A Framework for Enhancing the Information Systems Innovation: Using Competitive Intelligence

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Abstract: Knowledge is used as a focal factor for competitive advantage, through effective and efficient performances by employees in many organisations. As a result, knowledgeable employees are expected to share their knowledge with others to increase innovation within the organisation. Unfortunately, this is not always the case. Generally, employees behave differently within an organisation. The main challenge is that no organisation has total control of its employees' behaviour and actions. The behaviour and action has impact on how information systems are deployed for innovation, in creating competitive advantage. As a result, many systems have been deployed by different organisations in attempt to address this challenge for the interest. Others have deployed competitive intelligence products and services. This is primarily intended to provide decision - makers with information that can contribute to the innovative process in order to meet customer needs. For an organisation to survive, it must be able to innovate and market its innovations. Also, innovation creates uncertainty about its consequences in the mind of potential adopters. There exists a discrepancy between what customers perceive as their problems or needs and what organisations understand these problems to be. This study was conducted with the primary aim to understand the impact of Competitive Intelligence (CI) on Information systems (IS) innovation products and services in organisations. The case study research method was employed, using a financial organisation. The Innovation-decision process, from the perspective of Diffusion of Innovation theory (DOI) was applied in the data analysis.

Keywords: competitive intelligence (CI), diffusion of innovation (DoI), Information systems (IS), innovation

1. Introduction

Through information systems, an organisation executes its business strategy and attempts to realize its business goals. Lederer and Gardiner (1992) refer to this as 'a portfolio of computer-based applications'. The information systems component is largely responsible for meeting the goals and objectives of the organisation. According to Iyamu and Olumide (2010:144), the information systems component consists of systems through which the business carries out its processes and logic. They are directly used by the end user (those who act on behalf of the business). Many organisations use information systems as a tool for their various innovations to support and enable processes and activities. Innovation is an on-going process to create, enable and support improvement for competitive advantage by the organisation (Mariano and Pavesi, 2000). William Baumol (2010) argued that large firm's use innovation as a competitive weapon, a compound of systematic innovative activity within the firm. However, innovation carries with it significant risks.

Companies keep competing against each other using products and services, making competitive intelligence (CI) an important tool in the development of strategy in the organisations. The importance of competitive intelligence is attributed to its contribution to technological knowledge and intelligence, and it use for the analysis of information systems innovation in organisations. It should be pointed out early that innovation and technology are often taken in a similar light as asserted by Rogers (2003: p12) that 'we often use the word "innovation" and "technology" as synonyms.' And as such CI is primarily intended to be used for the state of art, technological trends and challenges, with a strategic vision on competitiveness and customers (Ashton & Klavans, 1997; Fleisher & Bensoussan, 2003). Competitive intelligence therefore can be considered as a tool for innovation process, observation of market, analysis of strategic behaviors of both competitors and customers, including their values, expectations and needs (Krücken-pereira et al., 2001).

An innovation according to Rogers (2003: p12) will be considered as 'an idea, practice, or object that is perceived as new by an individual or other unit of adoption.' A unit of adoption in this case could be the organisation, a society and also a target market. Technological Innovation in products and processes, constitutes a crucial factor for national economic growth (Manual De Oslo, 2008; Lacerda *et al.*, 2001). According to Fang (2005) Innovation can be divided into three categories: Radical innovations, Incremental innovations, and Product innovation. Martins and Tarblanche (2003) define innovation as "the implementation of a new and possible problem-solving idea, practice or material

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artefact (e.g. a product) which is regarded as new by the relevant unit of adoption and through which change is brought about"

Competitive Intelligence offers a real strategic advantage for many businesses (Stephen, 2006). Gilad (2000) argues that some of the largest corporate organizations have a dedicated CI department, while smaller businesses often practice CI on an ad hoc basis. This they do so by informally collecting information from a variety of internal and external sources, such as the Internet, trade shows conferences and networking meetings. Competitive Intelligence is of importance to many businesses mainly because it helps to formulate strategy, as well as make informed decisions.

The CI is deployed with the intention to better, coordinate internal processes and activities of organizations, primarily, to reach market more effectively. Gathering people, the logic and the physical architecture around common purposes provide individuals with the information they need to expand their own knowledge (Malhotra, 2000; Hoven, 2001). This approach help to build high performance teams in the organisation. This indeed, is the foundation of the integrated organisation, where the information technology is capacitating technological innovation.

Competitive intelligence has the main function of processing and refining information and knowledge, whether it is within an organisation or in a network of organisations. Martre (1994) argues that complex modes of competition in organisations are increasing and are characterized by cooperation-competition relationships to which companies must adapt. Competitive intelligence should be applied to adjust strategy to the new paradigm of competition. In McCord's (2002) view, competition leads to collaboration and competitive intelligence.

