

**THE DEVELOPMENT OF COMPETITIVE INTELLIGENCE
(CI) IN SOUTH AFRICA WITH SPECIAL REFERENCE TO
THE CI PRACTICES IN A PHARMACEUTICAL
COMPANY**

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REMARKS

- The dissertation is submitted in the form of a research article and comprises two sub articles, one that has been published and the other submitted for publication in scientific journals.
- The editorial style of the research article included as Chapter 2: The development of Competitive Intelligence in South Africa, is specified by the Journal of Competitive Intelligence and Management. This chapter also includes an inventory of articles and publications written in South Africa on the subject of Competitive Intelligence. The purpose is to build on this inventory in order to create a national archive of publications on the subject of Competitive Intelligence.
- The editorial style of the research article included as Chapter 3: Pharmaceutical industry player approach to Competitive Intelligence, is specified by the Competitive Intelligence Magazine. The article has been published in this journal as Viviers, W & Muller, M-L., 2004. Competitive Intelligence Magazine, 7(1): 18-23. The references used for the two research articles are listed together in the bibliography at the end of this dissertation.

SUMMARY

THE DEVELOPMENT OF COMPETITIVE INTELLIGENCE (CI) IN SOUTH AFRICA WITH SPECIAL REFERENCE TO THE CI PRACTICES IN A PHARMACEUTICAL COMPANY

Key Words: Competitive Intelligence (CI), planning and focus, collection, analysis, key intelligence needs, communication, awareness and culture, process and structure, CI process, CI unit.

Competitive intelligence (CI) is one of the fastest growing fields in the business world South Africa included; yet little quantitative research has been conducted or published on the development and use of CI in South Africa. CI is concerned with the methods companies use to monitor their competitors, their own competitive position, and to improve their competitiveness. It is not a new business activity but modern CI is more focused, formal, organised and actionable.

CI is not an activity limited to a few countries or companies in certain industries; it is a worldwide phenomenon. Most of the Fortune 500 companies use CI extensively. Literature shows some countries such as France, Japan, Sweden and the USA to be more advanced in their embracement of CI as a means to enhance competitiveness. In these countries, CI is a recognised business discipline and has become a major source to achieve competitive advantage. They are also developed in terms of the role government plays in supporting CI activities.

Another indicator of CI as a growing practice worldwide is the development of the Society of Competitive Intelligence Professionals (SCIP). Globally, SCIP chapters have taken root in all continents. Moreover, SCIP Europe, SCIP Italia, SCIP Australia and SCIP Deutschland are part of a growing worldwide network

of SCIP affiliates, i.e. independent organisations that have formally affiliated with SCIP.

Leaders in the field of CI training are France, Japan, Israel, Sweden, and Korea while Europe is beginning to appreciate the importance of CI as a corporate tool. Some practitioners suggest that in the near future, all MBA programmes in Europe will include CI as a core subject and that the investment community will be looking at companies' track records in terms of their CI practices (Blagg, 2002).

In comparison, CI in South Africa is still in its infancy (Muller, 1999). However, with South Africa's competitive landscape being reshaped, the need for CI as a means to enhance competitiveness has grown rapidly. Research into CI in South Africa has been limited. The first comprehensive research projects were launched in the beginning of the century. Very few companies then knew about CI, let alone practice it. But that did not mean that companies did not monitor competitors and other external events. There was just no formalised structured approach in assessing their environment. Since then, a team of researchers came together to find an answer to the question: What is the level of development and deployment of CI in South Africa? The findings of the research indicated a realisation among South African companies that they will have to take pro-active steps based on available information in order to survive.

An assessment of current programmes in CI at South African learning institutions revealed a lack of formal academic programmes. Current programmes are mainly limited to short courses in basic CI principles. At present there are no CI courses presented at secondary schools in South Africa, and although some progress has been made in the development of courses, much still needs to be done. Programmes should also be presented at business schools at MBA level or at least as part of management and leadership training.

A detailed description of the development of CI in South Africa in the areas of research, consulting and training is provided in Chapter 2. To illustrate the CI practice in a company, a case study is discussed in Chapter 3 to examine and analyse the development of the CI capability in one of the most prominent pharmaceutical companies. The pharmaceutical industry provides an appropriate example of an industry that undergoes constant and rapid change.

Various areas of CI still need to be researched including CI in the academy as well as further studies on how companies in South Africa conduct CI. This study aims to add to the growing database of research into CI in South Africa.

For the first research article (chapter 2) two research methods were used i.e. a literature study into CI as a business discipline and a qualitative design (interviews) to obtain information from leaders in CI in South Africa. Given that CI is still in its infancy, the sample was small and included all recognised knowledgeable people on CI in South Africa.

For the second research article (chapter 3) the same two research methods were applied. Both a qualitative design (interviews) and a questionnaire were used for the collection of primary information on the targeted company. The interviews were conducted with the CI manager in the company that was targeted for the case study. The sensitive nature of CI meant that permission for the publication of the case study had to be obtained provided a disguised name was used.

OPSOMMING

DIE ONTWIKKELING VAN MEDEDINGENDE INTELLIGENSIE IN SUID-AFRIKA MET SPESIALE VERWYSING NA DIE MEDEDINGENDE INTELLIGENSIE PRAKTYKE VAN 'N FARMASEUTIESE MAATSKAPPY

Sleutelterm: Mededingende Intelligensie (MI), beplanning en fokus, insameling, analise, bestuur, sleutelinligtingsbehoefte, bewustheid en kultuur, proses en struktuur, MI proses, MI eenheid.

Mededingende intelligensie (MI) is een van die mees snelgroeiende bestuursdissiplines in Suid-Afrika asook in die res van die wêreld. Daar is egter nie genoegsame kwantitatiewe navorsing beskikbaar oor die ontwikkeling en gebruik van MI in Suid-Afrika nie. MI behels die metode wat maatskappye gebruik om hulle mededingers en mededingende posisie te monitor en om hulle mededingendheid te bevorder. MI is nie 'n nuwe sakedisziplinêre nie maar moderne MI is wel meer gefokus, georganiseer en bruikbaar ('actionable').

MI is nie 'n aktiwiteit wat beperk is tot slegs 'n paar lande of maatskappye in sekere industrieë nie maar is 'n wêreldwye verskynsel. Die meeste van die Fortune 500 maatskappye het goed ontwikkelde MI-praktyke. Literatuur toon voorts dat daar lande soos Japan, die VSA, Frankryk en Swede is wat verder gevorder is in terme van hoe MI aangewend word om mededingendheid te bevorder. In hierdie lande word MI erken as sakedisziplinêre en het MI 'n erkende manier geword waarop mededingendheid en mededingende voordeel bereik kan word. Die genoemde lande is voorts verder ontwikkel ten opsigte van regerings se rol ter ondersteuning van MI-bedrywighede. Europa het ook die rol en belangrikheid van MI begin erken. Daar is selfs MI-kenners wat meen dat alle MBA programme in Europa binne die afsienbare toekoms MI as sleutelvak in hulle leerplane gaan insluit. Daar word voorts geargumenteer dat

die beleggingsgemeenskap sal begin kyk na 'n maatskappy se MI-geskiedenis wanneer aandeelpryse en kredietgraderings ter sprake kom (Blagg, 2002).

'n Verdere teken van MI se groei as sakedisipline is die wêreldwye ontwikkeling van die Society of Competitive Intelligence Professionals (SCIP). Sg. SCIP 'chapters' word in alle wêrelddele insluitende Suid-Afrika aangetref. Benewens die 'chapters' is daar in verskeie lande ook SCIP affiliate; dit is onafhanklike organisasies wat hulle formeel by SCIP geaffilieer het.

Daarteenoor is MI in Suid-Afrika steeds in sy kinderskoene (Muller, 1999). Suid-Afrika se mededingende omgewing word egter herskep en die behoefte aan MI as 'n wyse waarop mededingendheid bevorder kan word, neem toe. Navorsing oor MI is tot dusver beperk. Die eerste omvattende navorsingsprojekte is eers in die begin van 2000 geloods. Weinig maatskappye het op daardie tydstip geweet wat MI is en het dit slegs op beperkte skaal bedryf. Maatskappye het egter wel mededingers en ander eksterne elemente gemonitor maar daar was geen formele gestruktureerde benadering tot omgewingsmonitering nie. Sedertdien het 'n groep navorsers byeengekom om 'n antwoord op die vraag te vind: Wat is die vlak van ontwikkeling en gebruik van MI in Suid-Afrika? Die bevindinge van die navorsing het getoon dat Suid-Afrikaanse maatskappye besef dat hulle pro-aktiewe stappe moet doen ten einde te oorleef en sukses te behaal in 'n toenemend mededingende sake-omgewing.

'n Bepaling van huidige MI-kursusse aan Suid-Afrika se opvoedkundige instellings het 'n gebrek aan formele akademiese kursusse onthul. Huidige kursusse is beperk tot kort kursusse in die grondbeginsels van MI. Geen MI-kursus word tans op skoolvlak aangebied nie hoewel vordering gemaak is met die ontwikkeling van programme. Dit is egter duidelik dat baie meer gedoen moet word en dat MI-kursusse op MBA-vlak of ten minste bestuurs- of leierskapopleiding aangebied moet word.

'n Gedetailleerde beskrywing van MI in Suid-Afrika op die gebied van navorsing, konsultasie en opleiding word in hoofstuk 2 verskaf. Ten einde die MI-praktyke

in 'n maatskappy te illustreer word 'n gevallestudie in hoofstuk 3 beskryf. Die MI-vermoë van een van die mees vooraanstaande farmaseutiese maatskappye in Suid-Afrika word beskryf. Die farmaseutiese industrie verskaf 'n gepaste voorbeeld van 'n industrie wat konstante en vinnige verandering ondergaan. Verskeie gebiede van MI benodig verdere navorsing, insluitende MI in die akademie en verdere navorsing oor hoe Suid-Afrikaanse maatskappye MI benader en bedryf. Hierdie studie het ten doel om 'n bydrae te maak tot die groeiende databasis van navorsing oor MI in Suid-Afrika.

Vir die eerste navorsingsartikel (hoofstuk 2) is twee navorsingsmetodes gebruik te wete 'n literatuurstudie oor MI as sakedisipline en 'n kwalitatiewe ontwerp (onderhoude) ten einde inligting van leiers in MI in Suid-Afrika te verkry. Aangesien MI steeds in sy kinderskoene is, was die steekproef klein en het dit alle erkende MI kenners in Suid-Afrika ingesluit.

Vir die tweede navorsingsartikel (hoofstuk 3) word dieselfde twee navorsingsmetodes toegepas. 'n Kwalitatiewe ontwerp (onderhoude) sowel as vraelyste is gebruik vir die insameling van primêre inligting oor die bepaalde maatskappy. Die onderhoude is met die MI-bestuurder van die maatskappy gevoer. Die sensitiewe aard van MI het daartoe gelei dat toestemming vir die publikasie van die gevallestudie verkry moes word maar dat die navorsing slegs onder 'n verskuilde naam gepubliseer kan word.

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CHAPTER 1: INTRODUCTION

1.1 PROBLEM STATEMENT

1.1.1 CI worldwide

Competitive intelligence (CI) is one of the fastest growing fields in the business world and is increasingly drawing attention throughout the world (Viviers, Saayman, Calof & Muller, 2002). Managers of international companies are proclaiming the importance of and need for CI. Probably the most popular quote on CI is the one by Robert Flynn, Chairman and CEO of NutraSweet (Flynn, 1996) who said, *"Competitive Intelligence, in my opinion, is worth about \$50 million a year to NutraSweet. That is a combination of revenues gained and those not lost - fifty is probably a low number."*

CI is not a new business activity. Meyer (1987) says successful business enterprises have been collecting and using intelligence for centuries. One of the first European international banks produced a "manuscript newsletter" for its key officers. Today this might be described as a "competitive intelligence" newsletter. This newsletter contained political insight and sensitive commercial information. What differentiates these efforts of the past with those of the present is the organised nature of the correlation of the material (Meyer, 1987). Modern CI is also more focused, formal and actionable.

Few of the Fortune 500 companies are not using CI extensively. Samsung's executives have stated that (Calof, 1998): *"Samsung's future success is dependent on the company's ability to collect and react to Competitive Intelligence"* while the ex-President of Kellogg's stated that companies that *"don't do this won't succeed"* (Calof, 1998). These comments were affirmed by Judy Vezmar, Vice President and General Manager, Xerox, USA who said (Calof, 1998): *"Xerox and other US firms that really want to stick around for a*

while will make Competitive Intelligence an absolutely integral part of their business every day."

