrapreneurial intensity. The *Intrapreneurial Intensity Index* can therefore be used as a measuring instrument to ascertain the intensity of intrapreneurship present in a large organisation. Specifically, this instrument can provide an overall view of the organisation’s intrapreneurial ability, as well as identify the specific areas in the organisation that possibly require change or modification in order to become more intrapreneurial. In other words, the instrument identifies areas in an organisation that require change or modification in order to survive in tomorrow’s corporate environment.

On a final note, in the words of the man who first coined the term ‘intrapreneurship’ in 1985, Gifford Pinchot:

*“Intrapreneurship is not just a way to increase the level of innovation and productivity of organisations, although it will do that. More importantly, it is a way of organising vast businesses so that work again becomes a joyful expression of one’s contribution to society”* (Pinchot, 2000, p.321).

## CHAPTER 8

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# CHAPTER 9

## APPENDICES

### APPENDIX A

#### INFORMATION & CONSENT FORM



This questionnaire serves as part of an Industrial Psychology Masters research project, which aims to develop an instrument to measure the intensity of Intrapreneurial qualities and behaviour in organisations. The completion of this questionnaire is completely voluntary, but your co-operation would be greatly appreciated. Confidentiality will be strictly adhered to, and there will be no mention of your personal name or your organisation.

---

#### DECLARATION BY PARTICIPANT

I, the undersigned participant,

- have been informed of the nature of the research and the nature of my participation
- have voluntarily agreed to participate in the research
- am aware that strict confidentiality will be adhered to, with there being no reference to my personal name or my organisation

**Signature of participant:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Witnessed by researcher:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Checked by supervisor:** \_\_\_\_\_ **Date:** \_\_\_\_\_

---

Please can you return your completed questionnaire to \_\_\_\_\_, within the next week.

Please circle the **ONE** answer that you believe best describes your working environment / conditions.

Thank you for your participation,



Marguerite Hill



<b>K</b>	<b>Customers are invited and encouraged to provide feedback to the organisation in order to get new ideas for products and services.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> 5                  4                  3                  2                  1	
<b>L</b>	<b>In our organisation there is a strong relationship between the number of new ideas and the number of new ideas implemented.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 1                  2                  3                  4                  5	
<b>M</b>	<b>Our organisation is continually pursuing new opportunities.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> 5                  4                  3                  2                  1	
<b>N</b>	<b>Our organisation places a strong emphasis on new and innovative products and services.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> 1                  2                  3                  4                  5	
<b>O</b>	<b>Employees are continually being encouraged to do things in new and different ways.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly Disagree</i> 5                  4                  3                  2                  1	
<b>P</b>	<b>Our organisation places a strong emphasis on continuous improvements in product delivery.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly Disagree</i> 5                  4                  3                  2                  1	

**About myself as an employee. . .**

<b>A</b>	<b>Getting on in my life and being successful is important to me</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> 1                  2                  3                  4                  5	
<b>B</b>	<b>I can honestly say that I have a reputation for perseverance.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 1                  2                  3                  4                  5	
<b>C</b>	<b>There is NEVER only one correct answer or way of doing things.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 1                  2                  3                  4                  5	
<b>D</b>	<b>Often the solution to one problem can only be found by creating other problems.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly Disagree</i> 5                  4                  3                  2                  1	

<b>E</b>	<b>I prefer to work in situations where I can decide on the best way of doing things rather than where the work methods are laid down.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly Disagree</i> 5                      4                      3                      2                      1	
<b>F</b>	<b>I am able to achieve my objectives even when there are few guidelines or systems in place.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> 5                      4                      3                      2                      1	
<b>G</b>	<b>I am willing to be criticised for breaking with tradition, if this is what it takes to succeed.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> 5                      4                      3                      2                      1	
<b>H</b>	<b>My biggest successes have resulted from my refusal to give up.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly Disagree</i> 5                      4                      3                      2                      1	
<b>I</b>	<b>High levels of uncertainty and disorder are better than high levels of control and order.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Sometimes</i> <i>Disagree</i> <i>Strongly Disagree</i> 5                      4                      3                      2                      1	
<b>J</b>	<b>I tackle problems with enthusiasm and zest.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> 1                      2                      3                      4                      5	
<b>K</b>	<b>I look for new and innovative ways to improve the way we do things.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> 1                      2                      3                      4                      5	
<b>L</b>	<b>I am excited and full of enthusiasm when new opportunities arise.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> 1                      2                      3                      4                      5	
<b>M</b>	<b>I view change as an opportunity for improvement rather than as a threat to my identity.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Sometimes</i> <i>Disagree</i> <i>Strongly Disagree</i> 5                      4                      3                      2                      1	
<b>N</b>	<b>I like to try different approaches to things even if there is a chance I might fail.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> 5                      4                      3                      2                      1	
<b>O</b>	<b>Failure, even if it occurs on a difficult job, is bad for your reputation and should be avoided.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Sometimes</i> <i>Disagree</i> <i>Strongly Disagree</i> 1                      2                      3                      4                      5	

<b>P</b>	<b>I like to do things that are different as I get bored with routine.</b>	
	<i>Always</i> 5	<i>Often</i> 4
	<i>Sometimes</i> 3	<i>Seldomly</i> 2
	<i>Disagree</i> 1	
<b>Q</b>	<b>I try to <i>avoid</i> doing things that are different and unconventional.</b>	
	<i>Never</i> 5	<i>Often</i> 4
	<i>Sometimes</i> 3	<i>Seldomly</i> 2
	<i>Always</i> 1	
<b>R</b>	<b>When things go wrong I am able to bounce back very quickly.</b>	
	<i>Never</i> 1	<i>Often</i> 2
	<i>Sometimes</i> 3	<i>Seldomly</i> 4
	<i>Always</i> 5	
<b>S</b>	<b>I prefer to have clear guidelines about what must be done and how to do them.</b>	
	<i>Always</i> 1	<i>Often</i> 2
	<i>Sometimes</i> 3	<i>Seldomly</i> 4
	<i>Never</i> 5	
<b>T</b>	<b>I am able to come up with a number of solutions to problems.</b>	
	<i>Always</i> 5	<i>Often</i> 4
	<i>Sometimes</i> 3	<i>Seldomly</i> 2
	<i>Never</i> 1	
<b>U</b>	<b>It is better to have attempted a difficult task and failed, than not to have tackled it at all.</b>	
	<i>Always</i> 5	<i>Often</i> 4
	<i>Sometimes</i> 3	<i>Seldomly</i> 2
	<i>Never</i> 1	

**About the organisation and its systems . . .**

<b>A</b>	<b>Our organisation can be described as a bureaucratic organisation.</b>	
	<i>Strongly Disagree</i> 1	<i>Agree</i> 2
	<i>Maybe</i> 3	<i>Disagree</i> 4
	<i>Strongly Disagree</i> 5	
<b>B</b>	<b>Our organisation has a hierarchical structure with clearly defined authority and responsibility.</b>	
	<i>Strongly Agree</i> 1	<i>Agree</i> 2
	<i>Unsure</i> 3	<i>Disagree</i> 4
	<i>Strongly Disagree</i> 5	
<b>C</b>	<b>In the past five years, the number of hierarchical levels in the organisation has:</b>	
	<i>Increased</i> 1	<i>Stayed the same</i> 2
	<i>Decreased</i> 3	<i>Decreased</i> 4
	<i>Decreased</i> 5	
<b>D</b>	<b>Our organisation's structure allows for resource sharing and encourages flexibility.</b>	
	<i>Strongly Agree</i> 5	<i>Agree</i> 4
	<i>Unsure</i> 3	<i>Disagree</i> 2
	<i>Strongly Disagree</i> 1	

<b>E</b>	<b>The employees at our organisation have narrow career paths with no room for change.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly Disagree</i> 1                      2                                      3                                      4                                      5	
<b>F</b>	<b>The ideas and suggestions of lower level employees are taken seriously and valued.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> 5                      4                                      3                                      2                                      1	
<b>G</b>	<b>Employees have to ask permission from a superior before performing a task in a different way.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> 1                      2                                      3                                      4                                      5	
<b>H</b>	<b>Our organisation has flexible job designs rather than formal job descriptions.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly Disagree</i> 5                      4                                      3                                      2                                      1	
<b>I</b>	<b>The organisation makes efforts to regularly rotate employees through different jobs.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> 5                      4                                      3                                      2                                      1	
<b>J</b>	<b>Employees at the lower levels of our organisation have very little power over how they do their work.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Sometimes</i> <i>Agree</i> <i>Strongly Agree</i> 5                      4                                      3                                      2                                      1	
<b>K</b>	<b>Our organisation has implemented quality circles.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 1                      2                                      3                                      4                                      5	
<b>L</b>	<b>Management makes all the important decisions for our organisation.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 5                      4                                      3                                      2                                      1	
<b>M</b>	<b>Our organisation gives all employees tasks / areas that they are responsible for.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 1                      2                                      3                                      4                                      5	
<b>N</b>	<b>On average, how many people report directly or indirectly to you?</b> <i>0 - 5</i> <i>6 - 10</i> <i>11 - 20</i> <i>20 - 30</i> <i>&gt; 30</i> 1                      2                                      3                                      4                                      5	
<b>O</b>	<b>In our organisation, people have to follow lines of authority and skipping levels is strongly discouraged.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 5                      4                                      3                                      2                                      1	
<b>P</b>	<b>Our organisation has implemented quality circles and task teams.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 1                      2                                      3                                      4                                      5	