Competitive intelligence and information systems seem to have a common focus, to meet the needs of the users. Information systems in many ways enable the gathering of information that later becomes competitive intelligence. And competitive intelligence facilitates the creation of information system innovations in the way it is used during the process of improving products and services.

2. Research methodology

The main focus of the study was to investigate and understand the impact of competitive intelligence on information systems innovation products and services in organisations. The approaches and methods employed in the study include the case study, qualitative research method, and semi-structured interview approach. The data was analysed, using the Innovation-decision process from the perspective of DoI theory.

The case study was adopted primarily because it is an approach that assists to achieve a deep understanding of a specific phenomenon. According to Cooper and Schindler (2006), the case study is an approach which combines individual and (sometimes) group interviews with record analysis and observation; used to understand events and their ramifications and processes. Hofstee (2006) argued that the case study approach is useful when detailed knowledge is required of any particular case. A pseudonym name, "Divhetsheleni" was used to represent the case, the organisation used in the study. The participants were codified from DV_LA001 to DV_LA012 to adhere to the ethical consideration as agreed with the organisation and the university.

The qualitative research method was selected for the study. This was because of the nature of the study, which required variety and wide spread of view and option about the phenomenon. According to Cooper and Schindler (2006:196), qualitative research includes 'an array of interpretive techniques which seek to describe, decode, translate, and otherwise come to terms with meaning, not frequency'. The qualitative study allows data to be gathered from multiple sources (Yin, 2009). In other words it is not limited to one source of information.

The research employed the interview and documentation approaches in the data collection. The interview approach allows the researcher to put questions to a respondent face-to-face (Wellman and Kruger, 2001). The research followed the semi-structured interview technique of the interview research approach so that the process does not lose focus, at the same time allows probing of responses. According to Kvale (1996), the most useful interview format for conducting qualitative research is often "semi-structured" (sometimes called "moderately scheduled"). This means the interview is not highly structured, as is the case of an interview that consists of all closed-ended questions, nor is it unstructured, so that the interviewee is simply given a license to talk freely about

the topic. This was advantageous for data collection because it made it possible to explain the questions that were not understood by the respondent and there was chance to further probe responses.

2.1 Diffusion of Innovation (DoI)

The Innovation-decision process from the perspective of DoI theory was employed in the data analysis. In DoI theory, technological Innovation is communicated through particular channels, over time, among the members of a social system (Rogers, 2003). The theory is concerned with the manner in which a new technological idea, artefact or technique, or a new use of an old one, migrates from creation to use.

According to Rogers (2003), the Innovation-decision process involves five steps. As shown in Figure 1 below, the process include: (1) knowledge, (2) persuasion, (3) decision, (4) implementation, and (5) confirmation. These stages typically follow each other in a time-ordered manner. The stages are briefly described below.