Literature shows that some countries including France, Japan, Sweden and the USA are more advanced in terms of the level in which companies adopt and use CI. In these countries CI has earned its rightful place as an acknowledged business discipline and has become a major source to achieve competitive advantage (MultiQuest Consultants). They are also developed in terms of the role government plays in supporting CI activities.

Various factors influence the development of CI in countries. These include culture, the nature of the economy, the country's competitive position and aspects such as geography. One possible reason for the differences in CI development in different countries is that in some countries e.g. France, Israel, Sweden and Canada, government plays an important role in terms of intelligence provider for businesses. Governments in these and many other countries are devoting their resources to help their companies develop CI capabilities (Calof & Breakspear, 1999).

Other reasons for the higher level of CI development in the afore mentioned countries include, heightened competition in the global marketplace, more advanced and formalised CI training programmes, and the extent of international trade these countries are involved in.

1.1.1.1 Government and business CI activities

Intensifying CI activities of governments are also nothing new. It coincides with the shift away from military intelligence after the Cold War to economic intelligence used to attain a competitive edge in the economic competition in global markets (Meyer, 1987). To sustain their market share France, Japan and Russia have initiated national programs to acquire US technical know-how. Former intelligence staff now transforms bits of sensitive information into

meaningful intelligence to guide industrial and national efforts towards dominance (Joyal, 1996).

The French government has been highly focused in their economic intelligence activities and in the mid-1990's formed a high-level commission under the office of the Prime Minister. The task of the Commission was to study how a selected number of foreign countries such as Japan, Sweden, Germany, the USA and the UK integrate economic information obtained from various governmental and non-governmental sources. In 1995, findings led to the establishment of the Agency for Diffusion of Technological Information, a central point for sensitive information in intelligence, business, diplomatic, and ministerial communications that reaches out to French Regional Chambers of Commerce seeking to promote French economic interests (Joyal, 1996).

The main aim can be said is boosting France's CI capability (Calof & Breakspear, 1999). Businesses who wish to avail themselves to this valuable information can subscribe to protected and secured national databases (Joyal, 1996). Also France's foreign intelligence service, Direction Générale de la Sécurité Extérieure (DGSE), was known to be operating in the late 1980's, targeting companies like Boeing, IBM and Texas Instruments for information and turning the information over to French companies (Calof & Breakspear, 1999 and Joyal, 1996).

In France, for example, the government is providing CI training to firms (Calof, 1998). This training includes programmes that educate companies on the various threats they might encounter in industrial espionage and economic intelligence (Joyal, 1996). These training programmes have been developed and currently include a master's degree to train intelligence specialists (Prescott, 2001).

The USA also has various components that promote American business overseas, most notably the Advocacy Center of the Department of Commerce

(DOC). However, North America is lagging behind certain European and Asian countries in the area of CI (Calof, 1998). Leading countries in CI have an edge over the USA and Canada in that they have an innate advantage in CI, since their national cultures value information and intelligence. Whereas government's role in CI in Europe and Asia is more advanced, the extent to which European companies practice CI is less advanced than in Asia (Blagg, 2002).

According to a survey into the CI practices among US companies by The Futures Group, in 1997, 82% of US companies with annual revenues over \$10 billion had an organised system for collecting information on rivals, while 60% (up from 58% two years earlier) of all surveyed US companies had an organised intelligence system (Society of Competitive Intelligence Professionals). Calof and Breakspear (1999) say, however, that although countries like Canada also have fairly advanced CI practices, it is doubtful whether more than 9% of North American firms have world-class CI capabilities (Calof & Breakspear, 1999). This situation, however, is rapidly changing. Realising their need to hone competitive strategy, a growing number of companies are moving forward and establishing a professional CI function.

Japan has been known to gather innovative technology and sensitive business information over many years. The Japan External Trade Organization, a government institution, is known to be driving the gathering of industrial and economic intelligence (Joyal, 1996).

In Japan, the trading companies or sogo shosha like Mitsui, have set the standard in terms of intelligence gathering and understanding business intelligence as organised information (Meyer, 1987).

Choate (1990) refers to the intelligence gathering capabilities of Japanese trading companies "as a vast overseas information collection system" that transmit the information to the headquarters where intelligence analysts

transform it into an intelligence product. Once the information is collated, analysed, and interpreted, the intelligence is immediately delivered to the key executives who use it by means of a pre-defined need-to-know system for strategic decision-making (Choate, 1990).

As more countries are embracing market-based economies, CI is evolving as a worldwide practice. In Germany, major banks are leading the way in terms of collecting and disseminating information through its clients by the state intelligence service (Calof & Breakspear, 1999). Preliminary data from a SCIP-sponsored Global Survey of CI undertaken in 1997, reveals that 2 to 3% of Germany's leading firms are aggressively conducting CI, in primarily the chemical/pharmaceutical and telecommunications industries (Miller, 1997).

Sweden is another country that is often referred to in literature as being a leader in CI. Because the Swedes see intelligence as a non-military way to ensure national peace and prosperity, the country has a well-developed CI culture (Calof, 1998). The small number of significant Swedish international companies all share information to work towards strengthening the overall competitive situation. The banks play a significant role in this effort and openly admit their role along with the Swedish government and its embassies around the world. It is also the Lund University in Sweden that first offered a PhD in CI (www.scip.org).

1.1.1.2 Society of Competitive Intelligence Professionals (SCIP)

Another indicator of CI as a growing practice worldwide is the development of SCIP itself. Based in the US, SCIP is an international organisation that is dedicated to helping Competitive or Business Intelligence professionals to develop expertise in creating, collecting, and analysing information; disseminating CI; and engaging decision-makers in a productive dialogue that creates organizational competitive advantage (SCIP).

Globally, SCIP chapters have been established and 18% of SCIP members are in 45 countries outside the US (Miller, 1997). The South African chapter was formed in 1996. Moreover, SCIP Europe, SCIP Italia, SCIP Australia and SCIP Deutschland are part of a growing worldwide network of SCIP affiliates, i.e. independent organisations that have formally affiliated with SCIP.

1.1.1.3 Education and training

France, Japan, Israel, Sweden, and Korea, also lead in terms of world-class training in CI (Calof, 1998). In Europe the market as a whole is beginning to appreciate the importance of CI as a corporate tool and some practitioners suggest that in the near future, all MBA programmes in Europe will include CI as a core subject area and that the investment community will be looking at companies' track records in terms of CI (Blagg, 2002). In Japan and France there are government-affiliated schools and courses of study dedicated to CI. Other prominent formal education programmes in CI include the following (SCIP):

- Australia: The Macquarie University: Graduate School of Management, Sydney, Australia presents an MBA course (CI for Global Business) and the University of South Australia: School of Communication, Information and New Media presents an MA (Knowledge Management).
- Canada: The British Columbia Institute of Technology (Introduction to CI); Charleton University (Professional Development Program covering the basics of environmental scanning/CI/business intelligence for business); Royal Roads University (Knowledge Management program); University of Ottawa (CI Executive MBA Seminar); University of Toronto Faculty of Information Studies (web-based continuing Education Program Internet CI); Wilfrid Laurier University (Managing CI); University of Windsor (Special Topics in Strategy - MBA - Managing CI); and York University (CI and Benchmarking).

- France: C.R.R.M. (University Aix-Marseille) presents a Masters Programme in CI.
- UK: The De Montfort University presents an MA Marketing Administration with CI as an elective subject.
- Sweden: The Lund University presents a Ph.D. Program in the School of Economics and Management and the University of Stockholm presents an MBA Executive Program in Business Intelligence.
- Brazil: The University of Minas Gerais, in cooperation with the University of Toronto, presents a web-based distance-learning course in environmental scanning and information management.

1.1.2 Competitive Intelligence in South Africa

Compared to the above-mentioned countries, CI in South Africa is still in its infancy (Muller, 1999). CI only started being recognised and used since the mid 1990s. As is the case with many countries, but especially those classified as emerging economies, South Africa's competitive landscape has changed dramatically in the past few years and especially since 1994 with the dawning of a the new democratic dispensation and the resultant re-entry into the world economy after decades of isolation. Since that re-entry, the need for CI as a means to enhance competitiveness has grown rapidly and with that also the growth of CI.

The case for CI as a means to enhance competitiveness is clear. Competitiveness has become a topical issue in recent years. According to the IMD World Competitiveness Yearbook South Africa seems unable to improve its global competitiveness ranking. South Africa's 2004 ranking once again deteriorated by two places from 16th to 18th out of 30 countries with populations of more than 20 million surveyed. Finland and the USA top the rankings (IMD, 2004). Countries are surveyed according to various criteria that are grouped into the four competitiveness factors: Economic performance, government efficiency, business efficiency and infrastructure.

In government circles the need for competitiveness is often voiced. The South African Reserve Bank Governor, Tito Mboweni, (2000) said that globalisation and greater competition pose interesting challenges for enterprises and the public authorities in South Africa. Markets need to make many adjustments to cope with this changed environment. Reiterating these sentiments, President Thabo Mbeki, in the debate on the state of the nation address (GCIS, 2002/2003), said the growth of the South African economy depends on its competitiveness and that measures should be taken to enhance competitiveness.

1.1.2.1 Research

Research into CI in South Africa has been limited. The first comprehensive research projects were launched in the beginning of the century. Before that only a few papers were written on CI including the studies by Du Toit of the Department of Information Studies at the RAU (Du Toit, 1990; Du Toit, 1995).

In 1999 an analysis was conducted (based on the experience of consultants) into CI practices in South Africa (Muller, 1999). Very few companies then knew about CI let alone practice it. But that did not mean that companies did not monitor competitors and other external events. There was just no formalised structured approach in assessing their environment (Viviers et al, 2002). In general South African firms are not on par in terms of efficient intelligence practices with their counterparts in the USA, Japan, Sweden, France, Israel and others (Kahaner, 1997).

In 2000/2001, a team of researchers came together to find an answer to the question: What is the level of development and deployment of CI in South Africa? The salient findings of the research indicated a realisation among South African companies that they will have to take pro-active steps based on available information in order to survive.

The results also indicated that South African companies still use relatively unsophisticated and ad hoc methods to keep track of what their competitors are doing and of their own competitive position in the market. Most companies recognised the need to improve the quality and integration of their CI, but few were in the process of implementing or developing plans. Many seem unsure of how to adopt more effective, integrated, and systematic approaches to CI (Viviers et al, 2002).

The overall results of the study point to the fact that companies in South Africa do not fare well in terms of formalising their CI practices. Also, systems in support of CI activities were inadequate or inappropriate. There was e.g. no central pooling point to where information could be communicated and where interpretation could take place. It seemed that one of the most important ingredients for successful and effective CI to take place namely management support and utilisation, was absent (Viviers et al, 2002).

The location of the core CI unit in companies was also found to be inappropriate for effective CI to take place. As a strategic management function the core CI activities should be placed as close as possible to key decision-makers in companies. However, this was not the case in South Africa as the CI unit was located in divisions or departments such as marketing and sales.

The Viviers study did, however, uncover a few highlights (Viviers et al, 2002):

- Company employees were recognised and used as primary sources of competitive information. This is important because such sources often are the providers of unique and exclusive information and insights.
- Sufficient time was spent on gathering and analysing information although more time should be spent planning the CI activities.
- Companies recognised the importance of being more externally focused and to not only monitor and analyse competitors, but to also monitor

other competitive factors such as suppliers, customers and regulatory issues.

- Analysis of information is taking place albeit of an elementary nature.
- Communication of intelligence to the right people does take place although the communication means or the way intelligence is packaged has been found to be lacking.
- Perhaps the most important highlight was the fact that companies in South Africa have recognised that CI can enhance competitiveness and that they should engage in such practice.

1.1.2.2 SCIP in South Africa

SCIP was launched in South Africa in the mid-1990s but growth of CI and of SCIP has been slow due to various reasons including the fact that CI was still relatively obscure. Furthermore, the need for better intelligence practices was largely unnoticed and unrecognised (Muller, 1999). Through the 1990's and in the early years of this century, SCIP in South Africa has not shown significant growth and membership remains low. Cost associated with membership might be a contributing factor to the limited growth.

1.1.2.3 Consultants

The growth of CI also led to growth in the consulting market. Early consulting groups were mostly ex state intelligence practitioners. Few international CI experts have entered the South African market and those that have been active have done so on a part-time, brief intervention basis.