<b>Q</b>	<b>Employees are encouraged to manage their own work and have flexibility to resolve problems.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> 5                      4                      3                      2                      1	
<b>R</b>	<b>Employees in our organisation have specialised jobs with a narrow range of activities.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 1                      2                      3                      4                      5	
<b>S</b>	<b>In our organisation, people are discouraged from informal job-related contacts across departments.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 5                      4                      3                      2                      1	

**About rewards in the organisation . . .**

<b>A</b>	<b>Our organisation's compensation and reward system is value-based with unlimited earning potential for employees.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly Disagree</i> 1                      2                      3                      4                      5	
<b>B</b>	<b>Employees are given support for self-initiated and unofficial activity that is to the benefit of the organisation.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> 1                      2                      3                      4                      5	
<b>C</b>	<b>Employees are given time to work on their own projects which could benefit the organisation.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Never</i> 1                      2                      3                      4                      5	
<b>D</b>	<b>The organisation sets and regularly evaluates goals related to innovative, risky and proactive behaviour.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 1                      2                      3                      4                      5	
<b>E</b>	<b>The organisation uses a broad range of evaluation criteria when considering support for new initiatives.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly Disagree</i> 5                      4                      3                      2                      1	
<b>F</b>	<b>There is sufficient resource slack to allow people to experiment with new business opportunities without formal budget approval.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 1                      2                      3                      4                      5	



<b>E</b>	<b>Our leader continually examines potential new market opportunities.</b>	
	<p><i>Never</i>      <i>Seldomly</i>      <i>Sometimes</i>      <i>Often</i>      <i>Always</i></p> <p>1              2              3              4              5</p>	
<b>F</b>	<b>Our leader initiates new production and sales directions.</b>	
	<p><i>Always</i>      <i>Often</i>      <i>Sometimes</i>      <i>Seldomly</i>      <i>Never</i></p> <p>5              4              3              2              1</p>	
<b>G</b>	<b>Growth and profit is the main focus of our leader's actions.</b>	
	<p><i>Strongly Agree</i>      <i>Agree</i>      <i>Unsure</i>      <i>Disagree</i>      <i>Strongly Disagree</i></p> <p>1              2              3              4              5</p>	
<b>H</b>	<b>Our leader never appears to tire or lose enthusiasm for the organisation.</b>	
	<p><i>Strongly Agree</i>      <i>Agree</i>      <i>Unsure</i>      <i>Disagree</i>      <i>Strongly Disagree</i></p> <p>5              4              3              2              1</p>	
<b>I</b>	<b>Our leader has a great ability to persuade others to achieve a certain goal.</b>	
	<p><i>Strongly Disagree</i>      <i>Disagree</i>      <i>Unsure</i>      <i>Agree</i>      <i>Strongly Agree</i></p> <p>1              2              3              4              5</p>	
<b>J</b>	<b>Our leader DOES NOT encourage open discussion with all employees.</b>	
	<p><i>Never</i>      <i>Seldomly</i>      <i>Sometimes</i>      <i>Often</i>      <i>Always</i></p> <p>5              4              3              2              1</p>	
<b>K</b>	<b>Our leader has instilled an intrapreneurial philosophy in all employees in the organisation.</b>	
	<p><i>Strongly Agree</i>      <i>Agree</i>      <i>Unsure</i>      <i>Disagree</i>      <i>Strongly Disagree</i></p> <p>5              4              3              2              1</p>	
<b>L</b>	<b>Our leader can be described as visionary and flexible.</b>	
	<p><i>Strongly Agree</i>      <i>Agree</i>      <i>Unsure</i>      <i>Disagree</i>      <i>Strongly Disagree</i></p> <p>5              4              3              2              1</p>	
<b>M</b>	<b>Our leader's enthusiasm rubs off on all employees within the organisation.</b>	
	<p><i>Always</i>      <i>Often</i>      <i>Sometimes</i>      <i>Seldomly</i>      <i>Never</i></p> <p>5              4              3              2              1</p>	
<b>N</b>	<b>Our leader encourages teamwork in our organisation.</b>	
	<p><i>Strongly Agree</i>      <i>Agree</i>      <i>Unsure</i>      <i>Disagree</i>      <i>Strongly Disagree</i></p> <p>5              4              3              2              1</p>	
<b>O</b>	<b>Our leader has a vague understanding of the working environment.</b>	
	<p><i>Strongly Agree</i>      <i>Agree</i>      <i>Unsure</i>      <i>Disagree</i>      <i>Strongly Disagree</i></p> <p>1              2              3              4              5</p>	

About organisational culture . . .

<b>A</b>	<b>Our top management philosophy emphasises proven products and services and the avoidance of heavy new product development costs.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly Disagree</i> 1                      2                      3                      4                      5	
<b>B</b>	<b>Our organisation is characterised by an active search for big opportunities.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 1                      2                      3                      4                      5	
<b>C</b>	<b>Our organisation makes cautious pragmatic step by step adjustments to problems.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> 1                      2                      3                      4                      5	
<b>D</b>	<b>Decision-making is characterised by bold decisions despite uncertainties of the possible outcome.</b> <i>Definitely</i> <i>Unsure</i> <i>Definitely Not</i> 5                      4                      3                      2                      1	
<b>E</b>	<b>Our organisation believes it is important to make compromises between our various stakeholders.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly Disagree</i> 5                      4                      3                      2                      1	
<b>F</b>	<b>Our organisation's approach to new opportunities is to commit, capitalise and move on to the next opportunity.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> 5                      4                      3                      2                      1	
<b>G</b>	<b>Our management and control of resources is characterised by renting, leasing, contracting and outsourcing.</b> <i>Strongly Disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly Agree</i> 1                      2                      3                      4                      5	
<b>H</b>	<b>Our organisation has a widely-held belief that innovation is an absolute necessity for the organisation's future.</b> <i>Strongly Agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly Disagree</i> 5                      4                      3                      2                      1	
<b>I (+)</b>	<b>People in our organisation are continuously encouraged to expand their capacities to achieve more.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> 1                      2                      3                      4                      5	
<b>J</b>	<b>Our organisation nurtures new and expansive patterns of thinking.</b> <i>Definitely</i> <i>Unsure</i> <i>Definitely Not</i> 5                      4                      3                      2                      1	

<b>K</b>	<b>Our organisation encourages life-long learning.</b>	
	<p><i>Definitely</i>                      <i>Unsure</i>                      <i>Definitely Not</i></p> <p>5                      4                      3                      2                      1</p>	
<b>L</b>	<b>We are encouraged to continually look at things in new ways.</b>	
	<p><i>Strongly Agree</i>      <i>Agree</i>                      <i>Unsure</i>                      <i>Disagree</i>      <i>Strongly Disagree</i></p> <p>5                      4                      3                      2                      1</p>	
<b>M</b>	<b>Our organisation's assessment of potential employees has a strong focus on entrepreneurial behaviour.</b>	
	<p><i>Strongly Agree</i>      <i>Agree</i>                      <i>Unsure</i>                      <i>Disagree</i>      <i>Strongly Disagree</i></p> <p>5                      4                      3                      2                      1</p>	
<b>N</b>	<b>Employees are encouraged to actively communicate and share ideas with each other.</b>	
	<p><i>Never</i>      <i>Seldomly</i>                      <i>Sometimes</i>                      <i>Often</i>                      <i>Never</i></p> <p>1                      2                      3                      4                      5</p>	
<b>O</b>	<b>There is an extensive employee orientation program for new employees to ensure employees shared corporate vision and purpose.</b>	
	<p><i>Strongly Disagree</i>      <i>Disagree</i>                      <i>Unsure</i>                      <i>Agree</i>      <i>Strongly Agree</i></p> <p>1                      2                      3                      4                      5</p>	
<b>P</b>	<b>There is continual recruitment of individual entrepreneurs into the organisation.</b>	
	<p><i>Definitely</i>                      <i>Unsure</i>                      <i>Definitely Not</i></p> <p>5                      4                      3                      2                      1</p>	
<b>Q</b>	<b>There is a strong emphasis on teamwork in the organisation.</b>	
	<p><i>Strongly Disagree</i>      <i>Disagree</i>                      <i>Unsure</i>                      <i>Agree</i>      <i>Strongly Agree</i></p> <p>1                      2                      3                      4                      5</p>	
<b>R</b>	<b>The organisation encourages individuals that have different views to those of the company to stimulate innovation.</b>	
	<p><i>Always</i>      <i>Often</i>                      <i>Sometimes</i>                      <i>Seldomly</i>                      <i>Never</i></p> <p>5                      4                      3                      2                      1</p>	
<b>S</b>	<b>Our organisation has a clear-cut vision to ensure an innovative company.</b>	
	<p><i>Strongly Disagree</i>      <i>Disagree</i>                      <i>Unsure</i>                      <i>Agree</i>      <i>Strongly Agree</i></p> <p>1                      2                      3                      4                      5</p>	
<b>T</b>	<b>Confidence, trust and accountability are words which describe how management treats the employees at our organisation.</b>	
	<p><i>Strongly Agree</i>      <i>Agree</i>                      <i>Unsure</i>                      <i>Disagree</i>      <i>Strongly Disagree</i></p> <p>5                      4                      3                      2                      1</p>	
<b>U</b>	<b>Failure is NOT condoned in our organisation.</b>	
	<p><i>Strongly Agree</i>      <i>Agree</i>                      <i>Unsure</i>                      <i>Disagree</i>      <i>Strongly Disagree</i></p> <p>1                      2                      3                      4                      5</p>	