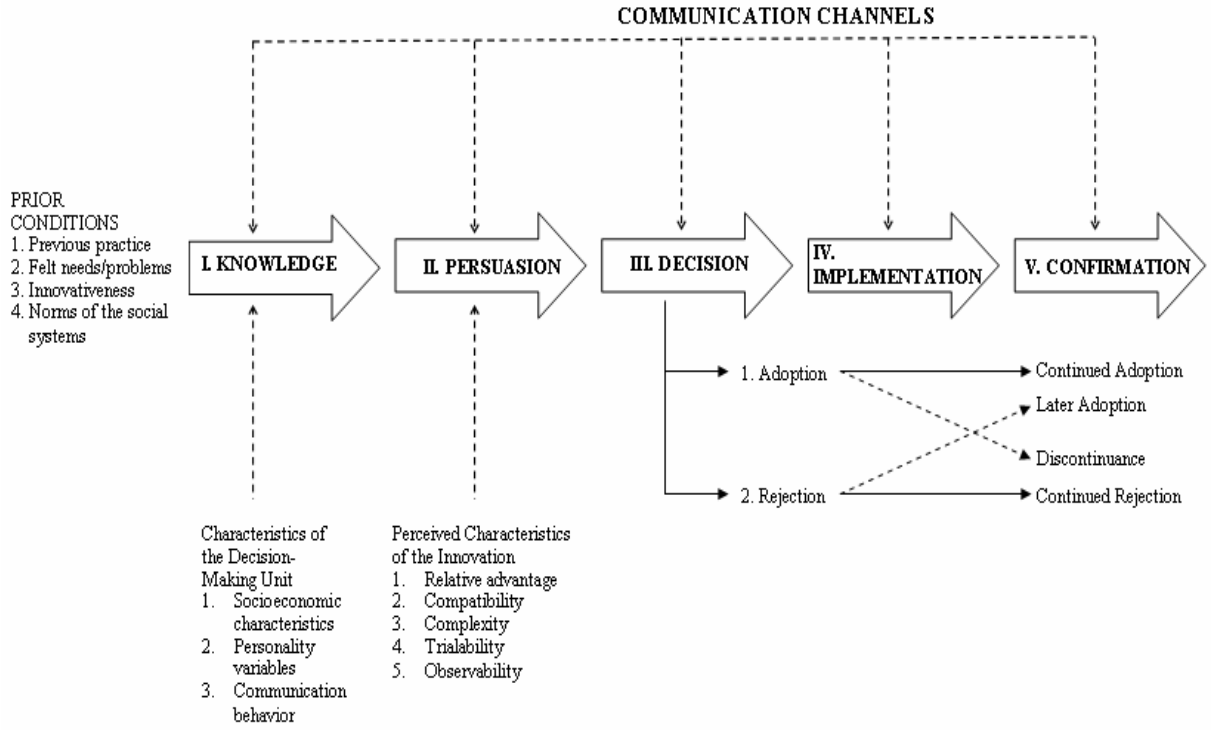

Figure 1: Diffusion of Innovations (Rogers, 2003)

The Innovation decision process characterized as a process that occurs while individuals participate in a series of actions related to decisions (Rogers, 1995). *Knowledge* occurs when individuals are aware of the Innovation and gain understanding of its functions. *Persuasion* is when individuals or decision-making units exhibit favourable or unfavourable behaviour toward the Innovation. *Decision* indicates when the individual or unit decides to adopt or reject the Innovation. *Implementation* occurs when the individual or unit decides to use the Innovation. *Confirmation* occurs when decision makers confirm or reject their decision to adopt the Innovation (Rogers, 1995).

3. Data analysis

Using the Innovation-Decision Process (Rogers, 2003), the analysis of the data is presented as follows:

3.1 Knowledge

Knowledge involves management efforts - from identifying needs to delivering intelligence products and services to consumers and clients. Similarly, innovations are evaluated, monitored and controlled using knowledge. In the organisation, knowledge was applied in the development of innovation, which was supported by policy, and generated new requirements. Through knowledge the organisation

could innovate, as well as plan how to utilise the products and services from innovation. According to DV_LA003 (p4:30-31), *Knowledge in the organisation is assessed by questions, and, they are categorised into needs, such as intelligence problem, decisions, risk metrics (risk tolerance level) and measurement methods. The organisation was challenged by the knowledge to innovate, primarily, for competitive advantage.*

The organisation focuses on the innovations of security tools and approaches. DV_LA004 (p13:100-101) explained that there is a growing use of Competitive Intelligence in the financial services sector and mentioned that the organisation has spent considerable resources to protect their businesses from infiltration of their systems by other forces.

According to DV_LA003 (p7:45-46), Knowledge is a vital tool, as such, and the organisation conducts surveys to assess employees' knowledge on the deployment of CI. The organisation worked hard on communicating with staff, ensuring strategies were clear, addressing performance and remuneration issues and motivating people. A number of employees, within the organisation, did not have the knowledge regarding some of their Information Systems innovation Product and Service offerings. This was attributed to factors such as inadequate skills; no clear consequences of not meeting performance standards; lack of alignment with strategy and a reward system that fails to motivate properly.

If employees are not informed, or are knowledgeable about products and services it creates risk to both individuals and the organisation. DV_L003 (p7:62-63) explained that everyone in the organisation are aware of the strategy and possesses knowledge of the products and services which are deployed in the organisation.

3.2 Persuasion

At the Persuasion stage, a person's main type of thinking is affected by, or related to, feelings. Some employees in the organisation develop an attitude towards certain Innovation and are psychologically involved with Information Systems Products and Services. According to DV_LA002 (p5:55-56), *there is a marketing team which responsible innovation, and persuades the Board of Directors for approval.* Post approval, the rest of the employees is persuaded on implementation and use of the innovation.

Organisations use incentives and bonuses as tools to persuade employees to perform their tasks, and align with the organisational innovative strategy. An employee stated that *when I am working on any project, I know that I should do my ultimate best to make sure the project becomes a success. The lack of some knowledge, on my part, in being able to deliver successfully on the project, affects my incentives and can, sometimes, also affect everyone involved on the project. DV_LA006 (p16:172-173).*

Some employees felt that only using the marketing team is exploitative because of the rest of the team's limited perception of the innovation, and reality. Not having a say in the matter may serve as an indicator of the message's influence on this stage. However, DV_LA001 (p2:14-15) *believes that, by having one team focusing on finding new ideas to innovate, it eliminates time waste and also cuts cost; inevitably speeding up the delivery process.* DV_LA004 (p8:83-84), commented that there is a perception that *people who work in the field might have first information of latest innovation, but often choose to remain silent because it's not their place to come up with new ideas*. The employee added that *it then becomes more difficult or easier to persuade these people to adopt innovation in the organisation, as they already know more about it. This depended on the type of findings they have about the innovation, as a result of their interaction with clients.*

Another interviewee, DV_LA005 (p9:148-149) commented that *Key Performance Indicators (KPIs) is good approach to periodically assess the performance of the individuals, business units and the organisation at large. The employees* further explained that *in the organisation, KPIs is defined in a way that is understandable, meaningful, and measurable. They are rarely defined in such a way such that their fulfilment would be hampered by factors seen as non-controllable by the organisations or individuals responsible.* The KPI ensure that *each employee knows the organisation's expectations, as well as the output required by the customers*.