The large auditing and consulting companies in South Africa also offer intelligence related services more notably Business Intelligence services related to the information and knowledge management architecture in companies. Accenture, Deloitte & Touche Consulting, Ernst & Young and PriceWaterhouseCoopers as well as KPMG include Business Intelligence in their respective service offerings.

1.1.2.4 Education and training

An assessment of current programmes in CI at South African learning institutions reveal a lack of formal academic programmes. Current programmes are mainly limited to short courses in basic CI principles. A CI analysis course developed in 2003 is the first sign that more comprehensive training programmes are in the offing.

At present there are no CI courses presented at secondary schools in South Africa, as is the case in Sweden (Calof & Breakspear, 1999). Although some progress has been made in developing programmes, much still needs to be done and programmes should be presented at MBA level or at least as part of management and leadership training. Higher learning institutions have hitherto been slow to provide training and research support to CI.

A detailed description of the development of CI in South Africa in the areas of research, consulting and training is provided in Chapter 2. Various areas of CI in South Africa i.e. information on the development of CI in South Africa, the current status of CI in South African companies, some unique facets of and challenges facing the CI capabilities of South African companies and remarks on the future of CI in South Africa, are examined.

To illustrate the CI practice in a company, a case study is discussed in Chapter 3 to examine and analyse the development of the CI capability in one of the most prominent pharmaceutical companies as it navigates in a highly competitive technology and research and capital-intensive industry. It highlights the role that CI plays in the company's global growth strategy and how realtime information gathering and analysis assist the company in making the right decision before the event. The case study is analysed against the background of it being part of a large multi national company and examines its CI activities according to the six constructs identified by Calof and Breakspear (Calof & Breakspear, 1999) (see 1.1.5).

The pharmaceutical industry provides an appropriate example of an industry that undergoes constant and rapid change. This means companies operating in that environment need to be innovative and able to constantly reassess their readiness to face the relentless wave of challenges including perpetual strategic planning and execution and optimal use of information to sustain competitive advantage. An instrument to achieve this is CI.

1.1.3 Development of CI as a business discipline

CI is concerned with the methods companies use to monitor their competitors, their own competitive position, and to improve their competitiveness. It is also concerned with the techniques used to select and filter information from a wide variety of primary and secondary sources, to interpret, analyse and communicate the information/intelligence to the right people, and to use it effectively (Hall & Bensoussan, 1996).

Although all good managers intuitively carry out CI, the information explosion, changing technology, and increasing global competitive pressures, mean that there is an increasing need to develop more systematic formal and planned ways of managing information and using CI. There is a basic acceptance that CI is an instrument that could enhance a company's competitive position by providing a means to better understand their competition (Kahaner, 1997). Keeping an eye on the competition is as old as business itself so is there anything new about CI?

Informal CI is in fact nothing new. A review of literature on the subject however suggests that there is indeed something new provided CI is practised in a more formal manner. A formal approach to CI has not been prevalent in South Africa and recognition that a formal approach to monitoring, interpreting and reacting to change in the competitive environment constitutes a novelty. Whether formal or informal CI, there is a constant supply of books and articles published on CI.

Authors like Kahaner (1997) and Metayer (1999) believe that factors such as globalisation, the reduction of trade barriers, the Internet and the end of the Cold War have triggered the demand for real-time strategic and market information.

In fact, the concept of CI as a process has long been proposed in an effort to increase a company's competitiveness (Montgomery & Urban, 1970; Pearce, 1976; Montgomery & Weinberg, 1979; Porter, 1980). Already in 1966 William Fair proposed the formation of a corporate "Central Intelligence Agency" within the company that would focus on the activities of collecting and disseminating information. This proposition has grown over the years to become an emerging business construct with delineated job functions directly responsible for collecting, analysing and disseminating information (Kahaner, 1997).

As far back as the early 1980's, Michael Porter (1980) indicated the benefits of monitoring the competition. Other early literature is generic in nature mentioning the benefits of a formalised approach and referring to competitors and the environment in general. The existence of a formal planning capability is however seen as a prerequisite in performing CI. Gilad (1996) says devoting resources to formal planning while neglecting the input of plans i.e. CI, is not effective.

It is, however, also Gilad (2000) that has started raising the opinion that companies should guard against over formalising CI because it could become a bureaucratic activity unsuitable for fast changing competitive environments. Following an entrepreneurial CI model can be a measure to prevent over-emphasis on procedures and systems that lead to standard outputs whereas the real value is provided when management is able to interpret rapidly changing environments. This model should give rise to creative solutions for unique situations (Gilad, 2000).

Most of these early CI “research” consists of anecdotal case studies of corporate CI activities but there has been little quantitative empirical research on CI (Ramaswamy, Gatignon & Reibstein, 1994). The published quantitative research has been largely descriptive in nature, describing the distribution of CI skills, resources and capabilities across organizations (Prescott & Smith, 1989; Muller, 1999). Porter’s work led to the creation of the then called Society for Competitor Intelligence Professionals 1986 (now called the Society of Competitive Intelligence Professionals – SCIP) and the publication of the Competitive Intelligence Review’s first issue in 1990.

An important issue in the literature on CI and related fields is the scope/demarcation of this discipline. To understand the essence of CI it is necessary to be aware of the concepts of data, information and intelligence and to be able to make a distinction between them.

Fuld (1995) makes the following distinction:

Data: Seemingly unrelated bits and pieces of information.

Information: Integrated data that makes sense to a person or an organisation.

Intelligence: Processed information that can directly be used for decision-making purposes.

Data and information are factual and include sometimes seemingly unrelated numbers, statistics, and scattered bits of data about people and companies and their activities. Intelligence on the other hand, is a collection of information pieces that has been filtered, distilled, and analysed and turned into something that can be acted upon. Intelligence, not data or information, is what managers need to make sound business decisions. It is intelligence (analysed and interpreted information) and not simply information that provides a manager with the ability to make accurate strategic business decisions.

Regarding the focus of CI, a broad examination of the literature shows that CI is more than monitoring the competition. It is about monitoring the entire business

environment. Most authors (Marchand, 1995; Hendrix, 1996) differentiate between competitor, competitive and business intelligence. The focus on the former being only competitors while CI would also include markets, customers, suppliers etc.

CI includes PEST factors and anything external to the company that could potentially impact on its profits. It is not uncommon to find the abbreviation CI being used for competitive Intelligence (Prescott & Herring, 1997). Gilad (1996a) talks about the objective of intelligence as “being able to predict competitors’ moves, customers’ moves, government moves and so forth.” In the broadest sense, CI is the process to reduce managerial decision uncertainty.

Although part of the nature of CI resides in the environmental scanning literature, subsequent studies prove that CI is more than just collecting information – it is a systematic process involving planning, analysis, data collection, and collation/preparation for analysis, communication, and process management. In fact, one study has shown that no more than 25% of a typical CI project is spent in collecting information (Calof & Miller, 1997).

Literature generally assumes that companies know who their competitors are. But focusing only on competitors can leave a company blind to other factors that could impact on its strategic goals (Gilad 1996b). Gilad (1996b) argues that companies that fail have really failed to read various market signals. Market signals are varied, seldom isolated from one another and require analysis. Only a systematic process like CI can decipher market signals early enough to save a company from failure. Just watching competitors, besides running the danger of ignoring other important market signals pointing to opportunities or/and threats, is in itself a comprehensive task.

There are often more competitors to watch than the company has resources for. Some authors provide methods that take into account traditional and potential

competitors and prioritise them according to a number of criteria (Sawka, 2000). Herring also details the use of Key Intelligence Topics (KIT) to focus the intelligence effort (Francis & Herring, 1999).

Various authors have put various different labels to CI including environmental scanning (Aguilar, 1967; Fahey & King, 1977; Fahey, King & Narayanan, 1982; Hambrick, 1982; Saxby, Parker, Nitse & Dishman, 2002), business intelligence (BI) (Cleland & King, 1975; Pearce, 1976), strategic intelligence (SI) (Montgomery & Weinberg, 1979; Aaker, 1983), competitor analysis (CA) (Rothschild 1979; Ghoshal & Westney, 1991) competitive technical intelligence (Brockhoff, 1991; Albagli, Dawson, & Hasnain, 1996), and market[ing] intelligence (MI) (Guyton, 1962; Pinkerton, 1969; Chonko, Tanner & Smith, 1991).

According to McGonagle and Vella (1999) CI has a number of subsets. The four most recognised ones are:

- Strategic intelligence: CI provided in support of strategic decision-making.
- Competitor Intelligence: Interpreted information about competitors, their strengths, weaknesses, intent and capabilities.
- Market intelligence: Intelligence on current market developments.
- Technical intelligence: Intelligence to assist a company to respond to threats and opportunities resulting from technological changes.

Most of these labels have positioned intelligence as the necessary (and sometimes assumed) prerequisite for strategic planning (Ansoff, 1979; Porter, 1980).

1.1.4 Definition of Competitive Intelligence and related terms

1.1.4.1 Competitive Intelligence

CI as a strategic business tool has long been proposed as a means to enhance competitiveness of countries, industries and companies (Porter, 1980). CI has grown to become an emerging business construct with delineated job functions directly responsible for intelligence collection, analysis, and dissemination (Kahaner, 1997).

Globalisation, along with the introduction of new technologies and increased business competition during the 1990s, started to add impetus for more robust and professional CI activities. The advent of the Information Age has also been a significant contributing factor. Thanks to the Internet and advances in telecommunications, there is now an overwhelming amount of easily accessible information (EMR website).

There is a basic understanding that CI enables senior managers in companies of all sizes to make informed decisions about everything from marketing, R&D and investing tactics to long-term business strategies. Effective CI is a continuous process involving the legal and ethical collection of information, analysis that does not avoid unwelcome conclusions, and controlled dissemination of actionable intelligence to decision makers (SCIP).

There is widespread recognition that competitive challenges and risks will increase significantly in the future, and that there is an increasing need to monitor competitors and other elements in a business environment (including customers, suppliers, legislation) if companies are to remain competitive themselves.

A comprehensive definition of CI is therefore “actionable recommendations arising from a systematic process involving planning, gathering, analysing, and

disseminating information on the external environment for opportunities or developments that have the potential to affect a company's or country's competitive situation" (Calof & Viviers, 2001). In a similar vein, Kahaner (1997) defines CI as "a systematic program for gathering and analysing information about a company's competitors and general business trends to further the company's goals." The main aim of CI should be to enhance a company's ability to "outwit, outmanoeuvre, and outperform current, emerging and potential competitors" (Fahey, 1998:3).

CI therefore, is a systematic process of determining information needs, collecting the right information for analysis and applying the results of the CI process in strategic planning. It is creating knowledge from openly available information by using a systematic process involving planning, collection, analysis, communication and management, resulting in decision-maker action. The intent of CI is to better understand customers, regulators, and competitors and so forth, to create new opportunities. In fact, "the intent is to forecast changes in any of these forces and to better position the company to take advantage of these changes" (Canadian Information Processing Society, 2002).

One of the better known and often quoted working definitions of CI is provided by SCIP that defines it as "the legal and ethical collection, analysis and dissemination of information regarding the competitive environment, and the capabilities, vulnerabilities and intentions of business competitors" (SCIP). In a broader sense CI is the process to reduce managerial decision uncertainty. CI can also be described as interpreted information of interest to management about the present and future environment in which the business is operating. The benefits of CI include better insight into competitors, more accurate market predictions and accurate monitoring of trends with significant impact on a company's future. CI is therefore more than just information about competitors (that is sometimes referred to more narrowly as competitor intelligence or market intelligence) and should provide actionable and reliable input to

decision-makers on those issues of highest importance to senior management (Daft, Sormunen & Parks, 1988; Herring, 1998; Gilad, 1989).

Ethics is also a topical issue as far as CI is concerned. The word intelligence often conjures up images of industrial espionage and stealing of information. A common question is whether CI is an ethical and legal activity (Muller, 1999). CI is not spying. It is the legal collection and analysis of open source information. Companies that have an effective CI capability need not resort to unethical information collection methods. The ethical standards of CI are more stringent than what is legally required. As a result, it is not uncommon for individuals to breach the boundaries of ethical behaviour (Prescott, 2001). Ethical CI is reinforced not only in the SCIP ethics code but also in its publication, *Navigating through the Gray Zone* (SCIP, 1997).