**APPENDIX C**

**PAPER VERSION**



This questionnaire serves as part of an Industrial Psychology Masters research project, which aims to develop an instrument to measure the intensity of Intrapreneurial qualities and behaviour in organisations. The completion of this questionnaire is completely voluntary, but your co-operation would be greatly appreciated. Confidentiality will be strictly adhered to, and there will be no mention of your personal name or your organisation.

-----  
**DECLARATION BY PARTICIPANT**

I, the undersigned participant,

- have been informed of the nature of the research and the nature of my participation
- have voluntarily agreed to participate in the research
- am aware that strict confidentiality will be adhered to, with there being no reference to my personal name or my organisation

**Signature of participant:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Witnessed by researcher:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Checked by supervisor:** \_\_\_\_\_ **Date:** \_\_\_\_\_

-----  
 Please complete the following information regarding your organisation:

**Age of organisation:** \_\_\_\_\_ years

**Number of employees working for organisation:** \_\_\_\_\_ employees

**Type of industry:** \_\_\_\_\_ e.g. finance, education, manufacturing etc.

-----  
 Please circle the **ONE** answer you believe best describes your current working environment / working conditions within your organisation as a whole.

Please can you return your completed questionnaire to \_\_\_\_\_, within the next week.

Thank you for your participation,

Marguerite Hill

About what the organisation does . . .

<b>A</b>	<b>Our organisation has a high rate of new service / product<sup>1</sup> introductions.</b>	
	<i>Strongly agree</i> 5	<i>Agree</i> 4
	<i>Unsure</i> 3	<i>Disagree</i> 2
	<i>Strongly disagree</i> 1	
<b>B</b>	<b>How does the number of new products introduced compare to that of your competitors?</b>	
	<i>A lot less than</i> 1	<i>Less than</i> 2
	<i>The same</i> 3	<i>More than</i> 4
	<i>Many more than</i> 5	
<b>C</b>	<b>Our organisation has increased the number of services offered during the past two years.</b>	
	<i>Strongly agree</i> 5	<i>Agree</i> 4
	<i>Unsure</i> 3	<i>Disagree</i> 2
	<i>Strongly disagree</i> 1	
<b>D</b>	<b>Our organisation is primarily influenced by the potential of untapped opportunity.</b>	
	<i>Strongly agree</i> 5	<i>Agree</i> 4
	<i>Unsure</i> 3	<i>Disagree</i> 2
	<i>Strongly disagree</i> 1	
<b>E</b>	<b>Customers<sup>2</sup> are invited and encouraged to provide feedback to the organisation in order to get new ideas for products and services.</b>	
	<i>Always</i> 5	<i>Often</i> 4
	<i>Sometimes</i> 3	<i>Seldomly</i> 2
	<i>Never</i> 1	
<b>F</b>	<b>In our organisation there is a strong relationship between the number of new ideas and the number of new ideas implemented.</b>	
	<i>Strongly disagree</i> 1	<i>Disagree</i> 2
	<i>Unsure</i> 3	<i>Agree</i> 4
	<i>Strongly agree</i> 5	
<b>G</b>	<b>Our organisation is continually pursuing new opportunities.</b>	
	<i>Always</i> 5	<i>Often</i> 4
	<i>Sometimes</i> 3	<i>Seldomly</i> 2
	<i>Never</i> 1	
<b>H</b>	<b>Our organisation places a strong emphasis on new and innovative products and services.</b>	
	<i>Never</i> 1	<i>Seldomly</i> 2
	<i>Sometimes</i> 3	<i>Often</i> 4
	<i>Always</i> 5	
<b>I</b>	<b>Employees are continually being encouraged to do things in new and different ways.</b>	
	<i>Strongly agree</i> 5	<i>Agree</i> 4
	<i>Unsure</i> 3	<i>Strongly disagree</i> 2
	<i>Disagree</i> 1	
<b>J</b>	<b>Our organisation places a strong emphasis on continuous improvements in product delivery.</b>	
	<i>Strongly agree</i> 5	<i>Agree</i> 4
	<i>Unsure</i> 3	<i>Strongly disagree</i> 2
	<i>Disagree</i> 1	

<sup>1</sup> **product / service** refers to what the organisation produces or performs on a regular basis

<sup>2</sup> **customers** refers to the individuals who make use of the products / services provided by the organisation

About myself as an employee . . .

<b>A</b>	<b>I am able to achieve my objectives<sup>1</sup> even when there are few guidelines or systems in place.</b> <i>Always</i> 5 <i>Often</i> 4 <i>Sometimes</i> 3 <i>Seldomly</i> 2 <i>Never</i> 1	
<b>B</b>	<b>I am willing to be criticised for breaking with tradition, if this is what it takes to succeed.</b> <i>Always</i> 5 <i>Often</i> 4 <i>Sometimes</i> 3 <i>Seldomly</i> 2 <i>Never</i> 1	
<b>C</b>	<b>My biggest successes have resulted from my refusal to give up.</b> <i>Strongly agree</i> 5 <i>Agree</i> 4 <i>Unsure</i> 3 <i>Disagree</i> 2 <i>Strongly disagree</i> 1	
<b>D</b>	<b>I tackle problems with enthusiasm and zest.</b> <i>Never</i> 1 <i>Seldomly</i> 2 <i>Sometimes</i> 3 <i>Often</i> 4 <i>Always</i> 5	
<b>E</b>	<b>I look for new and innovative ways to improve the way we do things.</b> <i>Never</i> 1 <i>Seldomly</i> 2 <i>Sometimes</i> 3 <i>Often</i> 4 <i>Always</i> 5	
<b>F</b>	<b>I am excited and full of enthusiasm when new opportunities arise.</b> <i>Never</i> 1 <i>Seldomly</i> 2 <i>Sometimes</i> 3 <i>Often</i> 4 <i>Always</i> 5	
<b>G</b>	<b>I view change as an opportunity for improvement rather than as a threat to my identity.</b> <i>Strongly agree</i> 5 <i>Agree</i> 4 <i>Sometimes</i> 3 <i>Disagree</i> 2 <i>Strongly disagree</i> 1	
<b>H</b>	<b>I like to try different approaches to things even if there is a chance I might fail.</b> <i>Always</i> 5 <i>Seldomly</i> 4 <i>Sometimes</i> 3 <i>Often</i> 2 <i>Never</i> 1	
<b>I</b>	<b>When things go wrong I am able to bounce back very quickly.</b> <i>Never</i> 1 <i>Seldomly</i> 2 <i>Sometimes</i> 3 <i>Often</i> 4 <i>Always</i> 5	
<b>J</b>	<b>It is better to have attempted a difficult task and failed, than not to have tackled it at all.</b> <i>Always</i> 5 <i>Often</i> 4 <i>Sometimes</i> 3 <i>Seldomly</i> 2 <i>Never</i> 1	

<sup>1</sup> objectives refers to both individual and organisational goals

About the organisation and its systems . . .