3.3 Decision

Many of the individuals in an organisation do not adopt innovated Information Systems Products and Services without proper testing and evaluation. The latter was carried out in relation to the usefulness and fit in the organisation's environment. Some individuals used partial trial to gain better understanding of innovation and deployment of products and services in the organisations.

One of the interviewees, DV_LA008 (p6:17-18) provided the following explanation; s*ome employees in the organisation are policy decision-makers and initiate requirements for CI products and services. These decision-makers are the recipients of the end Products and Services of CI through Information Systems Innovation. The decisions are based on information and knowledge, and sometimes lead to the levying of more requirements; thus triggering the Intelligence Cycle. After finishing a cycle, a new set, or improved set, of template will be produced that will be used in monitoring and identifying risk*.

According to a Director, DV_LA002 (p5:43-44), It is common to find deployments filled with projects that have attractive returns on investment but do not move the needle on performance parameters that matter in the marketplace. In selecting Products and Services to innovate and build a portfolio of improvement initiatives, clear linkage to strategic priorities needs to be established; not just at the outset, but on an on-going basis. When making decisions, one of the most seductive pitfalls is to become comfortable with embracing innovations that are, in themselves, attractive without paying sufficient attention to overall optimization.

Although finance could be viewed as the artery of a firm and an important indicator of management direction, management mindset encompasses more variables than only financial decisions. *The organisation's brand, strategy, employees and customers play a major role when making a decision to innovate. The brand has to define the organisation through the innovation. The innovation has to align with strategy, the employees' need for knowledge and skills to deploy the CI innovation, and the customer has to get the best Product and Services that will help solve their problems.* DV_LA001 (p3:19-20).

3.4 Implementation

Each division at Divhetsheleni has its own strategic team that deals with implementing the strategy of the division, making sure it aligns with the organisational strategy. All CI implementation is defined by the same vision and goals in order to improve innovation, as well as to create a competitive brand. The *strategy team ensures that Information Systems Innovation aligns with the organisation's strategy. However, the organisation had a Marketing Department, which was responsible for innovations that needed to be implemented in all the various divisions of the organisation. According to one of the employees, (DV_LA001 p2:18-19), Implementation of a new innovation was about being prepared to measure the organisation's performance consistently, constantly, to recognise weaknesses and, indeed, be willing to address those weaknesses. This begins with initial measurement, which serves as an indication of where the organisation is, so that it can determine where it wants to be. The o*rganisation still follows old traditional ways of implementation, while Information Systems Innovation challenges the employees to acquire more knowledge, and understanding, of the products and services they deploy. The organisation readiness to implement becomes a challenge during the innovative process.

A forward–looking organisation seeks to provide value-added offerings, through Information Systems Innovation, at every stage of its life in order to improve the culture of the organisation. The organisation's *high-performance culture was characterised by openness and trust, with clear accountability for execution, and the freedom to take calculated risks; thereby constantly raising individual and organisational performance. This was expressed by DV_LA005 (p15:204-205).*

According to DV_LA002 (p6:64-65), m*ost of the organisation's successful implementations of a remuneration strategy, and the alignment of benefits across all staff, are based on job function rather than grades.*

The employee further expressed that*, Performance scorecards reflect an integrated approach to sustainability and are balanced across economic, environmental, social, transformational and cultural elements. Our commitment to driving high performance is evident in our new organisational structure,*

with the separation of support structures from the client-facing clusters to ensure that the business is able to focus on improving economic performance regardless of economic conditions.

3.5 Confirmation

Confirmation was the recognition, by the organisation, of the benefits of using Information Systems Innovation; its integration into the organisation's on-going routine, or promotion of the innovation to others; as well as the identification of Products and Services to be deployed. This gives the organisation an opportunity to provide feedback immediately when decisions for tomorrow's solutions are being made. According to one of the employees, *we establish a team work with our clients from the beginning of the deployment,* DV_LA006 (p18:248-249*). This team work between the organisation and the customers made it possible to test and confirm the proposed innovation.*

In addition, another employer, DV_LA001 (p3:29-30) commented that *in cases whereby many solutions required testing, the customer gave the organisation access to people who were experts on the applications*. The collaboration between hardware and software providers, at this early stage, eliminated the risk normally associated with new technology deployment.