1.1.4.2 Business Intelligence

Regarding the terminology, the terms CI and Business Intelligence (BI) are often used to describe what CI is. BI and CI are concepts that are used interchangeably by researchers and there have been numerous discussions about the similarities and differences between them (Gilad & Herring, 1996). BI developed out of a need by companies for external information through environmental scanning and many BI practitioners have developed their own definitions of the concept. These definitions vary. Hamrefors (1999) argues that CI is the part of BI that has the purpose to increase the competitiveness of a company. Gilad (Gilad & Gilad, 1988:viii) defines BI as “the activity of monitoring the environment external to the firm for information that is relevant for the decision-making process in the company.” Researchers started to realise that company strengths and weaknesses should be related to opportunities and threats in the market and lead to environmental scanning (and therefore an external focus in the company) gaining importance.

Sometimes the term BI is used to specifically refer to the more general competitive context, which includes such things as stakeholders (shareholders, community groups etc), regulations, etc. (Wu, 2000). Yet another explanation of the term BI is from a data analysis perspective. In this sense BI is the process of gathering high-quality information about the subject matter being researched that will help the individual(s) analysing the information, draw conclusions or make assumptions. All this information would provide an overall understanding of the industry, which would have been impossible to have unless the analysis had been conducted (Wu, 2000).

The background research into BI suggests that BI is thus a broader concept than CI – CI is that part of BI that has the purpose of increasing the competitiveness of a company (Hamrefors, 1999). BI is also a more generalised terms applied to the broad category of applications and technologies for gathering, storing, analysing and providing access to data to help company users make better business decisions. Amongst others, BI applications include the activities of decision support systems, query and reporting, online analytical processing (OLAP), statistical analysis, forecasting, and data mining. An alternative way of describing BI is “the technology required to turn raw data into information to support decision-making within corporations and business processes” (all-BI Business Intelligence Solutions.)

From an information systems perspective, BI is the system that provides users with OLAP or data analysis to answer business questions and identify significant trends or patterns in the information that is being examined. These are information systems that facilitate the data gathering so those users can focus on the business questions they are trying to answer such as: Which products are the best selling and most profitable? Who buys our products by industry category? Who are our best customers and how much do they buy? Graham Walter of Cognos calls it getting meaningful information from databases (Bisson, 2003). Business Intelligence software tools, usually as a

mix of analytical tools and report generators, are therefore mainly used by companies to find ways of unlocking the value of vast quantities of information.

1.1.4.3 Knowledge Management

The other term often used in relation to CI is Knowledge Management (KM) with the major differences being the much broader scope of KM. CI creates knowledge by using, amongst others, KM to provide timely, actionable insights into opportunities and threats in the competitive environment.

The American Productivity and Quality Centre (APQC) defines KM as "systematic approaches to help information and knowledge emerge and flow to the right people at the right time to create value" (Williams, 2002). The commonality between KM and CI can be found in the words "systematic" and "actionable." Both disciplines must be implemented in a methodical, organised fashion so that people who need it can access information, and knowledge and CI must be actionable in order to be valuable to the organisation and help it create a competitive advantage (Williams, 2002).

Some experts consider KM to be no more than an empty slogan and Management Information Systems (MIS) "dressed up and ready to suck up corporate resources" (Gilad, 1999). Basically, KM is information management or concerned with MIS. KM's aim is to manage knowledge as an intangible resource but has become ways to retrieve existing information hidden in corporate databases (Intranets, portals, and virtual communities) (Gilad, 1999). Gilad goes on to argue that this means that KM in this form has little to do with knowledge and everything to do with retrieval tools.

Fuld (1999) says KM's scope is much wider than CI's in that its objective is harnessing the entire corporation's skills, market knowledge and overall business skills using various software instruments. CI on the other hand is a

focused, human driven and executed business discipline that often uses BI software and/or KM instruments.

1.1.4.4 Competitive Technical Intelligence

Competitive Technical Intelligence (CTI) is a subset of CI. It takes advantage of the broad availability of technical documentation in the form of patents and other documents, as well as the complexity of products and services in today's fast changing marketplace. The focus thus is more of a technical nature. In addition, practices such as reverse engineering and product benchmarking are assisting companies to isolate technology foundations of products or services and integrate their uniqueness into their own (Aurora WDC).

CTI is the process focusing on monitoring the competitive and technical environment of an organisation for the purpose of better decision making by high and middle level executives in the areas of marketing, product design, research and development (R&D), which can be used from investment tactics to long-term business strategies. CTI is carried out in organizations of all sizes through a continuous and systematic process that implies legal and ethical collection of information, analysis, production of actionable results for strategic planning process and controlled diffusion of main findings (SCIP).

The difference between CTI and CI lies in the content and the area in which decisions are impacted. CTI mainly impacts on technology or R&D-related issues but should be combined with market intelligence and the broader CI and with strategy to have an impact on the company's business (Clark, Herring, Paap, Rosenkrans & Tessun, 1998).

1.1.5 The Competitive Intelligence process

Intelligence works best when viewed as a process comprising a number of activities (Kahaner, 1997; Rouach & Santi, 2001). Expert CI practitioners refer

to a cyclic process called the CI process or cycle consisting of various steps or constructs that should follow on one another without any of the steps of actions being overlooked. Calof and Breakspear (1999) describe the six key areas or constructs that collectively form the intelligence model. The constructs will be discussed subsequently:

- **Planning and focus:** Many researchers and authors have highlighted the importance of this first step in the CI process (Ashton & Stacey, 1995; Kahaner, 1997; McGonagle & Vella, 1999; Rouach & Santi, 2001). CI is not about collecting all information but focusing on issues of highest importance to senior management (Daft et al, 1988; Herring, 1998; Gilad, 1989). It is also about a wider focus than only on competitors to include facets such as suppliers, customers, the regulatory environment, etc. This phase is required to allocate resources for the CI project or process as well as to establish the purpose and result of the findings.
- **Collection:** It is during this phase that information is collected from a variety of sources for examination during the CI process. Collection involves accessing a variety of different sources (primary and secondary). These can be internal such as company employees (Collins, 1997) or external to the company. Herring (1988) argues that human sources in general deliver more timely and unique information. However, published data is important for analysis and for cross checking the human reporting. The key to successful CI is to focus on what information is important and relevant and know where to find it (Ashton & Stacey, 2001). Collection also involves various acquisition methods including environmental scanning (Aguilar, 1967; Lenz & Engledow, 1986a; Lenz & Engledow, 1986b; Daft et al., 1988). Other subjects related to the collection stage are information classification, information usage (Menon & Varadarajan, 1992; Garvin, 1993; Maltz & Kohli, 1996; Rouach & Stacey, 2001) and information storage (files, the library and computer systems). Rouach & Stacey (2001) distinguish between three different types of data: White information

(open source information), gray information (private domain information) and black information (illegally obtained information). Collectors of information must follow strict ethical and legal guidelines (Marceau & Sawka, 1999) while collecting information.

- **Analysis:** Many practitioners believe that this is where “true” intelligence is created, that is, converting information into “actionable intelligence” on which strategic and tactical decisions may be made (Gilad & Gilad, 1985a; Gilad & Gilad, 1986; Kahaner, 1997; Calof & Miller, 1997; Herring, 1998). According to Kahaner (1997) and Rouach and Santi (2001) this is the core activity of the CI process. An interpretation of information is made based on the key intelligence needs of the user (Ashton & Stacey, 1995). Much work has been done in the areas of competitive analysis, environmental analysis and competitive theory. The analysis activity is most difficult to describe since there is no standard way of performing analysis and a wide range of basic and advanced analysis tools are used in the analysis process (Ashton & Stacey, 1995). Marceau and Sawka (1999) say that for intelligence to be relevant, advanced and appropriate analytical tools must be used. The models that are found most often include PEST (political/legal, economical, socio-cultural and technological) analysis, scenario analysis, Porter’s Five Forces model, SWOT (strengths weaknesses, opportunities and threats) analysis and competitor profiling.

In more detail, intelligence analysis involves collating and organising basic data, discerning the causes for actions, comparing different components of the issue at hand and interpreting the meaning and implications of information. According to Gilad and Glad (1988) the analysis process comprises six steps: Collating data, condensing information, drawing conclusions, building scenarios, studying implications for competitive positioning and suggesting recommendations for action. Analysis is also about testing information for accuracy, timeliness and completeness (Ashton & Stacey, 1995).

- **Communication:** Once the analysis is completed, the intelligence unit must ensure that the results of the CI process or project are communicated to those with the authority and responsibility to act on the findings. If intelligence is not delivered no intelligence was created. Kahaner (1997:133) says: "It's the time when you present your logical arguments based on your analysis of raw data. It's a time to defend logic, to put up or shut up. It's the time when most competitive intelligence projects fail." The transfer of strategic information is proposed and corollaries to this include the study of marketing knowledge within the firm (Menon & Varadarajan, 1992; Moorman, 1995) and knowledge dissemination (Huber, 1990; Garvin, 1993; Kahaner, 1997; Hurley, Thomas, & Hult, 1998).
- **Process and structure:** CI requires appropriate policies, procedures, and a formal (or informal) infrastructure so that employees may or can contribute effectively to the CI system as well as gain the benefits from the CI process. There is much support for a formal structure and a systematic approach to CI (Porter, 1980; Gilad & Gilad, 1985b; Gilad & Gilad, 1986; Ghoshal & Kim, 1986). The CI process depends on gathering people and resources from a range of internal units. Often however CI functions are placed in a position where they do not reach their full potential (Lackmann, Saban, & Lanasa, 2000).

There are many variations on the CI models chosen by companies. There is no "best practice" in terms of centralised or decentralised functions or the location of the function. This is because companies and industries differ from one another in terms of attitudes, knowledge and values as well as their environments (Kahaner, 1997).

- **Organisational awareness and culture:** For CI to flourish in a company and for the discipline to be implemented and used optimally, there has to be an appropriate organisational awareness of CI and a culture of

competitiveness. Creating the right environment for CI is important and requires continuous staff training highlighting the importance of CI. There has been support for this awareness/culture construct in the area of market orientation (Goshal & Westney, 1991; Pole, Madsen & Dishman 2000; Slater & Narver, 2000). Although decision makers are the drivers and primary users of CI, Kahaner intimates that information gathering should be on everyone's mind (Kahaner, 1997).

Without proper awareness and attitudes that favour both intelligence and information sharing, it is difficult to develop intelligence within an organisation. Prescott, Herring and Panfely (1998) state that successful CI systems evolve over time because a CI network cannot be placed everywhere in a company at a certain time or will evolve at a similar speed in various departments in a company.

1.1.6 Need for CI research in South Africa

CI in South Africa emerged from the business sector. The academy was initially not involved in research into CI nor were any formal training programmes developed. By the turn of the century, only a few papers were written on the subject including the research by Du Toit (Du Toit, 1990; Du Toit, 1995).

By 2000, the Potchefstroom University (now the North-West University) and specifically Viviers, in collaboration with Calof from University of Ottawa in Canada, were the first to embark on a more comprehensive empirical research project into the CI practices of South African companies. The research that flowed out of this include research into the CI practices of South African companies (Viviers et al, 2002).

In 2002, Viviers, Saayman and Muller launched a second CI research project - this time into the CI behaviour of South African and Flemish exporters.

International research partners in the project were two Flemish universities i.e. the Free University of Brussels and the University of Antwerp.

Various areas of CI still need to be researched including CI in the academy and further studies on how companies in South Africa conduct CI. This study aims to add to the growing database of research into Competitive Intelligence in South Africa.

1.2 RESEARCH OBJECTIVES

Knowledge and research on CI as a business discipline in South Africa is limited.

- In order to obtain a more representative picture of CI practices, one of the main questions that remains largely unanswered is how and to what extent CI is practiced by South African companies. The first objective of this study is to fill that gap by exploring the practical conduct of CI in a South African based company.
- The second objective is to explore the development of CI in South Africa and to provide a chronological overview of the development of CI in South Africa. The underlying forces that have impacted on the development curve will be examined.
- The third objective is to discuss the key findings of the research and provide recommendations and areas for further study including the CI model, required skills for CI, how to measure the effectiveness of CI and what lessons can be learnt from more advanced CI countries.

1.3 RESEARCH METHOD AND DESIGN

For the first research article (chapter 2) two research methods were used i.e.:

- A literature study on CI as a business discipline and specifically on what has been published by whom on CI in South Africa.