<b>A</b>	<b>Our organisation can be described as a bureaucratic<sup>2</sup> organisation.</b>  Strongly agree 1      Agree 2      Maybe 3      Disagree 4      Strongly disagree 5	
<b>B</b>	<b>Our organisation's structure allows for resource sharing and encourages flexibility.</b>  Strongly agree 5      Agree 4      Unsure 3      Disagree 2      Strongly disagree 1	
<b>C</b>	<b>The ideas and suggestions of lower level employees are taken seriously and valued.</b>  Always 5      Often 4      Sometimes 3      Seldomly 2      Never 1	
<b>D</b>	<b>Employees have to ask permission from a superior before performing a task in a different way.</b>  Always 1      Often 2      Sometimes 3      Seldomly 4      Never 5	
<b>E</b>	<b>Our organisation has flexible job designs<sup>3</sup> rather than formal job descriptions.</b>  Strongly agree 5      Agree 4      Unsure 3      Disagree 2      Strongly disagree 1	
<b>F</b>	<b>Employees at the lower levels of our organisation have very little power over how they do their work.</b>  Strongly disagree 5      Disagree 4      Sometimes 3      Agree 2      Strongly agree 1	
<b>G</b>	<b>Management makes all the important decisions for our organisation.</b>  Strongly disagree 5      Disagree 4      Unsure 3      Agree 2      Strongly agree 1	
<b>H</b>	<b>In our organisation, people have to follow lines of authority and skipping levels is strongly discouraged.</b>  Strongly disagree 5      Disagree 4      Unsure 3      Agree 2      Strongly agree 1	
<b>I</b>	<b>Employees are encouraged to manage their own work and have the flexibility to resolve problems.</b>  Always 5      Often 4      Sometimes 3      Seldomly 2      Never 1	
<b>J</b>	<b>In our organisation, people are discouraged from informal job-related contacts across departments.</b>  Strongly disagree 5      Disagree 4      Unsure 3      Agree 2      Strongly agree 1	

<sup>1</sup> **bureaucratic** refers to an organisation that is governed by central administration, tends to be oppressive and inflexible

<sup>2</sup> **flexible job designs** refers to changing roles and tasks within a particular job

About rewards in the organisation . . .

<b>A</b>	<b>Our organisation's compensation and reward system is value-based<sup>4</sup> with unlimited earning potential for employees.</b> <i>Strongly agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly disagree</i> 1                    2                    3                    4                    5	
<b>B</b>	<b>Employees are given support for self-initiated and unofficial activity that is to the benefit of the organisation.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> 1                    2                    3                    4                    5	
<b>C</b>	<b>Employees are given time to work on their own projects which could benefit the organisation.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> 1                    2                    3                    4                    5	
<b>D</b>	<b>The organisation sets and regularly evaluates goals related to innovative, risky and proactive behaviour.</b> <i>Strongly disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly agree</i> 1                    2                    3                    4                    5	
<b>E</b>	<b>The organisation uses a broad range of evaluation criteria when considering support for new initiatives.</b> <i>Strongly agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly disagree</i> 5                    4                    3                    2                    1	
<b>F</b>	<b>The organisation has systems that offer both financial and non-financial rewards for entrepreneurial behaviour.</b> <i>Strongly disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly agree</i> 1                    2                    3                    4                    5	
<b>G</b>	<b>Employees are rewarded for taking calculated risks.</b> <i>Strongly agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly disagree</i> 5                    4                    3                    2                    1	
<b>H</b>	<b>Our organisation has clear goals, which have been mutually agreed upon by employees and management.</b> <i>Strongly disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly agree</i> 1                    2                    3                    4                    5	
<b>I</b>	<b>Our organisation's philosophy is "if it's not broken, why fix it?".</b> <i>Strongly agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly disagree</i> 1                    2                    3                    4                    5	
<b>J</b>	<b>Employees receive recognition from the organisation for innovative ideas and suggestions.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> 1                    2                    3                    4                    5	

<sup>4</sup> **value-based** refers to recognition and reward based on value added to the organisation

About the leadership of the organisation . . .

<b>A</b>	<b>Our leader takes calculated risks with regard to exploring and seizing growth opportunities.</b> <i>Always</i> 5 <i>Often</i> 4 <i>Sometimes</i> 3 <i>Seldomly</i> 2 <i>Never</i> 1	
<b>B</b>	<b>Our leader can be described as charismatic<sup>5</sup>.</b> <i>Definitely not</i> 1 <i>Not really</i> 2 <i>Sometimes</i> 3 <i>Perhaps</i> 4 <i>Definitely</i> 5	
<b>C</b>	<b>Our senior executives solve problems by brainstorming together.</b> <i>Never</i> 1 <i>Seldomly</i> 2 <i>Sometimes</i> 3 <i>Often</i> 4 <i>Never</i> 5	
<b>D</b>	<b>Our leader continually examines potential new market opportunities.</b> <i>Never</i> 1 <i>Seldomly</i> 2 <i>Sometimes</i> 3 <i>Often</i> 4 <i>Always</i> 5	
<b>E</b>	<b>Our leader never appears to tire or lose enthusiasm for the organisation.</b> <i>Strongly agree</i> 5 <i>Agree</i> 4 <i>Sometimes</i> 3 <i>Disagree</i> 2 <i>Strongly disagree</i> 1	
<b>F</b>	<b>Our leader has a great ability to persuade others to achieve a certain goal.</b> <i>Strongly disagree</i> 1 <i>Disagree</i> 2 <i>Sometime</i> 3 <i>Agree</i> 4 <i>Strongly agree</i> 5	
<b>G</b>	<b>Our leader DOES NOT encourage open discussion with all employees.</b> <i>Never</i> 5 <i>Seldomly</i> 4 <i>Sometimes</i> 3 <i>Often</i> 2 <i>Always</i> 1	
<b>H</b>	<b>Our leader has instilled an entrepreneurial philosophy in all employees in the organisation.</b> <i>Strongly agree</i> 5 <i>Agree</i> 4 <i>Unsure</i> 3 <i>Disagree</i> 2 <i>Strongly disagree</i> 1	
<b>I</b>	<b>Our leader can be described as visionary and flexible.</b> <i>Strongly agree</i> 5 <i>Agree</i> 4 <i>Sometimes</i> 3 <i>Disagree</i> 2 <i>Strongly disagree</i> 1	
<b>J</b>	<b>Our leader's enthusiasm rubs off on all employees within the organisation.</b> <i>Always</i> 5 <i>Often</i> 4 <i>Sometimes</i> 3 <i>Seldomly</i> 2 <i>Never</i> 1	

<sup>5</sup> **charismatic** refers to having the power to inspire and encourage others

About organisational culture . . .

<b>A</b>	<b>Our organisation has a widely held belief that innovation is an absolute necessity for the organisation's future.</b> <i>Strongly agree</i> <i>Agree</i> <i>Sometimes</i> <i>Disagree</i> <i>Strongly disagree</i> 5                      4                      3                      2                      1	
<b>B</b>	<b>People in our organisation are continuously encouraged to expand their capacities to achieve more.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> 1                      2                      3                      4                      5	
<b>C</b>	<b>Our organisation nurtures new and expansive patterns of thinking.</b> <i>Definitely</i> <i>Perhaps</i> <i>Unsure</i> <i>Not really</i> <i>Definitely Not</i> 5                      4                      3                      2                      1	
<b>D</b>	<b>We are encouraged to continually look at things in new ways.</b> <i>Strongly agree</i> <i>Agree</i> <i>Sometimes</i> <i>Disagree</i> <i>Strongly disagree</i> 5                      4                      3                      2                      1	
<b>E</b>	<b>There is an extensive employee orientation program for new employees to ensure employees share the corporate vision and purpose.</b> <i>Strongly disagree</i> <i>Disagree</i> <i>Sometime</i> <i>Agree</i> <i>Strongly agree</i> 1                      2                      3                      4                      5	
<b>F</b>	<b>There is continual recruitment of individual entrepreneurs into the organisation.</b> <i>Definitely</i> <i>Perhaps</i> <i>Unsure</i> <i>Not really</i> <i>Definitely Not</i> 5                      4                      3                      2                      1	
<b>G</b>	<b>There is a strong emphasis on teamwork<sup>6</sup> in the organisation.</b> <i>Strongly disagree</i> <i>Disagree</i> <i>Sometime</i> <i>Agree</i> <i>Strongly agree</i> 1                      2                      3                      4                      5	
<b>H</b>	<b>The organisation encourages individuals that have different views to those of the company to stimulate innovation.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> 5                      4                      3                      2                      1	
<b>I</b>	<b>Our organisation has a clear-cut vision to ensure an innovative company.</b> <i>Strongly disagree</i> <i>Disagree</i> <i>Sometime</i> <i>Agree</i> <i>Strongly agree</i> 1                      2                      3                      4                      5	
<b>J</b>	<b>Confidence, trust and accountability are words, which describe how management treats the employees at our organisation.</b> <i>Strongly agree</i> <i>Agree</i> <i>Sometimes</i> <i>Disagree</i> <i>Strongly disagree</i> 5                      4                      3                      2                      1	

<sup>6</sup> **teamwork** refers to working in groups and achieving goals together rather than individually

**APPENDIX D****ELECTRONIC VERSION****ORGANISATIONAL CONSENT FORM**

This questionnaire serves as part of an Industrial Psychology Masters research project, which aims to develop an instrument to measure the intensity of Intrapreneurial qualities and behaviour in organisations. The completion of this questionnaire is completely voluntary, but the co-operation of the employees of your organisation would be greatly appreciated. Confidentiality will be strictly adhered to, and there will be no mention of your personal name or your organisation.