4. Findings

There were some findings from the above analysis of the data. The findings are discussed as follows:

Culture

When an organisation is operating globally, culture always becomes a challenge. The organisation's high-performance culture is characterised by openness and trust, with clear accountability for execution, and the freedom to take calculated risks; thereby constantly raising individual and organisational performance. For the organisation to deliver on its high performance culture, it must have created an environment where information is shared openly, whereby its' people are reward for their skills. In addition, trust must be created to ensure that employees do not feel used.

Each innovation has performance scorecards that reflect an integrated approach to sustainability. These are balanced across economic, environmental, social, transformational and cultural elements. In addition, these innovation performance scorecards assist in building a new organisational structure; separating support structures from client-facing clusters.

Knowledge Sharing

One of the challenges of an organisation is that of getting people to share their knowledge. In today's organisation, where so much depends on teamwork and collective knowledge, it is only a handful of people who have the kind of knowledge with which they can hold their peers (including bosses) to ransom. Such individuals were Directors or Managers, who were careful and caution of losing trade secrets. It may be a particular Specialist who has been in the organisation for many years and has built up his, or her, own unique way of achieving success without perhaps even understanding the deep tacit knowledge of how they do it. All these poses threat to organisation, when they want to innovate, because such individuals holds on to the expertise that they have.

Organisation is intended to create a commitment to culture, change, challenge, competition and cooperation. If, as is often the case, time pressure leads to poor knowledge sharing, then there must be a commitment to allow time for it to happen. Commitment to knowledge sharing must be demonstrated throughout the organisation.

Repositioning of Brand

The organisation shifts its focus from repositioning its brand to building the brand and the brand promise. When an organisation innovates, the brand needs to sell the idea. Therefore, the customer has to start seeing the innovation from brand perspective.

The organisation continues to inspire, motivate and challenge people to make a difference, whilst striving to become a leader in client-employee understanding and care; across all market segments. The introduction of a new brand expression, accentuates the intensified, and increased, nationwide

above and below-the-line advertising campaigns to position the organisation's brand in a more relevant and approachable manner.

Education and Awareness

Education and Awareness in the organisation encourages and enhances people's participation in activities aimed at conservation, protection and management of the environment; essential for achieving sustainable development. The organisation seems to ignore the importance of educating their staff about Information Systems Product and Services and the path taken by the organisation to deploy Competitive Intelligence. There appears to be the assumption that seems that all employees are aware of the deployment process. Employees who were not aware of the innovations which were taking place in the organisation, could be considered and classified more as expense, than an asset. Their inability to transfer, or acquire skills, from one other is evident since they are not cognisant of the innovation taking place within their organisation. Spending the necessary time to educate employees, and making them aware of CI, will cut organisation costs and reduce time spent doing feasibility studies on the process of adopting and implementing innovation by an outside partner.

Improve Innovation

The organisation improves innovation across all business clusters in order to create a single view of its client base. It enables a closer relationship with clients, and it facilitates better co-ordination all actions. The organisation strives to provide more transactional service offerings, and the driving of primary investor status, by focusing on further enhancements.

Some divisions, however, were planning on introducing a number of new products, services and business ventures. A dedicated unit, focused on driving innovative products, has been established. The organisation will be building on the innovative products that they launch every year; aiming to have improved its innovation delivery capability significantly.

Inclusiveness

Some of the innovation for process improvement lies with the process owners. This is not a new concept, but it bears emphasising; as organisations are still not taking this aspect seriously when innovating.

Frequently, process owners are frontline people who do not have the chance to participate in improvement efforts. While they may not be formally trained in quality tools, their closeness to the process is a vantage point second to none. The organisation uses their marketing team to come up with innovation. The same team runs the marketing campaigns and interacts with the customer, forgetting the very people who actually deploy the process.

Prioritization

One of the most seductive pitfalls is for an organisation to become comfortable with doing Information Systems innovation projects that are in themselves attractive, without paying sufficient attention to overall optimisation. It is common to find deployments filled with Information Systems innovation projects that have attractive returns on investment, but do not move the needle on performance parameters that matter in the marketplace. In selecting Information Systems innovation projects and building a portfolio of improvement initiatives, clear linkage to strategic priorities needs to be established, not just at the outset but on an on-going basis.

Creativity is not generally associated with defining the portfolio of Information Systems innovation projects; however, ongoing re-evaluation can uncover opportunities for innovation. The sum, or where time and attention is placed, defines an organisation's strategic direction.

The next section presents the interpretation of the findings from the case study.

4.1 Interpretation of the findings

The findings from the analysis are regarded as the factors which influence the Innovation of Competitive Intelligence (CI) within the Information Systems environment. The Products and Services

of CI manifest into many other components, as depicted in Figure 2 below. The discussion that follows explains each of the components.