- A qualitative design (interviews) was used for phase one to obtain information from leaders in CI in South Africa. Given that CI is in its infancy, the sample was small and included all recognised knowledgeable people on CI in South Africa.

For the second research article (chapter 3) the same two research methods were applied i.e.

- A literature study on CI as a business discipline and specifically on CI in South Africa as well as desk research into the nature of the competitiveness in the pharmaceutical industry to determine the competition drivers in this industry.
- A qualitative design (interviews) as well as a questionnaire was used to collect primary information on the targeted company. The interviews were conducted with the CI manager in the company that was targeted for the case study. The sensitivities around CI meant that permission for the publication of the case study had to be obtained provided a disguised name was used.

1.4 DIVISION AND SUMMARY OF CHAPTERS

The chapters of the dissertation are presented as follows:

Chapter 1 contains the problem statement and the research objectives as well as an overview of CI as practiced in South Africa and other countries. The origin of CI and definitions are also discussed.

The development of CI in South Africa is discussed in Chapter 2. Areas that are assessed include research into CI, education and training programmes, the role of consultants in the development of CI and how CI is practiced in South Africa.

Chapter 3 discusses the pharmaceutical industry's approach to CI and examines the CI practices of a particular pharmaceutical company.

In Chapter 4 the research conclusions and recommendations are discussed.

CHAPTER 2: THE DEVELOPMENT OF COMPETITIVE INTELLIGENCE IN SOUTH AFRICA

(Submitted to the Journal of Competitive Intelligence and Management - JCIM)

THE DEVELOPMENT OF COMPETITIVE INTELLIGENCE IN SOUTH AFRICA

2.1 INTRODUCTION

Competitive Intelligence (CI) has long been recognised as a strategic management tool that could enhance competitiveness. In South Africa, CI is enjoying increasing prominence but is not yet on a level of that in countries such as the USA, Australia, Japan, France and Canada. With the recognition that competitive challenges and risks will increase significantly in the future, there is an increasing need to continuously monitor the competitive landscape to remain competitive. Most companies recognise the need to improve the quality and integration of their competitive intelligence, but many seem unsure of how to adopt more effective, integrated, and systematic approaches to CI.

The aim of the paper is to provide an overview of the development of CI in South Africa in the areas of research, consulting and training. This paper examines various areas of CI in South Africa i.e. information on the development of CI in South Africa, the current status of CI in South African companies, some unique facets of and challenges facing the CI capabilities of South African companies and remarks on the future of CI in South Africa.

2.2 THE DEVELOPMENT OF CI IN SOUTH AFRICA

Competitiveness has become a topical issue in South Africa and amongst South African companies. There is a clear distinction between competitiveness pre and post the political change that occurred in April 1994 when the globally unacceptable apartheid system¹ was replaced by a democratically elected majority government. The significance of that change is notable when examining the development of CI as a strategic business tool in South Africa.

¹ Apartheid was a social policy or racial segregation involving political and economic and legal discrimination against non-whites; the former official policy in South Africa. (The Free Dictionary: <http://www.thefreedictionary.com/apartheid>).

2.2.1 Highlights pre-1994

- Before 1994, South Africa was, for decades, economically, politically and socially isolated from the rest of the world. A wide range of sanctions and exchange control regulations and a generally inward-looking culture were in place that inhibited the growth of international trade in South Africa (Calof & Viviers, 1995:72-73).
- Coupled with this was the withdrawal from South Africa of a significant number of multinational companies as a means of protest or forced by pressure. Local companies developed a warped sense of competition as there were many protectionist measures in place and the economy was highly regulated. South African exporters e.g. had to devise creative means to get their products on the global market, often resorting to illegal sanction busting measures.
- Within a short period of time after the democratic elections in South Africa in April 1994, the international market became more accessible for South African products. The full force of internationalisation and globalisation severely hit South African companies that were ill prepared for global competition. It is perhaps not surprising that the first CI noises were heard shortly thereafter.
- By the mid 1990's, the first SCIP chapter was established in the economic hub of South Africa namely the Gauteng Province.

2.2.2 SCIP in South Africa

SCIP was launched in South Africa in the mid-1990s. Among the first chapter coordinators were Gareth Osche and Andy Grudko. These were humble beginnings and initial activities included breakfast meetings where knowledgeable people spoke about CI and SCIP and where a degree of networking took place. The 'audiences' were small and SCIP was not growing fast.

Reasons include the following:

- CI as a business discipline was not well known.
- Companies were not yet ready for implications of implementing CI.
- Companies were also not yet very competitively minded.
- CI was associated with industrial espionage due, to a certain degree, to the prominent role the security establishment had in the apartheid days and the connotation made between intelligence and spying. It was a difficult image to rectify.
- Another obstacle to the message of CI was that consultants that were involved in counter intelligence and perhaps less ethical information gathering activities, also dominated the early days of CI.
- A further debilitating factor hindering the emergence of CI in the fledgling years was the doubt from government circles about the legitimacy of CI, equating the latter with subversive activities and in general rendering it an unsavoury flavour. There were also signs of Government probes into what CI is, whether it is a legal activity and whether practitioners were not conducting activities that clashed with those of the state intelligence and security establishment.
- The slow and limited growth in SCIP members in South Africa can also be attributed to the exchange rate. The local currency (the Rand) devalued against the US\$ to such an extent that people could not afford the SCIP membership. This resulted in the fact that due to the annual SCIP Conferences being held in the USA (and later also in Europe), the international CI fraternity remained largely out of reach of the average South African CI practitioner, academic or consultant. CI was, and still is, perceived to be an expensive exercise for companies that are already experiencing trouble to undertake.

By 1999, SCIP had not grown beyond the single chapter in Gauteng Province. It was only in 1999, on the first visit by an international CI specialist, prof Jonathan Calof, that SCIP experienced a flare-up. Calof made presentations on

CI at SCIP chapter meetings. He was also instrumental in launching the second SCIP chapter in South Africa namely in Cape Town. The chapter coordinators were CI practitioners Johan Esterhuizen and Thea Rutherford. Due to a lack of leadership, commitment and interest, the chapter ceased to exist after only one year.

In 1999, the Gauteng chapter underwent a reawakening driven by CI consultants and most notably Michael Kühn of IBIS Business and Information Services and also saw the emergence of a second association for CI practitioners i.e. the South African Association of Competitive Intelligence Professionals, SAACIP. Parallel to the emergence of CI in South Africa was the growing prominence of KM; the promotion of KM tools and the message that prevailed that CI is very similar to KM. Other management tools also enjoyed more prominence than CI including Total Quality Management and Balanced Scorecard. This led to much confusion and delayed the entrenchment of CI as a management tool.

Nonetheless, CI persevered and the 'market' generally developed and opened up to the benefits it could hold for companies. Employees, practitioners and consultants became members of SCIP and SAACIP and attendance of local chapter meetings increased gradually. Companies were still slow to recognise CI as a tool to enhance competitiveness and few ventured tentatively on the road of CI.

The management aspect of CI gradually overtook the counter intelligence and security aspect and with that, the number of CI practitioners increased. Discussing CI with company leaders, it is clear that efficient managers all intuitively conduct CI but the information overload, changing technology, and increasing levels of competition both in South Africa and in export markets mean that there is an increasing need to develop more systematic CI capabilities. The intensity of competitiveness is expected to increase. Perhaps the largest competitive challenge facing South African companies is from their

own managers. It is only when managers understand and recognise the benefits of CI and actively drive the process that they will be able to meet the competitive challenges. By the end of the 1990s, CI interest groups were SCIP Southern Africa (SCIPSA) by 1999, SAACIP and the Knowledge Management Society of South Africa (KMSSA). Membership of these groups indicated the growing interest in CI and the need for more information on CI.

The fact that the South African members of SCIP are largely from the consulting fraternity is also revealing. In December 2003, SCIP had 18 members in South Africa. The 19th member on the list of SCIP members emigrated to Canada in the course of 2002. The members are mainly based in the Gauteng and Western Cape Provinces, are mostly in the consulting business and have been members for two years and longer. Few new names have been added to the list over the past few years.

No academics or persons attached to academic institutions are listed as SCIP members although one person is a member of an institute attached to an academic institution. South African SCIP members include those that are conducting activities in CI as well as those active in counter CI consulting. The companies that are represented through the members are all large companies and represent mining, agriculture, banking/insurance and training/recruitment.

2.2.3 Research

CI in South African emerged from the business sector. Initially, the academy was not involved in research into CI nor were formal training programmes developed. By the turn of the century, only a few papers were written on the subject. These include:

- The article of Adeline du Toit of the Department of Information Studies at the RAU in Gauteng is titled *Marketing Intelligence: A Competitive Weapon* (Du Toit, 1990). In this article she argues that marketing

intelligence had become a strategic product for organisations. Companies have realised that if they did not monitor the actions and activities of their competitors, their strategic plans would fail. Marketing intelligence, she said, is a competitive weapon as it enables the company to react to external environmental factors.

- Adeline du Toit published an article titled *Managing Intelligence: A New Paradigm for South Africa* in 1995 in which she elaborates on the role intelligence and specifically competitor intelligence can play in making developing countries more competitive. She argues that a country's competitiveness depends on the ability of its businesses and industries to innovate. Information plays an important role in the process of innovation and improvement. She also discusses the design of CI systems as well as information sources that can be used to track competitors.
- A descriptive paper on the status of CI in South Africa written by Marié-Luce Muller of IBIS Business and Information Services and published in the *Competitive Intelligence Review* in 1999 (Muller, 1999). The central message was that globalisation brought about a need for better information and more importantly, a need for the ability to translate information into knowledge and to link that knowledge to decision-making and strategy. An increasing number of South African companies realised that in order to survive, let alone prosper in a changed competitive environment, they would have to take a new view of that environment. They had to become less inward focused. She concluded by stating that the need for CI is vast.

By 2000, the Potchefstroom University (now the North-West University) and specifically prof Wilma Viviers, in collaboration with prof Jonathan Calof from University of Ottawa in Canada, were the first to embark on a more comprehensive research project into the CI practices of South African companies.

The research that flowed out of this includes the following:

- In 2001, Wilma Viviers, Andrea Saayman and Marié-Luce Muller conducted research into the CI practices of South African companies. The National Research Foundation (NRF) funded the project (results are discussed later in this paper).
- In 2002, Wilma Viviers, Andrea Saayman and Marié-Luce Muller launched another research project - this time into the CI behaviour of South African and Flemish exporters. International research partners in the project were two Flemish universities i.e. the Free University of Brussels and the University of Antwerp (results are discussed later in this paper). The project finishes in 2004.

2.2.4 Training and conferences

Since 1999 some academics took note of the need for and application benefits of CI and the first steps toward formalised CI training were taken albeit in pre graduate courses and mostly in Information Management or related faculties.

Simultaneously, consultants developed training courses mostly on topics such as what CI is and how to collect information ethically and legally. Early training programmes also contained elements of Defensive CI and the management of CI. Training courses were, however, largely developed as part of a service offering to clients and presented in-house. By 1999, very few courses in CI were available on the open market and it was left to conference organisers like marcus evans (former ICM), terrapin and the International Institute for Research (IIR) to present conferences on CI topics and case studies. CI consultants presented the latter. These training events fulfilled an important role in establishing CI as a legitimate management tool although the market had by then started asking for more in-depth academically approved CI training programmes.

2.2.5 Consultants

With the growing market for CI came a growing number of CI, management and strategic management consultants. There were varying degrees of expertise, knowledge and standing. Consultants were mostly South Africans and in general initially had state intelligence backgrounds. This is not surprising as CI has strong roots in intelligence in the CIA context. What consultants lacked in business principles, they made up with knowledge of what intelligence is, the intelligence process and its application in a business context as well as understanding the difference between data and information and intelligence.

People with an intelligence background were also:

- Sensitised in terms of recognising important information.
- Skillful networkers and collectors of information.
- Intelligence analysis experts.
- Experts in integrating diverse pieces of information into an intelligence picture of the competitive environment.

In the early years, no CI consultants from abroad were active in South Africa for any significant period of time besides brief interventions to do training on invitation or to study CI. The cost associated with inviting and hosting such persons was an inhibiting factor and was regarded as an unviable exercise from the foreign CI consultant's (mostly from the US) point of view. One of the first such practitioners was prof Jonathan Calof and with other occasional overseas visitors (including Douglas Bernhardt and Craig Fleisher) at the time, provided depth to CI research, training and consulting in South Africa.