-----

**DECLARATION**

I, the participant,

- have been informed of the nature of the research and the nature of the organisation's participation

Agree:

Disagree:

- have voluntarily agreed to allow the researcher to conduct research at the organisation

Agree:

Disagree:

- am aware that strict confidentiality will be adhered to, with there being no reference to employee names or the name of the organisation.

Agree:

Disagree:

-----

Please complete the following information regarding your organisation:

Age of organisation:  years

Number of employees working for organisation:  employees

Type of industry:  e.g. finance, education, manufacturing etc.

-----

Please complete the following questionnaire by **clicking** on the appropriate option box. Please select the **ONE** answer you believe best describes your current working environment / working conditions within your organisation as a whole.

Once you have completed the questionnaire, please forward to [M.Hill@ru.ac.za](mailto:M.Hill@ru.ac.za)

Thank you for your participation,

Marguerite Hill

About what the organisation does . . .

<b>A</b>	<b>Our organisation has a high rate of new service / product<sup>1</sup> introductions.</b> Strongly agree <input type="checkbox"/> 5    Agree <input type="checkbox"/> 4    Unsure <input type="checkbox"/> 3    Disagree <input type="checkbox"/> 2    Strongly disagree <input type="checkbox"/> 1	
<b>B</b>	<b>How does the number of new products introduced compare to that of your competitors?</b> A lot less than <input type="checkbox"/> 1    Less than <input type="checkbox"/> 2    The same <input type="checkbox"/> 3    More than <input type="checkbox"/> 4    Many more than <input type="checkbox"/> 5	
<b>C</b>	<b>Our organisation has increased the number of services offered during the past two years.</b> Strongly agree <input type="checkbox"/> 5    Agree <input type="checkbox"/> 4    Unsure <input type="checkbox"/> 3    Disagree <input type="checkbox"/> 2    Strongly disagree <input type="checkbox"/> 1	
<b>D</b>	<b>Our organisation is primarily influenced by the potential of untapped opportunity.</b> Strongly agree <input type="checkbox"/> 5    Agree <input type="checkbox"/> 4    Unsure <input type="checkbox"/> 3    Disagree <input type="checkbox"/> 2    Strongly disagree <input type="checkbox"/> 1	
<b>E</b>	<b>Customers<sup>2</sup> are invited and encouraged to provide feedback to the organisation in order to get new ideas for products and services.</b> Always <input type="checkbox"/> 5    Often <input type="checkbox"/> 4    Sometimes <input type="checkbox"/> 3    Seldomly <input type="checkbox"/> 2    Never <input type="checkbox"/> 1	
<b>F</b>	<b>In our organisation there is a strong relationship between the number of new ideas and the number of new ideas implemented.</b> Strongly disagree <input type="checkbox"/> 1    Disagree <input type="checkbox"/> 2    Unsure <input type="checkbox"/> 3    Agree <input type="checkbox"/> 4    Strongly agree <input type="checkbox"/> 5	
<b>G</b>	<b>Our organisation is continually pursuing new opportunities.</b> Always <input type="checkbox"/> 5    Often <input type="checkbox"/> 4    Sometimes <input type="checkbox"/> 3    Seldomly <input type="checkbox"/> 2    Never <input type="checkbox"/> 1	
<b>H</b>	<b>Our organisation places a strong emphasis on new and innovative products and services.</b> Never <input type="checkbox"/> 1    Seldomly <input type="checkbox"/> 2    Sometimes <input type="checkbox"/> 3    Often <input type="checkbox"/> 4    Always <input type="checkbox"/> 5	
<b>I</b>	<b>Employees are continually being encouraged to do things in new and different ways.</b> Strongly agree <input type="checkbox"/> 5    Agree <input type="checkbox"/> 4    Unsure <input type="checkbox"/> 3    Strongly disagree <input type="checkbox"/> 2    Disagree <input type="checkbox"/> 1	
<b>J</b>	<b>Our organisation places a strong emphasis on continuous improvements in product delivery.</b> Strongly agree <input type="checkbox"/> 5    Agree <input type="checkbox"/> 4    Unsure <input type="checkbox"/> 3    Strongly disagree <input type="checkbox"/> 2    Disagree <input type="checkbox"/> 1	

About myself as an employee . . .

<sup>1</sup> **product / service** refers to what the organisation produces or performs on a regular basis

<sup>2</sup> **customers** refers to the individuals who make use of the products / services provided by the organisation

<b>A</b>	<b>I am able to achieve my objectives<sup>1</sup> even when there are few guidelines or systems in place.</b> Always <input type="checkbox"/> 5      Often <input type="checkbox"/> 4      Sometimes <input type="checkbox"/> 3      Seldomly <input type="checkbox"/> 2      Never <input type="checkbox"/> 1	
<b>B</b>	<b>I am willing to be criticised for breaking with tradition, if this is what it takes to succeed.</b> Always <input type="checkbox"/> 5      Often <input type="checkbox"/> 4      Sometimes <input type="checkbox"/> 3      Seldomly <input type="checkbox"/> 2      Never <input type="checkbox"/> 1	
<b>C</b>	<b>My biggest successes have resulted from my refusal to give up.</b> Strongly agree <input type="checkbox"/> 5      Agree <input type="checkbox"/> 4      Unsure <input type="checkbox"/> 3      Disagree <input type="checkbox"/> 2      Strongly disagree <input type="checkbox"/> 1	
<b>D</b>	<b>I tackle problems with enthusiasm and zest.</b> Never <input type="checkbox"/> 1      Seldomly <input type="checkbox"/> 2      Sometimes <input type="checkbox"/> 3      Often <input type="checkbox"/> 4      Always <input type="checkbox"/> 5	
<b>E</b>	<b>I look for new and innovative ways to improve the way we do things.</b> Never <input type="checkbox"/> 1      Seldomly <input type="checkbox"/> 2      Sometimes <input type="checkbox"/> 3      Often <input type="checkbox"/> 4      Always <input type="checkbox"/> 5	
<b>F</b>	<b>I am excited and full of enthusiasm when new opportunities arise.</b> Never <input type="checkbox"/> 1      Seldomly <input type="checkbox"/> 2      Sometimes <input type="checkbox"/> 3      Often <input type="checkbox"/> 4      Always <input type="checkbox"/> 5	
<b>G</b>	<b>I view change as an opportunity for improvement rather than as a threat to my identity.</b> Strongly agree <input type="checkbox"/> 5      Agree <input type="checkbox"/> 4      Sometimes <input type="checkbox"/> 3      Disagree <input type="checkbox"/> 2      Strongly disagree <input type="checkbox"/> 1	
<b>H</b>	<b>I like to try different approaches to things even if there is a chance I might fail.</b> Always <input type="checkbox"/> 5      Seldomly <input type="checkbox"/> 4      Sometimes <input type="checkbox"/> 3      Often <input type="checkbox"/> 2      Never <input type="checkbox"/> 1	
<b>I</b>	<b>When things go wrong I am able to bounce back very quickly.</b> Never <input type="checkbox"/> 1      Seldomly <input type="checkbox"/> 2      Sometimes <input type="checkbox"/> 3      Often <input type="checkbox"/> 4      Always <input type="checkbox"/> 5	
<b>J</b>	<b>It is better to have attempted a difficult task and failed than not to have tackled it at all.</b> Always <input type="checkbox"/> 5      Often <input type="checkbox"/> 4      Sometimes <input type="checkbox"/> 3      Seldomly <input type="checkbox"/> 2      Never <input type="checkbox"/> 1	

<sup>1</sup> objectives refers to both individual and organisational goals

About the organisation and its systems . . .