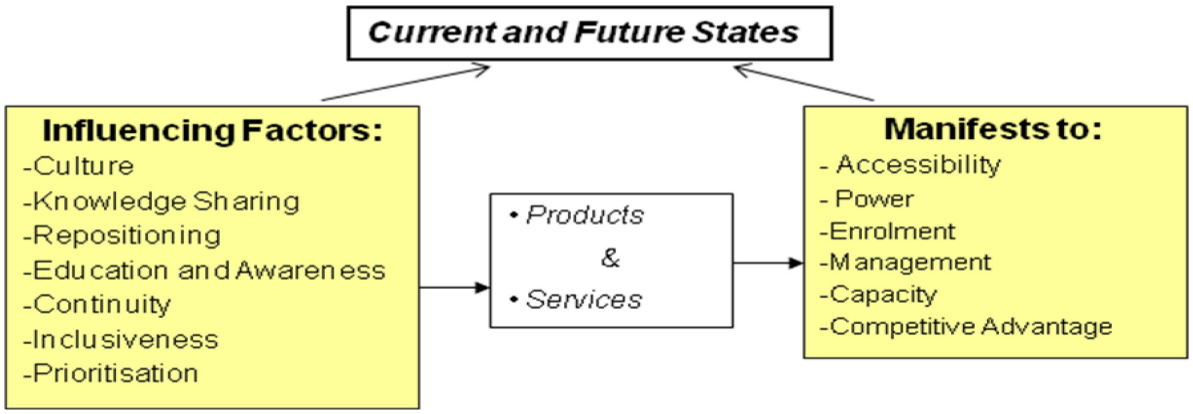

Figure 2: Factors influencing competitive intelligence on information systems innovation

- Accessibility – This refers to the organisational ability to access information needed for the making of public decisions as well as its ability to share the economical status of the organisation with its employees. It also speaks of the sharing of knowledge and expertise by employees, with their peers, without hiding any information for fear of any threat that might arise. Some of these include the following; "If I share some of my knowledge, will you use it out of context, misapply it (and then blame me!), or pass it off as your own without giving any acknowledgement or recognition to me as the source?"
- Power - This is often a cop out by managers, or change agents, who are not adequately addressing the human factors or motivational aspects. In the organisation, so much depends on teamwork and collective knowledge, it is only a handful of people who have knowledge on which they can hold their peers (and bosses) to ransom. There are some specialists who has been in the organisation for many years, and built stock of knowledge, which they use as a source of power. However, knowledge is power but is, typically, not the primary reason for lack of knowledge sharing.
- Enrolment – Based on different interests, many employees decide either to enrol (participate) on the innovations process or not. Also, those who enrol might do so reluctantly, depending on the interest. Personal interest takes priority above the organisation's interest.
- Management - There is pressure on productivity, on deadlines, and it's a general rule that the more knowledgeable you are, the more people there are waiting to collar you for the next task. Management ensures that lessons learnt by individuals and groups are captured into the knowledge database for sharing.

Another aspect of management is the use of aligning rewards and recognition to support appropriate behaviours, efficiency and productivity by employees. This minimizes, and eventually eradicates, the schemes that are based on seniority or individual expertise, rather than team effectiveness.

- Capacity - At regular team meetings, time must be allocated to understand and improve internal processes. Too many meetings are task and output focused, but fail to address the means of achieving successful outcomes.
- Competitive Advantage – This is the strategic advantage one organisation entity has over its rival entities within its competitive industry. Achieving Competitive Advantage strengthens and positions an organisation better within the business environment.

In order for an organisation to develop a competitive advantage it must have resources and capabilities that are superior to those of its competitors. Without this superiority the competitors can simply replicate what the organisation was doing, and any advantage disappears quickly.

Framework for Information Systems Innovation

From the analysis and findings, the case study provides insight to the different characteristics of Competitive Intelligence (CI) Products and Services Innovations within the Information Systems

environment. This is illustrated in Figure 3. To have a full understanding, the discussion that follows should be read with the figure 3.