Some of the earlier consulting companies in CI were established in the late 1990s of which IBIS Business and Information Services, Competitive Business Intelligence and Analysis (CBIA), and the Zero Foundation were amongst the earliest. There were also a number of one-person consultancies but these fell by the wayside as the market was just too small and not yet ready for CI. More

consultancies started in the late 1990's most notably FutureAntz and QuantumIII.

Also more international consultants and trainers started visiting South Africa and presented papers on CI and brief training courses e.g. Jonathan Calof's Trade Show Intelligence training and frequent Searching Smarter on the Internet workshops. Among the most recent visitors were Craig Fleisher, Jonathan Calof, Arik Johnson and Douglas Bernhardt.

2.3 CURRENT STATUS OF CI IN COMPANIES

By 2001, CI in South Africa was slowly emerging and taking tentative steps in claiming its rightful place as a recognised management tool. Overall, however, it was still in its infancy (Calof & Viviers, 2001:63; Muller, 1999).

A need developed to properly assess the way in which South African companies conduct CI and this led to the first in-depth project in 2001, led by prof Wilma Viviers of the North-West University. The other team members were prof Andrea Saayman and Marié-Luce Muller of IBIS Business and Information Services. The aims of the study were to determine the CI practices of South African companies and to test the generalizability of the Calof and Breakspear 1999 Canadian CI study. Globally and in South Africa very little has been published about the holistic intelligence model. The research therefore attempted to fill this gap.

The research was built around the six key areas which collectively form the intelligence model as identified by Calof and Breakspear i.e. planning and focus, collection, analysis, communication, process and structure and organisational awareness and culture (Calof & Breakspear, 1999). The 2001 Viviers study was characterised by unique hurdles including identifying a sample base due to a lack of reliable databases and a low response rate. Questionnaires were sent to a large number of companies of varying sizes and

involved in manufacturing and tertiary activities and a number of companies were interviewed.

Research findings included the following:

- Overall, results suggested that South African companies showed a general lack of appropriate processes or structures for CI.
- Companies were particularly poor in the formal organisation and process for intelligence.
- There was little evidence that systems in companies assist the CI activities.
- There was also a lack of intelligence tools such as KM and the Intranet.
- Few companies had a central coordinating point for receiving competitive information.
- Few had dedicated CI units.
- Few companies could claim that CI was embedded in the whole company.
- The core CI activities resided mostly in the marketing function with either the marketing manager or the CEO taking ultimate accountability (the latter particularly true in smaller companies).
- Companies were also spending too much time collecting information and too little time on adding meaning and value to information and making it actionable intelligence.
- Most worrying was the fact that in arguably the most important activity of CI i.e. analysis, South African companies fared weak with a lack of appropriate skills and related to that, the lack of use of more advanced analysis tools.
- Little information sharing took place and people in the company in general did not know what the focus of the intelligence activity was.

The positive outcomes of the study included the fact that companies in South Africa acknowledged that CI can enhance competitiveness and that it is

regarded as a legitimate business activity. Also encouraging was the fact that the focus of CI activities extended beyond analysing competitors to include regulatory matters, customers and suppliers and this was a positive observation.

The overall conclusion was that by 2001, South African companies were not yet as well equipped to conduct good intelligence practices as their counterparts in the United States, Japan, Sweden, France, Israel and others (Kahaner, 1997).

Recommendations that arose included:

- Starting joint work on CI projects and training by the academy, the private and public sector as well as expert international partners to adhere results in the long run.
- Initiating the type of programs seen in other countries where curricula in CI are available.
- Increasing the awareness and development of CI as a strategic business tool in order to improve the competitiveness of South African companies.

The trend toward regarding CI as a continuous and formal activity in order to gain optimal benefits did however emerge since that first study. The number of companies developing intelligence groups or units has risen noticeably and it is not uncommon to find the job title of Manager of CI in companies. Prof Viviers and her team confirmed these trends in a second study into the CI practices of South African companies that commenced in 2002. This project researched the CI practices of South African exporters and was conducted in cooperation with two Flemish universities i.e. the Free University of Brussels and the University of Antwerp.

Questionnaires were e-mailed to 3960 exporting companies. A total of 321 responses were received which represented a response rate of 8.11%. For the analysis of the results, only 309 companies supplied sufficient information.

Those responses included were mainly from the manufacturing sector, followed by the services and primary sectors.

The results of the South African part of the research were compared to the results of the Flemish research and some interesting new insights into the constructs of CI developed.

Findings included the following:

- Completed exploratory and confirmative factor analysis indicated five dimensions/constructs in the data: Information gathering (planning, focus and collection), data analysis and quality control, process and structure, culture and awareness and skills development.
- Less than 50% (173) respondents indicated that they do not have any organised CI activity in their company.
- 6.7% said they had a dedicated CI unit.
- CI was mostly housed in the Sales and Marketing division of companies.
- Most of the CI time is spent collecting information rather than planning and analysing.
- A positive aspect was that people inside the companies were recognised and used primary sources of information.

2.3.1 Current status of CI consulting

In terms of consulting, there are currently a number of companies offering consulting in various aspects of CI ranging from the design and implementation of CI structures in companies to information audits, competitiveness audits and training in various aspects of competitive intelligence. Research has found that companies increasingly tend to outsource the content aspect of CI e.g. the gathering and initial analysis of information. Companies active in CI consulting and rendering various services include FutureAntz, IBIS Business and Information Services, CBIA and QuantumIII. There are also a number of

companies delivering security and investigative (detective, private investigator) services under the BI and CI banner. These include Andy Grudko (one of the first SCP chapter coordinators in South Africa - 1996-1999), Zero Foundation, TSCM and Forensic Strategies & Solutions.

The large auditing and consulting companies in South Africa also offer intelligence related services more notably Business Intelligence services related to architecture in companies. Accenture, Deloitte & Touche Consulting, Ernst & Young and PriceWaterhouseCoopers as well as KPMG include Business Intelligence in their respective service offerings. The services are more enterprise architecture oriented and would typically include services such as Enterprise Resource Planning (ERP) and customising real-time business intelligence systems. Business Intelligence is also the name given to products and services offered in terms of software and tools. In this regard, SAS Enterprise Intelligence, BI-OLAP, CS Holdings, Cognos and Convera are amongst a significant number of companies active in this field.

2.3.2 Formal and ad hoc education and training in CI

Very few formal academic programmes have developed. Amongst the current programmes are:

- A certificate in Strategic and Competitive Analysis developed by Marié-Luce Muller of IBIS Business and Information Services and prof Adeline du Toit of RAU and presented annually at RAU (semester course). The first year the course was presented was in 2002 and a total of 16 students completed the course. The students were mainly CI practitioners involved in business analysis activities in mainly large companies and in government departments including the Presidency.
- CI and KM Certificate courses at the University of Pretoria: This course was launched in 2002 as an academic first in South Africa. The course

fits the educational, learning, training and knowledge management strategies of the University and was developed in response to the growing industry and government needs for a global competitive workforce. The certificate is taught with a blend of theoretical and practical knowledge. It emphasises case studies and group learning approaches. The certificate course is presented over a period of one academic year and consist of eleven lectures, presented after-hours. All sessions have a practical dimension and students are expected to submit assignments in addition to the written exam. Industry leaders and experts address relevant topics in addition to the formal lectures.

- A module in CI, developed by Michael Kühn of IBIS Business and Information Services as part of the MBA Programme at the Potchefstroom University Business School.
- The University of Stellenbosch presents an MPhil Program in information and knowledge management with a one-year or two-year option. The programme focuses on the problems of the related fields of information management and KM in organisations. Theoretical frames of reference as well as methodological and problem-solving skills are incorporated with a view to application in a variety of career environments. An understanding is cultivated, on the one hand, of the relationship and interaction between information management and KM. CI is, however, not the main topic but a theme together with themes such as decision-making and decision support systems, information policy, law and ethics, information management, organisation, retrieval, Innovation strategies and complexity management and systems development. The mode of instruction is interactive seminars supplemented with directed self-study, tutorials and discussions.
- The University of Cape Town's Graduate School of Business (GSB) presents a module in CI as part of its executive and management

education, particularly in marketing (CI for executives making strategic decisions) and human resource management. In marketing it is one of three tracks, the others being: The A - Z of Strategic Brand Management and Social Marketing – managing social behaviour change; and CI presented as a track called “CI – Lifeblood of competitive strategy.” in Human Resource Management’s Executive and Management Education Programme. It is aimed at senior executives at corporate, divisional and business unit level and with responsibilities in the areas of brands, products, business development, marketing, market research, mergers and acquisitions, technology development, strategic planning and business intelligence.

- CI is also presented as a module in a number of graduate courses at various other tertiary institutions like so-called technical colleges and other universities e.g. RAU (Department of Information Management) and North-West University (Potchefstroom Campus). No university, however, yet offers comprehensive dedicated CI training at either graduate or postgraduate level.
- Ad hoc training programmes presented by international and local CI consultants and practitioners and mainly hosted by conference organisers including marcus evans, IIR, terrapin and SAACIP.

At present there are no CI courses presented at primary or secondary schools in South Africa, as is the case in Sweden. Formal CI training is definitely not yet provided at an appropriate level at South African learning institutions.

Although some progress has been made in developing programmes, much still needs to be done and programmes should be presented at MBA level or at least as part of management and leadership training.

2.4 UNIQUE FACETS OF CI IN SOUTH AFRICA

Research into the CI practices in South Africa (both descriptive and empirical) and into the CI practices of South African exporters have shown certain areas in which local companies lag behind other countries. In particular, in terms of the extend and depth of training and consulting services, South Africa is far behind countries like the USA and other countries known for their leadership in CI like Sweden (Kahaner, 1997), Japan and even Australia. Australia is perhaps a comparable example to South Africa in terms of the challenges the former faces to enhance competitiveness. SCIP is far more active in Australia than in South Africa (SCIPAust) while Australian Universities teach Competitive Intelligence more comprehensively than currently done in South Africa.

With better teachings available, in particular in terms of strategic and competitive analysis and the management of CI, these weak areas of the discipline are sure to improve with time. Unfortunately, these are also the most important aspects of efficient CI practices. Efficiency and expertise in more advanced Competitive Analysis tools are particular lacking with most analysis skills limited to basic techniques like SWOT, PEST and low-level profiling of competitors, markets and industries. Furthermore, analytical skills are not yet honed to be capable to integrate a variety of factors, internal and external to companies using a variety of complimentary analysis techniques into insightful competitive pictures.

As is globally the case, the CI practices of South African companies differ from company to company. Multinational companies headquartered elsewhere, see the South African subsidiary's CI function as an extension of the centralised capability. Toyota SA e.g., with its headquarters in Japan, conducts CI in a highly structured and formalised real-time manner. The local subsidiary collects and analyses information according to very specific focus areas e.g. local behaviour of international competitors, local consumer patterns and

preferences, factors that would impact on exports (Toyota SA exports many vehicles to other right-hand drive countries). It also analyses the impact of changes in the regulatory environment e.g. alternative energy sources, labour legislation, environmental issues and unique to South Africa, the impact of employment regulations. South African industries are being prescribed, in so-called Industry Empowerment Charters, the number of people they have to employ from various ethnic backgrounds in various levels in the company. Failure to do so means heavy penalties. Companies therefore have to comply and have the necessary administrative and reporting structures in place as required by law.

A case study conducted on a multinational pharmaceutical company with a subsidiary in South Africa, confirms the earlier mentioned method of conducting CI. The local subsidiary tracks certain uniquely South African elements in the company's competitive environment such as regulatory issues, social responsibility issues, the impact of generic medicine and maintaining close communication with the South African government in the latter's attempts to manage the AIDS pandemic in South African. The local subsidiary leaves global trends tracking of technological developments and mergers and acquisitions as well as consumer related matters to the headquarters and also does no research and development. It does, however, keep an eye on the activities of competitors in the South African competitive landscape.

The largest companies have been found to adopt CI in a comprehensive manner including designing and setting up structures and appointing dedicated CI staff. These are, however, few and limited to the largest companies in South Africa of local subsidiaries of multinational companies based elsewhere. More often companies incrementally embark on the CI route often taking key intelligence needs and driving them as projects. An example of such a strategy is a postal services company that needed to size the market in order to validate information that the courier market in South African was shrinking. CI showed that the contrary was happening and that the market research that was done

was corrupted and that in fact, the company's outlook and approach was so antiquated that it failed to realise what the market was doing and what competitors were up to. The smaller the company, the higher the incidence of unsophisticated part-time CI practices, often done in a rudimentary manner by the CEO especially and often only when the going gets tough.