<b>A</b>	<b>Our organisation can be described as a bureaucratic<sup>2</sup> organisation.</b>	
	<p><i>Strongly agree</i>      <i>Agree</i>      <i>Maybe</i>      <i>Disagree</i>      <i>Strongly disagree</i></p> <p><input type="checkbox"/> 1      <input type="checkbox"/> 2      <input type="checkbox"/> 3      <input type="checkbox"/> 4      <input type="checkbox"/> 5</p>	
<b>B</b>	<b>Our organisation's structure allows for resource sharing and encourages flexibility.</b>	
	<p><i>Strongly agree</i>      <i>Agree</i>      <i>Unsure</i>      <i>Disagree</i>      <i>Strongly disagree</i></p> <p><input type="checkbox"/> 5      <input type="checkbox"/> 4      <input type="checkbox"/> 3      <input type="checkbox"/> 2      <input type="checkbox"/> 1</p>	
<b>C</b>	<b>The ideas and suggestions of lower level employees are taken seriously and valued.</b>	
	<p><i>Always</i>      <i>Often</i>      <i>Sometimes</i>      <i>Seldomly</i>      <i>Never</i></p> <p><input type="checkbox"/> 5      <input type="checkbox"/> 4      <input type="checkbox"/> 3      <input type="checkbox"/> 2      <input type="checkbox"/> 1</p>	
<b>D</b>	<b>Employees have to ask permission from a superior before performing a task in a different way.</b>	
	<p><i>Always</i>      <i>Often</i>      <i>Sometimes</i>      <i>Seldomly</i>      <i>Never</i></p> <p><input type="checkbox"/> 1      <input type="checkbox"/> 2      <input type="checkbox"/> 3      <input type="checkbox"/> 4      <input type="checkbox"/> 5</p>	
<b>E</b>	<b>Our organisation has flexible job designs<sup>3</sup> rather than formal job descriptions.</b>	
	<p><i>Strongly agree</i>      <i>Agree</i>      <i>Unsure</i>      <i>Disagree</i>      <i>Strongly disagree</i></p> <p><input type="checkbox"/> 5      <input type="checkbox"/> 4      <input type="checkbox"/> 3      <input type="checkbox"/> 2      <input type="checkbox"/> 1</p>	
<b>F</b>	<b>Employees at the lower levels of our organisation have very little power over how they do their work.</b>	
	<p><i>Strongly disagree</i>      <i>Disagree</i>      <i>Sometimes</i>      <i>Agree</i>      <i>Strongly agree</i></p> <p><input type="checkbox"/> 5      <input type="checkbox"/> 4      <input type="checkbox"/> 3      <input type="checkbox"/> 2      <input type="checkbox"/> 1</p>	
<b>G</b>	<b>Management makes all the important decisions for our organisation.</b>	
	<p><i>Strongly disagree</i>      <i>Disagree</i>      <i>Unsure</i>      <i>Agree</i>      <i>Strongly agree</i></p> <p><input type="checkbox"/> 5      <input type="checkbox"/> 4      <input type="checkbox"/> 3      <input type="checkbox"/> 2      <input type="checkbox"/> 1</p>	
<b>H</b>	<b>In our organisation, people have to follow lines of authority and skipping levels is strongly discouraged.</b>	
	<p><i>Strongly disagree</i>      <i>Disagree</i>      <i>Unsure</i>      <i>Agree</i>      <i>Strongly agree</i></p> <p><input type="checkbox"/> 5      <input type="checkbox"/> 4      <input type="checkbox"/> 3      <input type="checkbox"/> 2      <input type="checkbox"/> 1</p>	
<b>I</b>	<b>Employees are encouraged to manage their own work and have the flexibility to resolve problems.</b>	
	<p><i>Always</i>      <i>Often</i>      <i>Sometimes</i>      <i>Seldomly</i>      <i>Never</i></p> <p><input type="checkbox"/> 5      <input type="checkbox"/> 4      <input type="checkbox"/> 3      <input type="checkbox"/> 2      <input type="checkbox"/> 1</p>	
<b>J</b>	<b>In our organisation, people are discouraged from informal job-related contacts across departments.</b>	
	<p><i>Strongly disagree</i>      <i>Disagree</i>      <i>Unsure</i>      <i>Agree</i>      <i>Strongly agree</i></p> <p><input type="checkbox"/> 5      <input type="checkbox"/> 4      <input type="checkbox"/> 3      <input type="checkbox"/> 2      <input type="checkbox"/> 1</p>	

<sup>1</sup> **bureaucratic** refers to an organisation governed by central administration, is oppressive and inflexible

<sup>2</sup> **flexible job designs** refers to changing roles and tasks within a particular job

About rewards in the organisation . . .

<b>A</b>	<b>Our organisation's compensation and reward system is value-based<sup>4</sup> with unlimited earning potential for employees.</b> <i>Strongly agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly disagree</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<b>B</b>	<b>Employees are given support for self-initiated and unofficial activity that is to the benefit of the organisation.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<b>C</b>	<b>Employees are given time to work on their own projects which could benefit the organisation.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<b>D</b>	<b>The organisation sets and regularly evaluates goals related to innovative, risky and proactive behaviour.</b> <i>Strongly disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly agree</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<b>E</b>	<b>The organisation uses a broad range of evaluation criteria when considering support for new initiatives.</b> <i>Strongly agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly disagree</i> <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	
<b>F</b>	<b>The organisation has systems that offer both financial and non-financial rewards for entrepreneurial behaviour.</b> <i>Strongly disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly agree</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<b>G</b>	<b>Employees are rewarded for taking calculated risks.</b> <i>Strongly agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly disagree</i> <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	
<b>H</b>	<b>Our organisation has clear goals, which have been mutually agreed upon by employees and management.</b> <i>Strongly disagree</i> <i>Disagree</i> <i>Unsure</i> <i>Agree</i> <i>Strongly agree</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<b>I</b>	<b>Our organisation's philosophy is "if it's not broken, why fix it?".</b> <i>Strongly agree</i> <i>Agree</i> <i>Unsure</i> <i>Disagree</i> <i>Strongly disagree</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<b>J</b>	<b>Employees receive recognition from the organisation for innovative ideas and suggestions.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	

<sup>4</sup> **value-based** refers to recognition and reward based on value added to the organisation

About the leadership of the organisation . . .

<b>A</b>	<b>Our leader takes calculated risks with regard to exploring and seizing growth opportunities.</b> Always <input type="checkbox"/> 5      Often <input type="checkbox"/> 4      Sometimes <input type="checkbox"/> 3      Seldomly <input type="checkbox"/> 2      Never <input type="checkbox"/> 1	
<b>B</b>	<b>Our leader can be described as charismatic<sup>5</sup>.</b> Definitely not <input type="checkbox"/> 1      Not really <input type="checkbox"/> 2      Sometimes <input type="checkbox"/> 3      Perhaps <input type="checkbox"/> 4      Definitely <input type="checkbox"/> 5	
<b>C</b>	<b>Our senior executives solve problems by brainstorming together.</b> Never <input type="checkbox"/> 1      Seldomly <input type="checkbox"/> 2      Sometimes <input type="checkbox"/> 3      Often <input type="checkbox"/> 4      Never <input type="checkbox"/> 5	
<b>D</b>	<b>Our leader continually examines potential new market opportunities.</b> Never <input type="checkbox"/> 1      Seldomly <input type="checkbox"/> 2      Sometimes <input type="checkbox"/> 3      Often <input type="checkbox"/> 4      Always <input type="checkbox"/> 5	
<b>E</b>	<b>Our leader never appears to tire or lose enthusiasm for the organisation.</b> Strongly agree <input type="checkbox"/> 5      Agree <input type="checkbox"/> 4      Sometimes <input type="checkbox"/> 3      Disagree <input type="checkbox"/> 2      Strongly disagree <input type="checkbox"/> 1	
<b>F</b>	<b>Our leader has a great ability to persuade others to achieve a certain goal.</b> Strongly disagree <input type="checkbox"/> 1      Disagree <input type="checkbox"/> 2      Sometimes <input type="checkbox"/> 3      Agree <input type="checkbox"/> 4      Strongly agree <input type="checkbox"/> 5	
<b>G</b>	<b>Our leader DOES NOT encourage open discussion with all employees.</b> Never <input type="checkbox"/> 5      Seldomly <input type="checkbox"/> 4      Sometimes <input type="checkbox"/> 3      Often <input type="checkbox"/> 2      Always <input type="checkbox"/> 1	
<b>H</b>	<b>Our leader has instilled an entrepreneurial philosophy in all employees in the organisation.</b> Strongly agree <input type="checkbox"/> 5      Agree <input type="checkbox"/> 4      Unsure <input type="checkbox"/> 3      Disagree <input type="checkbox"/> 2      Strongly disagree <input type="checkbox"/> 1	
<b>I</b>	<b>Our leader can be described as visionary and flexible.</b> Strongly agree <input type="checkbox"/> 5      Agree <input type="checkbox"/> 4      Sometimes <input type="checkbox"/> 3      Disagree <input type="checkbox"/> 2      Strongly disagree <input type="checkbox"/> 1	
<b>J</b>	<b>Our leader's enthusiasm rubs off on all employees within the organisation.</b> Always <input type="checkbox"/> 5      Often <input type="checkbox"/> 4      Sometimes <input type="checkbox"/> 3      Seldomly <input type="checkbox"/> 2      Never <input type="checkbox"/> 1	

<sup>5</sup> **charismatic** refers to having the power to inspire and encourage others

About organisational culture . . .