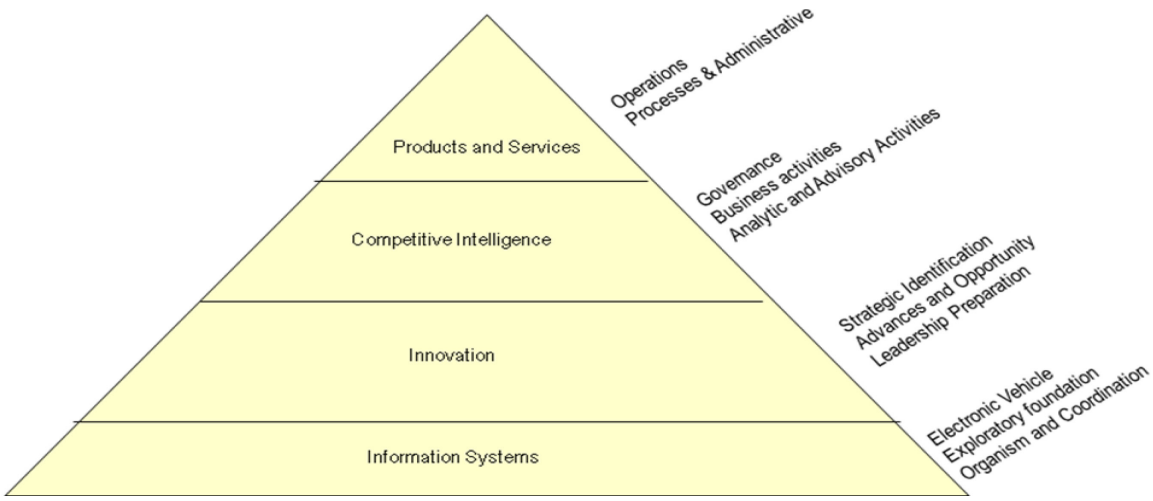

Figure 3: Competitive intelligence products and services innovations within the information systems environment

Organisations that are strong in Adaptability and Involvement have an edge in innovation and creativity, while organisations excelling in Mission and Consistency have a high measure of stability, return on investment and return on sales. Organisations measuring high in all components have a dramatic financial advantage over organisations that are weak in these areas. Organisations at the bottom perform just as one would expect: They are sluggish, wasteful and out of touch with their customers.

A differentiated corporate culture can build sustainable long-term competitive advantage and help to attract and retain talented staff. The various management and leadership development programmes are key enablers. Organisation needs to become the employer of choice, recognising that market competition for talent continues to increase. Continued focus remains on making organisations a great place to work and able to attract, develop and retain the best people.

The economic capital, risk appetite and risk adjusted performance management methodologies of the organisation get to be embedded across the group, and fully integrated into strategy and reporting; in parallel with the historical return on ordinary shareholder's equity (ROE). The risk management structure is maintained for the continuous build of a strong risk culture, including firmly establishing risk as an enabler for growth; a competitive advantage and a key source for innovation.

There is reliance, by the organisation, on the Key Performance Indicators (KPI's) to identify or measure the acceptance of innovation by a client. KPI, for an organisation, is a tool that persuades decision makers as a result of the reaction of the customer towards the organisation's innovation. It also measures an employee's performance on certain tasks related to the innovation.

The organisation and its executives are grappling with several concerns relating to the management and institutionalisation of knowledge sharing. They see the most pressing need as developing a structured and systematic approach to what is known as knowledge sharing. Knowledge sharing has gained increasing attention in recent years and has become more relevant in the fast changing, IT-driven world; primarily due to the fact that organisations always want to stay ahead of their competitors.

Information systems innovation begins with the organisational environment, whereby there is top-down support for project management practices and investment, by the organisation, in the innovation process. In rolling out Products and Services, implementation by the organisation focuses on doing so correctly, rather than simply doing what it takes to complete the competitive intelligence deployment as quickly as possible, at a minimum cost.

If successful implementation of products and services contributes directly to strategic objectives, then the bottom line information systems and innovation should lead to organisational success. Innovation requires an investment in resources, therefore responsibility lies with senior management to ensure that investments are made wisely and add value to the organisation as a whole. Unsuccessful competitive intelligence deployments translate into poor investment and, ultimately, senior management is accountable for projects not reaching the objectives of the organisation.

In conclusion, the brand of an organisation brand is a key intangible attribute by which they compete. Its main objective is to support differentiators; and reposition the company as being significantly different from any other financial organisation. In so doing, potential clients are drawn to the brand which, ultimately, encourages them to choose their organisation above that of their competitors.

For a company to deploy competitive intelligence successfully, appropriate organisational awareness of the culture of competitiveness must be cultivated. While decision makers should call the shots on what intelligence is required, information gathering should be on everyone's mind. Through the findings and interpretation of the two case studies on the impact of competitive intelligence information systems products and services innovations in organisations, a Framework was developed to illustrate stages that organisations have to following during Information Systems innovation.

From the findings and interpretation of the case study on the impact of Competitive Intelligence on Information Systems products and services innovations in organisations, a Framework was developed, Figure 4. The Framework is aimed at providing direction for organisations during Information Systems innovation, the stages on the Framework encompasses the activities involved in Information Systems innovation.