An interesting observation of the CI practices of South African companies is that the more companies rely on exports and interaction with the international market, the more they are inclined to adopt CI and the higher the understanding of CI's place as strategic business decision tool. There is also a higher natural acceptance and understanding of the benefits and place of CI. Another observation is that managers that have had international exposure either by having served in multinationals or from origin, are also more inclined to be natural practitioners of CI or are more familiar with the discipline.

2.5 CHALLENGES TO THE GROWTH OF CI IN SOUTH AFRICA

Growth in CI in South Africa is a foregone fact. However, this growth is challenged in a number of ways.

2.5.1 Inhibiting factors

Perhaps the single most important factor inhibiting growth of CI in South African companies is the pressure under which the average South African manager operates. This leaves little time and other resources to embark on comprehensive CI programmes. Furthermore, the perceived costs associated with developing and running a CI capability often leads to companies deciding against developing a CI capability.

CI is still a relatively obscure business discipline and this is a further inhibiting factor to growth while there are still opinions, also in government circles, that CI is equal to industrial espionage.

The limited consulting services in various aspects of CI that are available in South Africa have not contributed to significant growth of CI and academic institutions have also been relatively slow uptake of CI.

2.5.2 Academy

Although higher learning institutions were slow to provide support to CI, they are enduring their own challenges i.e. a total transformation of the higher education sector of South Africa including a number of mergers taking place among South African universities and technikons. This means that the development of new programmes has lagged behind the global trend but new programmes are being developed including programmes in CI. In-depth training on CI, in particular competitive and strategic analysis and the management of CI, is sorely missed and is expected to gain attention of leading trainers in South Africa – short programmes will remain, but comprehensive training will grow substantially.

One might also notice a closer collaboration between CI and BI and Information Communication Technology (ICT). Already there are learning institutions that are drawing in CI expertise to connect with the Information Management and ICT sciences, as there are a variety of collaboration opportunities.

2.5.3 Consultancies

As the discipline continues to grow, a growth in the number and quality of consulting services might follow. The current consultancies were mentioned earlier in the paper. An area that is experiencing continuing growth is the development of CI tools. Although the realisation that CI is a human driven and human executed process, there is a need for affordable home-grown tools. Very few of these exist that are home-grown and these are mostly related to data storage. Larger global BI companies like SAS Institute, Convera, Business Objects, Cipher Systems, Cognos, Lotus Notes and the like, are present in

South Africa and their products are widely used albeit fairly limited to larger companies as these are in a better position to afford and utilise them. High cost associated with these products is an inhibiting factor and there is a market in South Africa for affordable yet sophisticated CI and BI tools. Institutions involved in the field of ICT have started to recognise this need like the newly established Tshwane University of Technology (TUT - recent merger of three technical higher learning institutions).

2.6 THE FUTURE OF CI IN SOUTH AFRICA

There is clear recognition that the world will become more competitive and will increasingly do so. How South African managers will meet these challenges is not clear and few have actual plans to improve their ability to keep track of competitors and to enhance their competitiveness. There appears to be a degree of complacency and self-deception that is inhibiting managers from instigating effective planning to improve CI and few conduct CI in a formal systematic manner. From the research it is encouraging to note that managers do recognise a need to better integrate CI in their companies' business processes.

With the increasing competitive related factors a reality (including fluctuating exchange rate, the country's geographical proximity and the unique challenges facing South African managers who have to deal with various regulations and legislative matters), CI as a means to keep track of changes in the competitive environment will grow. It is expected that more companies of different sizes and from various sectors across the board, will expand on their CI capabilities.

In a broader sense, globalisation and continuously increasing competition pose interesting challenges on a micro and macro level for enterprises and the public authorities. This will prompt them to make adjustments to cope with the changing environment (Mboweni, 2000).

There is a dire need to enhance South Africa's competitiveness in various fields including government and business efficiency, the domestic economy, infrastructure, innovation, technology and human resources. In the most recent IMD World Competitiveness Yearbook (IMD, 2004), South Africa's ranking slipped two positions to 49th out of 60 economies surveyed. South Africa's performance was especially lacking in the macro evaluation of the domestic economy (58th out of 60) and the extent to which basic technological, scientific and human resources meet business needs (55th out of 60).

The World Economic Forum's Global Competitive Report of 2003 (WEF, 2003) puts South Africa behind Botswana in terms of best performing economy and ranks South Africa 32 out of 102 economies in terms of growth competitiveness and 36 out of 102 in terms of networked readiness. More significantly in terms of this report, on the microeconomic competitiveness ranks (testing company operations and strategy and the quality of the business environment) South Africa was ranked 28 out of 102 economies (higher than the 2002 ranking)² while the quality of the national business environment ranking has also improved from 33rd place to 28th. Significantly, South Africa's business environment ranks ahead of current company sophistication (Global Competitiveness Report, 2003: p 47) meaning that efforts to improve entrepreneurship, strategic thinking, managerial practice and business education should be high priorities in South Africa. CI as a strategic management tool should therefore form an integral part of efforts to enhance the competitive behaviour of South African companies and society as a whole.

With that there will be an increase in the demand for top-notch CI services as companies still look externally when deciding to roll out CI. Also, training needs will increase and it is expected that training institutions, in particular higher education institutions, will expand on their formal CI programmes especially in the management and information management sciences.

² The number of countries surveyed in 2003 increased from 80 to 102 with more coverage in Africa. The ranking model was changed and this has had an impact on the rankings of the 2003 index. In general, countries ranked higher than in 2002. Especially developing countries' ranking improved mainly due to the wastefulness of government spending not being taken into account.

2.7 INVENTORY OF CI RELATED WORKS

2.7.1 Books

- Muller, M.L. (2002). *Creating intelligence The Nuts & Bolts business series Guide 4.*: Knowledge Resources.
- Muller, M.L. (2002). *What is Competitive Intelligence? The Nuts & Bolts business series Guide 1.* Knowledge Resources.
- Muller, M.L. (2002). *Getting started in Competitive Intelligence: The Nuts & Bolts business series Guide 2.* Knowledge Resources.
- Muller, M.L. (2002). *Gathering Competitive Intelligence: The Nuts & Bolts business series. Guide 3.* Knowledge Resources.
- Muller, M.L. (2002). *Managing Competitive Intelligence: The Nuts & Bolts business series Guide 5.* Knowledge Resources.
- Muller, M.L. (2002). *Defending against hostile Competitive Intelligence: The Nuts & Bolts business series Guide 6.* Knowledge Resources.

2.7.2 Academic Journal Articles

- Du Toit A. (1990). "Marketing Intelligence: A Competitive Weapon," *South African Journal for Library Information Sciences*, 58(3): 277-281.
- Du Toit A. (1995). "Managing Intelligence: A New Paradigm for South Africa," *Management Dynamics* 4(3): 17-36.
- Meintjes G.F. and Pistorius, C.W.I. (1996). "Competition by Parastatal Organisations", ITI-96-2, University of Pretoria, April 1996. Also published as Pistorius, C.W.I. "Management of technology in South Africa", *Civil Engineering Magazine*, Vol 4, No 12, December 1996, p.3.
- Muller, M-L. (2003). "Key activities of Competitive Intelligence," *South African Journal of Information Management* 5(1). March. Online: www.rau.ac.za/sajim.

- Muller, M-L. (2003). "Key activities of Competitive Intelligence (2)," *South African Journal of Information Management* 5 (2). June. Online: www.rau.ac.za/sajim.
- Muller, M-L. (2003). "Key activities of Competitive Intelligence (3)," *South African Journal of Information Management* 5 (3). September Online: www.rau.ac.za/sajim.
- Muller, M-L. (2003). "Key activities of Competitive Intelligence (4)," *South African Journal of Information Management* 5 (4). December Online: www.rau.ac.za/sajim.
- Muller, M-L. (2004). "Key Intelligence Needs," *South African Journal of Information Management* 6 (1). February. Online: www.rau.ac.za/sajim.
- Muller, M-L. (2004). "Key ingredients for Successful CI," *South African Journal of Information Management* 6 (2). May. Online: www.rau.ac.za/sajim.
- Muller, M-L & Whitehead, C. (2001). Into Battle with Competitive Intelligence," *Executive Business Brief* 6(5): 26-28.
- Muller, M-L. (1999). "South Africa: An Emerging CI Player," *Competitive Intelligence Review* 10 (4) 74-78.
- Pistorius, C.W.I. "Wêreldmededingendheid en die tegnologie", *Suid-Afrikaanse Tydskrif vir Natuurwetenskappe en Tegnologie*, Vol 15, No 3, September 1996, pp. 134-138. ("World competitiveness and technology", *South African Journal for Natural Sciences and Technology*).
- Pistorius, C.W.I. "South Africa's Competitiveness Trap", *South African Journal of Science*, Vol 97, January/February 2001, pp. 9-15.
- Pistorius, C.W.I., "Technology as the engine of growth", *Research for a Competitive Industry*, Sciencetech '96, Annual magazine of the Foundation for Research Foundation, 1996, p. 2.
- Viviers, W. & Calof, J.L. (2001). "Adding competitive Intelligence to South Africa's knowledge management mix," *Africa Insight*, 31(2). June: 61-67
- Viviers, W & Calof, J.L. (2002). "International information seeking behaviour of South African exporters," *South African Journal of Information Management*, 4(3), September Online: www.rau.ac.za/sajim.

- Viviers, W, Calof, J.L. & Naudé, W.A. (2002). "Competitive Intelligence Practices of German and Canadian firms: A comparison," *University of Ottawa. Working paper*. May.
- Viviers, W., Saayman, A., Muller, M-L, & Calof, J.L. (2002). "The competitive intelligences practices in South African firms," *SA Journal of Business Management*, 33(37): 27-37.
- Viviers, W, Olivier, S, & De la Harpe, S.P.le R. (2003). "Legal guidelines for the collection of information in the Competitive Intelligence process in South Africa," *South African Journal for Information Management*, December. Online: www.rau.ac.za/sajim..
- Viviers, W., Saayman, A. & Muller, M-L. (2004). "Competitive Intelligence: 1999-2002 and beyond," *Africa Insight*, Vol. 34.
- Viviers, W., & Muller, M.L. 2004. "A pharmaceutical industry approach to CI." *Competitive Intelligence Magazine*, 7(1): 18 -23.

2.7.3 Popular books and articles

- Viviers, W. 2000. "Intelligence? What intelligence – competitive edge," *Finansies en Tegniek/Finance Weekly*, 23 June: 44.
- "Competitive Intelligence: Check the threats," Article on research results in *Finansies en Tegniek/Finance Weekly*, 18 October 2001:17.
- "Competitive Intelligence training: SA companies' intelligence," Article on research results in *Finance Week*, 10 May 2002:40.
- Viviers, W. "Suid-Afrika - onder druk van benemende mededinging [South Africa-under pressure of increasing competition]," *Kerkblad*, 28 August 2002:29-31.
- "Dié inligting is nodig vir sukses. [This information is necessary for success]," Abstract from research results. *Beeld* 4 June 2002.
- Viviers, W. (2002). "The Competitive Intelligence practices of South African firms," *NRF report*.

"Mededingende Intelligensie: Jy kan dit nie meer ignoreer nie [Competitive Intelligence: You can no longer ignore it]," *Finansies en Tegniek/Finance Weekly* 14 June 2002: 46.

Viviers, W., & Muller, M.L. 2004. A pharmaceutical industry approach to CI. *Competitive Intelligence Magazine*, 7(1):18 -23.

2.7.4 Conference papers

Du Toit A. & Muller M-L. (2003). "Competitive Intelligence in Automaker Inc: A Case Study," *marcus evans Conference on Competitive Intelligence*. January.

Fourie, L.C.H.(2002). "The future of business intelligence," *SUGISA Conference*, Midrand, South Africa.

Muller, M-L. (2003). "Competitive Intelligence for exporters: Recommendations," *Workshop of the results of research project*, University of Antwerp, Belgium. October.

Venter, P. (2002). Aligning strategy and competitive intelligence. Paper delivered at IIR Competitive Intelligence Symposium. April.

Venter, P. (2003). Competitive analysis. Workshop presented at Marcus Evans Competitive Intelligence Conference. January.

Venter, P. (2003). Strategic competitive analysis techniques: a case study. Paper delivered at SAS Competitive Intelligence Conference. April.