<b>A</b>	<b>Our organisation has a widely held belief that innovation is an absolute necessity for the organisation's future.</b> <i>Strongly agree</i> <i>Agree</i> <i>Sometimes</i> <i>Disagree</i> <i>Strongly disagree</i> <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	
<b>B</b>	<b>People in our organisation are continuously encouraged to expand their capacities to achieve more.</b> <i>Never</i> <i>Seldomly</i> <i>Sometimes</i> <i>Often</i> <i>Always</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<b>C</b>	<b>Our organisation nurtures new and expansive patterns of thinking.</b> <i>Definitely</i> <i>Perhaps</i> <i>Unsure</i> <i>Not really</i> <i>Definitely Not</i> <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	
<b>D</b>	<b>We are encouraged to continually look at things in new ways.</b> <i>Strongly agree</i> <i>Agree</i> <i>Sometimes</i> <i>Disagree</i> <i>Strongly disagree</i> <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	
<b>E</b>	<b>There is an extensive employee orientation program for new employees to ensure employees share the corporate vision and purpose.</b> <i>Strongly disagree</i> <i>Disagree</i> <i>Sometimes</i> <i>Agree</i> <i>Strongly agree</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<b>F</b>	<b>There is continual recruitment of individual entrepreneurs into the organisation.</b> <i>Definitely</i> <i>Perhaps</i> <i>Unsure</i> <i>Not really</i> <i>Definitely Not</i> <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	
<b>G</b>	<b>There is a strong emphasis on teamwork<sup>6</sup> in the organisation.</b> <i>Strongly disagree</i> <i>Disagree</i> <i>Sometimes</i> <i>Agree</i> <i>Strongly agree</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<b>H</b>	<b>The organisation encourages individuals that have different views to those of the company to stimulate innovation.</b> <i>Always</i> <i>Often</i> <i>Sometimes</i> <i>Seldomly</i> <i>Never</i> <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	
<b>I</b>	<b>Our organisation has a clear-cut vision to ensure an innovative company.</b> <i>Strongly disagree</i> <i>Disagree</i> <i>Sometimes</i> <i>Agree</i> <i>Strongly agree</i> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<b>J</b>	<b>Confidence, trust and accountability are words, which describe how management treats the employees at our organisation.</b> <i>Strongly agree</i> <i>Agree</i> <i>Sometimes</i> <i>Disagree</i> <i>Strongly disagree</i> <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1	

<sup>6</sup> **teamwork** refers to working in groups and achieving goals together rather than individually

**APPENDIX E****ON-LINE INTERNET-BASED VERSION**
**INTRAPRENEURIAL INTENSITY INDEX  
QUESTIONNAIRE**
**Organisational Consent Form**

This questionnaire serves as part of an Industrial Psychology Masters research project, which aims to develop an instrument to measure the intensity of Intrapreneurial qualities and behaviour in organisations. The completion of this questionnaire is completely voluntary, but the co-operation of the employees of your organisation would be greatly appreciated. Confidentiality will be strictly adhered to, and there will be no mention of your personal name or your organisation.

I, the participant,

have been informed of the nature of the research and the nature of the organisation's participation (  Agree),

have voluntarily agreed to allow the researcher to conduct research at the organisation (  Agree),

am aware that strict confidentiality will be adhered to, with there being no reference to employee names or the name of the organisation (  Agree).

Please complete the following information regarding your organisation:

**Age of organisation:**  years

**Number of employees working for organisation:**  employees

**Type of industry:**  e.g. finance, education, manufacturing, etc.

Please complete the following questionnaire by selecting the appropriate option from the drop down list. Please select the ONE answer you believe best describes your current working environment / working conditions within your organisation as a whole. Once you have completed the questionnaire, click the 'Submit' button at the bottom of this form.

Thank you for your participation,

Marguerite Hill

Questions

**About what the organisation does...**

- A) Our organisation has a high rate of new service/product introductions
- B) How does the number of new products introduced compare to that of your competitors?
- C) Our organisation has increased the number of services offered during the past two years.
- D) Our organisation is primarily influenced by the potential of untapped opportunity.
- E) Customers are invited and encouraged to provide feedback to the organisation in order to get new ideas for products and services.
- F) In our organisation there is a strong relationship between the number of new ideas and the number of new ideas implemented.
- G) Our organisation is continually pursuing new opportunities.
- H) Our organisation places a strong emphasis on new and innovative products and services.
- I) Employees are continually being encouraged to do things in new and different ways.
- J) Our organisation places a strong emphasis on continuous improvements in product delivery.

**About myself as an employee...**

- A) I am able to achieve my objectives even when there are few guidelines or systems in place.
- B) I am willing to be criticised for breaking with tradition, if this is what it takes to succeed.
- C) My biggest successes have resulted from my refusal to give up.
- D) I tackle problems with enthusiasm and zest.
- E) I look for new and innovative ways to improve the way we do things.
- F) I am excited and full of enthusiasm when new opportunities arise.
- G) I view change as an opportunity for improvement rather than as a threat to my identity.
- H) I like to try different approaches to things even if there is a chance I might fail.
- I) When things go wrong I am able to bounce back very quickly.
- J) It is better to have attempted a difficult task and failed, than not to have tackled it at all.

**About the organisation and its systems...**

- A) Our organisation can be described as a bureaucratic organisation.
- B) Our organisation's structure allows for resource sharing and encourages flexibility.
- C) The ideas and suggestions of lower level employees are taken seriously and valued.
- D) Employees have to ask permission from a superior before performing a task in a different way.
- E) Our organisation has flexible job designs rather than formal job descriptions.
- F) Employees at the lower levels of our organisation have very little power over how they do their work.
- G) Management makes all the important decisions for our organisation.
- H) In our organisation, people have to follow lines of authority and skipping levels is strongly discouraged.
- I) Employees are encouraged to manage their own work and have the flexibility to resolve problems.
- J) In our organisation, people are discouraged from informal job-related contacts across departments.

**About rewards in the organisation...**

- A) Our organisation's compensation and reward system is value-based with unlimited earning potential for employees.
- B) Employees are given support for self-initiated and unofficial activity that is to the benefit of the organisation.
- C) Employees are given time to work on their own projects which could benefit the organisation.
- D) The organisation sets and regularly evaluates goals related to innovative, risky and proactive behaviour.
- E) The organisation uses a broad range of evaluation criteria when considering support for new initiatives.
- F) The organisation has systems that offer both financial and non-financial rewards for entrepreneurial behaviour.
- G) Employees are rewarded for taking calculated risks.
- H) Our organisation has clear goals, which have been mutually agreed upon by employees and management.
- I) Our organisation's philosophy is "if it's not broken, why fix it?".
- J) Employees receive recognition from the organisation for innovative ideas and suggestions.

**About the leadership of the organisation...**

- A) Our leader takes calculated risks with regard to exploring and seizing growth opportunities.

- B) Our leader can be described as charismatic .
- C) Our senior executives solve problems by brainstorming together.
- D) Our leader continually examines potential new market opportunities.
- E) Our leader never appears to tire or lose enthusiasm for the organisation.
- F) Our leader has a great ability to persuade others to achieve a certain goal.
- G) Our leader DOES NOT encourage open discussion with all employees.
- H) Our leader has instilled an entrepreneurial philosophy in all employees in the organisation.
- I) Our leader can be described as visionary and flexible.
- J) Our leader's enthusiasm rubs off on all employees within the organisation.

**About organisational culture...**

- A) Our organisation has a widely held belief that innovation is an absolute necessity for the organisation's future.
- B) People in our organisation are continuously encouraged to expand their capacities to achieve more.
- C) Our organisation nurtures new and expansive patterns of thinking.
- D) We are encouraged to continually look at things in new ways.
- E) There is an extensive employee orientation program for new employees to ensure employees share the corporate vision and purpose.
- F) There is continual recruitment of individual entrepreneurs into the organisation.
- G) There is a strong emphasis on teamwork in the organisation.
- H) The organisation encourages individuals that have different views to those of the company to stimulate innovation.
- I) Our organisation has a clear-cut vision to ensure an innovative company.
- J) Confidence, trust and accountability are words, which describe how management treats the employees at our organisation.

Click the 'Submit' button to submit your responses...