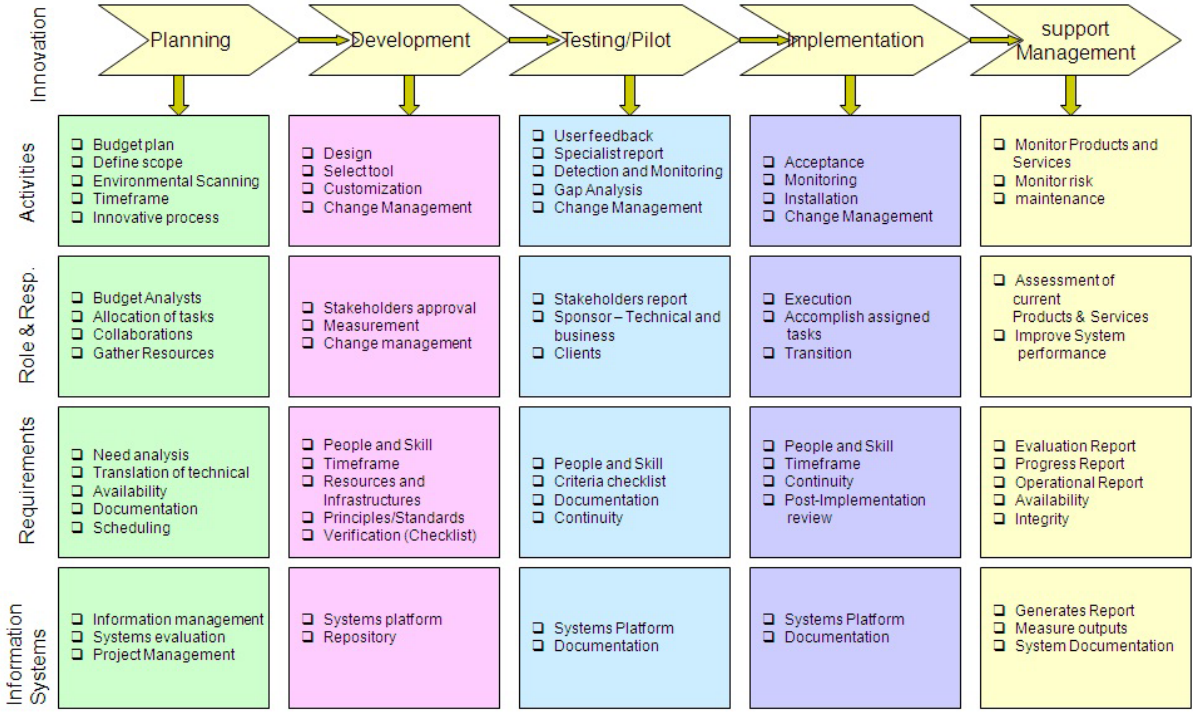

Figure 4: Framework for information systems innovation

The Information Systems it's composed of five different stages that organisations need to follow for deployment of CI products and services. Each Stage has columns that are categories by different aspects of innovation on a row level. All innovation stages or phases actives, roles and responsibilities, requirements and information systems inputs for the deployment of a successful competitive intelligence products and services has been illustrated in this framework.

5. Conclusion

This study was holistically and comprehensively carried out within the scope as demarcated in Chapter one. The findings and the analysis of the study indicate that further research relating to competitive intelligence can be conducted. Some of the suggestions are:

- Organisational Culture – it would be in the interest of academic organisations to investigate and gain a better understanding of how organisational culture impacts on Competitive Intelligence products and services in organisations.
- Underpinning theories – it would be a significant contribution to apply different theories such as Organisational information processing theory (OIPT) and Technology-Organisation-Environment Framework (TOT framework) in a similar study. Organisation need to be knowledgeable about the Competitive intelligence products and services they deploy so that they can make better decisions to innovate. Organisational information processing theory is applied to Organisations that need quality information to cope with environmental uncertainty and improve their decision making. (Premkumar *et al,* 2005). Another theory that can also be applied in a similar study is TOT framework because the study establishes organisational culture as being one of the main concerns when deploying CI products and services. TOT framework emphasises the process by which an organisation adopts and implements technological innovations which are influenced by the technological context, the organisational context, and the environmental context (Tornatzky and Fleisher 1990). The environmental context includes the size and structure of the industry, the organisation's competitors, the macroeconomic context, and the regulatory environment (Tornatzky & Fleisher 1990). Both these theories have been applied in the Information Systems fields but not in organisational culture and Competitive intelligence fields.

Knowledge sharing is critical to Information System Innovation in the organisation that deploys it, making it very useful for competitive advantage. The study helps managers to gain better understanding of how knowledge sharing influences products and services in the organisations.

Sometimes the effect of Competitive Intelligence on the innovative process is not obvious, but it does exist because the companies compete, and are challenged with customers' needs. Therefore it is strategically important to equip as many as possible employees with enough knowledge to carry out the customers' demands. Regardless of how knowledge is acquired, Competitive Intelligence deployment relies on the knowledge individuals and group have about the information Systems products and services.

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