**APPENDIX F****FACTOR ANALYSIS TABLE**

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Var1	0.43946	0.31725	0.579357	-0.07817	0.164717	0.475583
Var2	0.31168	0.27875	0.68891	0.264145	-0.00297	0.444733
Var3	0.310877	0.34495	0.53606	0.205537	0.285978	0.244485
Var4	0.38915	0.2782	0.572812	0.12743	0.141655	0.504772
Var5	0.307295	0.39062	0.52725	0.421693	0.295993	0.197732
Var6	0.23017	0.49146	0.647616	0.333168	0.150408	0.132464
Var7	0.558531	0.1841	0.6188	0.193137	0.303082	0.218741
Var8	0.36142	0.37104	0.734439	-0.07231	0.160012	0.17304
Var9	0.42956	0.25367	0.56966	0.250242	0.227702	0.273174
Var10	0.431787	0.34814	0.60434	0.204858	0.36751	0.257909
Var11	0.40079	0.32244	0.215007	0.154855	0.185108	0.541753
Var12	0.40874	0.27279	0.401638	0.042055	0.364084	0.542676
Var13	0.27323	0.2623	0.47127	0.134582	0.247399	0.592087
Var14	0.40262	0.34777	0.321651	0.059255	0.197218	0.557083
Var15	0.276072	0.25533	0.452499	-0.05189	0.302129	0.55488
Var16	0.389479	0.23728	0.388733	-0.03716	0.176346	0.70343
Var17	0.10467	0.31748	0.557619	0.221531	0.260324	0.57873
Var18	0.24607	0.40897	0.164412	0.340887	0.387032	0.462883
Var19	0.22316	0.24858	0.361869	0.403792	0.18375	0.634148
Var20	0.40878	0.18582	0.409742	0.123234	0.390465	0.508971
Var21	0.30135	0.63563	0.413045	-0.03986	0.235211	0.267232
Var22	0.48964	0.52482	0.324926	-0.0029	0.233598	0.360775
Var23	0.3591	0.57397	0.258281	0.108691	0.277312	0.336435
Var24	0.16939	0.67263	0.466005	0.132281	0.118177	0.209647
Var25	0.42866	0.58062	0.189973	0.281804	0.142569	0.456696
Var26	0.27079	0.74545	0.20368	0.159166	0.348188	0.203472
Var27	0.23343	0.80429	0.170592	0.213515	0.146999	0.186854
Var28	0.62671	0.56812	0.133684	0.122185	0.26665	0.142293
Var29	0.37914	0.54831	0.373295	0.208672	0.43475	0.292476
Var30	0.38208	0.65811	0.13787	0.081882	0.486135	0.282406

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Var30	0.38208	0.65811	0.13787	0.081882	0.486135	0.282406
Var31	0.34607	-0.08031	0.246618	0.177426	0.64728	0.279652
Var32	0.33708	0.027513	0.302508	0.413088	0.48786	0.263591
Var33	0.23942	0.129887	0.384281	0.02613	0.66002	0.100684
Var34	0.49319	-0.03546	0.33817	-0.08815	0.4251	0.313832
Var35	0.33049	0.50548	0.320729	-0.10207	0.512818	0.304941
Var36	0.33948	0.06154	0.270035	0.000687	0.68721	0.284102
Var37	0.27205	0.343247	0.191262	-0.00897	0.74468	0.207318
Var38	0.32237	0.37902	0.311493	0.082074	0.657781	0.213226
Var39	0.41538	0.39847	0.319647	0.017325	0.52941	0.379445
Var40	0.42171	0.50722	0.234075	0.052903	0.461249	0.37415
Var41	0.39912	0.49964	0.27285	0.503494	0.058288	0.282168
Var42	0.33394	0.41736	0.407036	0.456657	0.104486	0.405042
Var43	0.58577	0.37393	0.157739	0.51678	0.183649	0.173038
Var44	0.098828	0.2701	0.445532	0.55531	0.412096	0.201871
Var45	0.18782	0.21692	0.414865	0.69589	0.15544	0.261716
Var46	0.067957	0.34658	0.330901	0.74045	0.055677	0.16297
Var47	0.47184	0.253288	0.29256	0.49763	0.324643	0.307436
Var48	0.182024	0.36905	0.336726	0.47403	0.149147	0.480396
Var49	0.025302	0.33616	0.260311	0.67555	0.234123	0.323376
Var50	0.155164	0.41389	0.088574	0.56538	0.202586	0.497581
Var51	0.62382	0.18851	0.480919	0.141757	0.383063	0.27402
Var52	0.66738	0.41037	0.314723	0.140757	0.210033	0.295192
Var53	0.6589	0.26884	0.201826	0.253934	0.285679	0.281724
Var54	0.58679	0.2865	0.524349	0.197477	0.276315	0.20694
Var55	0.66894	0.3016	0.456847	0.06948	-0.10557	0.333228
Var56	0.568172	0.43207	0.250279	0.108147	0.234862	0.45513
Var57	0.71328	0.39036	0.342801	-0.06974	0.218547	0.191172
Var58	0.5851	0.47597	0.232593	0.070929	0.178763	0.33084
Var59	0.6206	0.43953	0.183893	0.218974	0.084867	0.421834
Var60	0.66734	0.40787	0.26811	0.190677	0.183083	0.321864

**APPENDIX G**

**INTRAPRENEURIAL INTENSITY INDEX  
SCORE INTERPRETATION SHEET**



**Task Innovation Index**

<b>Extremely Low (10 – 24)</b>	<b>Low (25 - 35)</b>	<b>High (36 - 46)</b>	<b>Extremely High (47 - 50)</b>
This organisation demonstrates no evidence of new product or service introductions or innovations at the individual or the organisational level, in terms of identifying, developing and exploiting new opportunities.	This organisation demonstrates little evidence of new product or service introductions or innovations at the individual or the organisational level, in terms of identifying, developing and exploiting new opportunities.	This organisation demonstrates evidence of new product and service introductions and innovations at the individual and the organisational level, in terms of identifying, developing and exploiting new opportunities.	This organisation demonstrates extensive evidence of new product and service introductions and innovations at the individual and the organisational level, in terms of identifying, developing and exploiting new opportunities.

**Intrapreneurial Employee Index**

<b>Extremely Low (10 - 25)</b>	<b>Low (26 - 35)</b>	<b>High (36 - 45)</b>	<b>Extremely High (46 - 50)</b>
This organisation consists mainly of individuals who lack the innovative vision, courage and willingness to embrace new opportunities and demonstrate creative change.	This organisation consists mainly of individuals who don't demonstrate much innovative vision, courage or willingness to embrace new opportunities or demonstrate creative change.	This organisation consists of many individuals who demonstrate innovative vision, courage and willingness to embrace new opportunities and demonstrate creative change.	This organisation consists mainly of individuals who demonstrate innovative vision, courage and willingness to embrace new opportunities and demonstrate creative change.

**Structural Flexibility Index**

<b>Extremely Low (10 - 26)</b>	<b>Low (27 - 35)</b>	<b>High (36 - 44)</b>	<b>Extremely High (45 - 50)</b>
This organisation demonstrates no attempt to achieve a flatter hierarchy, wider divisions of labour, wider spans of control and tends to be centralised in its nature.	This organisation demonstrates little attempt to achieve a flatter hierarchy, wider divisions of labour, wider spans of control and tends to be quite centralised in nature.	This organisation demonstrates attempts to achieve a flatter hierarchy, wider divisions of labour, wider spans of control and tends to be quite decentralised in its nature.	This organisation demonstrates a flatter hierarchy, wider divisions of labour, and wider spans of control and is decentralised in its nature.

### Incentive Policies Index

<b>Extremely Low (10 - 26)</b>	<b>Low (27 - 35)</b>	<b>High (36 - 43)</b>	<b>Extremely High (44 - 50)</b>
This organisation does not offer employees the opportunities, the encouragement or the incentives to experiment with new ideas, and instills the fear of being punished as a result of possible failure.	This organisation rarely offers employees the opportunities, the encouragement or the incentives to experiment with new ideas and instills the fear of being punished as a result of possible failure.	This organisation offers employees the opportunities, the encouragement and the incentives to experiment with new ideas without having the fear of being punished as a result of possible failure.	This organisation readily offers employees the opportunities, encouragement and incentives to experiment with new ideas with no fear of being punished as a result of possible failure.

### Intrapreneurial Leadership Index

<b>Extremely Low (10 - 25)</b>	<b>Low (26 - 35)</b>	<b>High (36 - 45)</b>	<b>Extremely High (46 - 50)</b>
This organisation has a leader who has little understanding of the environment, is not visionary or flexible, fails to encourage teamwork or a multi-disciplined approach and does not encourage an intrapreneurial philosophy in the organisation.	This organisation has a leader who partially understands the environment, is not visionary or flexible, fails to encourage teamwork or a multi-disciplined approach and does not encourage an intrapreneurial philosophy in the organisation.	This organisation has a leader who understands the environment, is visionary and flexible, encourages teamwork and a multi-disciplined approach and encourages an intrapreneurial philosophy in the organisation.	This organisation has a leader who thoroughly understands the environment, is visionary and flexible, encourages teamwork and a multi-disciplined approach and encourages a strong intrapreneurial philosophy in all employees in the organisation.

### Intrapreneurial Culture Index

<b>Extremely Low (10 - 25)</b>	<b>Low (26 - 35)</b>	<b>High (36 - 46)</b>	<b>Extremely High (47 - 50)</b>
This organisation functions in an environment which is characterised by individualism, high power distance, high uncertainty avoidance, with no focus on quality of life or short-term orientation.	This organisation functions in an environment which is characterised mainly by individualism, high power distance, high uncertainty avoidance, with little focus on quality of life or short-term orientation.	This organisation functions in an environment which is characterised mostly by collectivism, low power distance, low uncertainty avoidance, with focus on quality of life and short-term orientation.	This organisation functions in an environment which is characterised by collectivism, low power distance, low uncertainty avoidance, with a strong focus on quality of life and short-term orientation.