Viviers, W., (1999). "Competitive Intelligence for International Trade," *Paper delivered at ICM Conference*. Johannesburg. March.

Viviers, W., (2001). "CI in higher education," *SCIPSA (Society for Competitive Intelligence Professionals Southern Africa) meeting*. Johannesburg. March.

Viviers, W. (2001). "CI as practised in SA: Preliminary results of NRF project," *Marcus Evans conference*. Rosebank, Johannesburg. November.

Viviers, W., (2002). " Competitive Intelligence Practices of South African firms: Feedback to respondents in research project," *Workshop*. Johannesburg. March.

- Viviers, W. (2002). "The challenges of Competitive Intelligence – based on case studies from NRF-research project," *Institute of International Research Conference on Competitive Intelligence*. Rosebank, Johannesburg. April.
- Viviers, W. (1999) "International information seeking behaviours of South African exporters," *Paper delivered at ABA Conference*. London, England, July 1999 (co-author). (Paper delivered by J.L. Calof).
- Viviers, W. (2001). "International information seeking behaviour of South African exporters," *Paper delivered by co-author at ICSB conference*. Taipei, 17-20 June.
- Viviers, W. Saayman, A. & Muller M-L. (2002). "Competitive Intelligence Practices of South African firms: Feedback on results," Workshop. Johannesburg. March.
- Viviers, W. (2002). "Competitive Intelligence practices of South African firms," *Workshop presented at University of Antwerp, Belgium*. April.
- Viviers, W. & Muller, M-L. (2003). "Competitive Intelligence in a pharmaceutical company," *Marcus Evans Conference on Competitive Intelligence*. January
- Viviers, W. (2003). "Competitive Intelligence for exporters," *Workshop of the results of research project at University of Antwerp, Belgium*. October
- Viviers, W. & Muller, M-L. (2002). "The competitive intelligence practices of South African firms," Conference paper at *Institute of International Research (IIR) Conference on Competitive Intelligence*. April
- Viviers, W. & Muller, M-L. (2003). "The competitive intelligence practices of a pharmaceutical industry player: A case study. *Southern Africa Institute for Management Scientists (SAIMS) Conference*. September.
- Viviers, W. Saayman, A. & Muller M-L. (2003). "Competitive Intelligence for Exporters: Feedback on research results," *Annual Conference of the Economic Society of South Africa (ESSA)*. Somerset West. September.
- Viviers, W. Saayman, A. & Muller M-L. (2003). "Competitive Intelligence for Exporters: Feedback on research results," *Southern Africa Institute for Management Scientists (SAIMS) Conference*. Potchefstroom. September.

- Saayman, A (2003). "Competitive Intelligence for exporters: Research feedback," *Workshop of the results of research project, organised by Trade & Investment South Africa*. Centurion. November.
- Viviers, W. Saayman, A. & Muller M-L. (2004). "Competitive Intelligence for Exporters: Feedback on research results," *marcus evans Advanced Competitive Intelligence Conference*. Rosebank, Johannesburg. May.

2.7.5 Other outputs

- Viviers, W. (2002). Interview on national radio: Competitive Intelligence: A tool for enhancing South Africa's competitiveness. June.
- Viviers, W & Muller, M-L. (2002). Presentation to Standard Bank Head office: Competitive Intelligence: Current realities: Globally, South Africa and Standard Bank SA. Johannesburg. July.
- Viviers, W & Muller, M-L. (2002). Presentation at TISA (Trade and Investment South Africa) on Competitive Intelligence for exporters. Pretoria. August.

2.7.6 Research and/or project reports

2001. NRF (National Research Foundation) research project approved: The Competitive Intelligence Practices of South African firms. Led by Prof Wilma Viviers. Research completed March 2002.
2002. NRF and Flemish government co-operation agreement on research: A comparative study of the Competitive Intelligence practices of South African and Flemish exporters. Universities involved: Free University Brussels and University of Antwerp. Research in progress.

CHAPTER 3: A PHARMACEUTICAL INDUSTRY PLAYER APPROACH TO COMPETITIVE INTELLIGENCE

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A PHARMACEUTICAL INDUSTRY PLAYER APPROACH TO COMPETITIVE INTELLIGENCE

3.1 INTRODUCTION

The road to a new medicine is long, it is arduous, and it is very, very expensive. We have to dig a lot of dry wells, and at any point along the way the entire process can blow up in our faces. No industry runs a more grueling gauntlet of risks in pursuit of its products. Popular attitudes to science, the acceptance of biotechnology, and the use of animals in medical research can affect our ability to prosecute our programs effectively. The pharmaceuticals of this century are going to move beyond merely keeping people alive or relieving pain to actually unlocking the very mystery of what causes disease.

BioPharm SA's CEO

[Fictitious name, real company]

Competitive intelligence (CI) is still a fairly obscure practice for many companies, especially those in South Africa. Having a CI function is imperative in a competitive environment that is increasingly complex, unpredictable, changing, and difficult to predict accurately. In a patent and research and development driven industry like pharmaceuticals, it is often impossible to quantify what others might claim. The best any company can do is to interpret a given situation (be it present trend or future forecast), try to understand and make sense of it, and base ideas of future developments on the current situation and knowledge.

This case study examines and analyses the development of a CI capability in a prominent pharmaceutical company, here called BioPharm South Africa (SA), as it navigates in a highly competitive technology, research, and capital-intensive industry where size matters. CI plays a role in the company's global

growth strategy, and real-time information gathering and analysis assist the company in making the *right* decision.

BioPharm SA constantly nurtures a culture of competitiveness and aims to ensure that all employees know their CI roles and responsibilities. The company also widens the advantages of having a CI capability by ensuring that CI has value at all levels in the company and that it is not just a top-down function.

3.2 CI IN BIOPHARM SOUTH AFRICA

BioPharm SA is part of a research-based, global pharmaceutical company focused on developing innovative products and active in more than 150 countries. The company operates in the health care, animal health, and consumer health care business segments. Ongoing productivity initiatives and mergers, partnering, and alliances drive BioPharm SA's growth strategy. Its CI capability should be viewed against the background of being part of a large multi-national corporation where CI is structured in a hub and spoke fashion. The core CI structure is at corporate headquarters, and the regional headquarters are responsible for primarily regulatory and market-related intelligence in their respective regions. As a result, BioPharm South Africa conducts CI in close cooperation with the corporate CI organisation.

3.2.1 In the beginning...

Companies often evolve their CI capabilities through specific developmental stages, from an informal to a full-scale position. However, some companies are stuck quite low on the evolutionary totem pole, with little expertise and sophistication in their CI positions (Gilad, 2001). At these companies, CI reacts to their clients' requests for competitor and competitive information. Here few have elevated their CI people to the role of providing intelligence independent of demand, such as early warning.

CI at BioPharm SA developed over time from a small start. Although the company has been involved in CI-related activities such as data gathering and competitor analysis for some time, it now needed to formalise the capability, especially in regards to electronic data, capturing in the sales department and ensuring wider application of intelligence in decision-making.

In addition to increased competition, CI capability was developed in response to their need to:

- Have better and more focused information (rather than more information).
- Create more effective internal data gathering capability. The paper-based data gathering methods were no longer efficient and too much information was being generated. Gathering needed to become more streamlined, effective and focused.
- Be different in the industry. Innovation to attain competitive advantage has become the differentiating factor.
- Have a competitive edge over rivals when it comes to identifying new technologies or processes that may have a significant competitive impact on BioPharm SA's markets and existing competitors.
- Be aware of any change in the relative strengths or weaknesses of BioPharm SA's rivals as soon as they occur, if not before the event. For example when a new product or competitor is considering to enter the market, the company would like to know about it sufficiently in advance to be able to take effective counter action and to identify new opportunities or threats in the relevant markets.

The CI capability in BioPharm South Africa developed internally, and leveraged company employees (primarily MBA graduates) as the need for interpreted information increased. Only establishing the computing system required external advice.

From an analysis point of view the company assumed that MBA qualified employees are skilled at using various analysis tools like win-loss analysis, financial analysis, and scenario planning. But how are the different CI stages conducted in BioPharm SA?

3.2.2 Planning and focus

To ensure focused information gathering, companies must be able to accurately identify the variables within their competitive environment. These are often their key intelligence requirements. The aim of proper planning is not to be surprised by threats and opportunities; the competitive environment should be scanned continuously, not only when danger lurks or profits fall. BioPharm SA regularly prepares profiles on its competitors, and specifically looks at competitor plans and intentions, and the competitor's partners, alliances, suppliers and distributors.

As a matter of priority, BioPharm Inc. (headquarters) tracks macro events such as the export and import market, European pharmaceuticals, local buying power, and changing and new technologies. BioPharm SA, however, tracks South African related trends and issues like the impact of legislation, labor regulations, customer behavior and preferences, and competitors' local behavior. "It is required of us to live eat and drink the South African market and to track changes far into the future." Social responsibility also has high importance because of government pressure on pharmaceuticals to assist in addressing South African health issues in a cost effective manner.

The intelligence focus areas or Key Intelligence Needs (KINs) of the company's decision-makers are known. "We know the mindset of the CEO and other key executives – how they view the industry, the degree of risk they are willing to take, the priority of their business goals." But these key intelligence needs are not regularly communicated to those that need to contribute information. If the latter do not know what the needs are, they will not be sensitised to what they

should be looking for. These needs alter constantly, hence the importance of revisiting and communicating them regularly.

CI in BioPharm South Africa is fairly reactive to KINs expressed by management but does not conduct projects without being specifically tasked. No process of regularly determining, updating, assessing, and analysing the KIN exists. Therefore there is no long-term intelligence plan. Although most important, the planning phase receives too little time and attention.

3.2.3 Process and structure

The debate on where best to locate the CI professional is old. Most companies, especially old world, still go by the conventional wisdom of placing CI under other functions and limiting its scope to that narrow functional focus. Being a strategic management tool, CI is best placed as close as possible to top decision-makers to facilitate focus on crucial strategic management issues. But, CI should also be a company-wide activity with operational units actively involved in the process on a more tactical level.

In BioPharm SA, there is a centralized CI capability, based in the strategy department that takes overall responsibility for the function. Elsewhere in BioPharm, there are nodes of informal, ad hoc CI activity, with the sales department housing the most active operational CI unit.

Sales are the main source of primary information and feed this information to the central CI capability. The latter makes sure that the right information is gathered by briefing and debriefing sales employees on a weekly basis. There is a short communication line to the top decision-makers and free access to these primary clients of intelligence. The CI capability taps into various top-rated databases both inside and outside the company. The electronic gathering system (whether from primary or secondary sources) is supported by both hardware and software.

The intelligence process results are still mainly used for tactical and operational purposes, although the strategy department does use them to support some strategic decision-making. The company has no people specifically dedicated to CI – they all have additional functions. This requires teamwork and cross-functionality building where people from elsewhere in the company are co-opted for projects.

The CI corps is highly and appropriately trained, although they are multi-tasked with no single person dedicated full time to manage the capability. This hampers continuity and focus. A senior manager (manager strategy) who reports directly to the chief executive officer heads the core CI capability based in the strategy department. CI nodes elsewhere in the company are still in the developmental phase, with the exception of the sales and marketing department. Well-functioning CI nodes will be developed in other departments as well.

The organisation has an intranet, although it is not for exclusively CI work. Competitive information is captured and communicated by means of Personal Digital Assistants (PDAs) and Lotus Notes is the knowledge management tool. No central CI dedicated intelligence database currently exists, although there are plans for one. The company does not know exactly what it knows. There is also no central pooling point where people can report their information, observations, or findings.

3.2.4 Collection

The company recognizes that decision-making based on gut-feel and unverified information should be avoided. BioPharm SA uses a variety of primary and secondary sources of information. Pharmaceutical regulations require companies to publish a wide range of information including product trial information. In such an information rich industry, finding information from

secondary sources is no challenge, although the cost factor associated with purchasing research can be inhibiting. BioPharm has an effective real-time, primary information source system in place, primarily using sales representatives as information sources. They are regarded as the company's sensory organs in the field, where unique bits and pieces of information can be picked up. This valuable information also includes information on competitor activities, competitor product information, promotions, and price information.

In BioPharm, most primary information is captured by sales employees according to pre-determined questions. These information requirements (product sales, patent comments, doctors' comments and display information) are developed at meetings and discussions by various role-players, including product developers, account managers, and sales and marketing employees.

Through the use of PDA's and Lotus Notes, these questionnaires are filled out at the point of call and sent to a central point. The sales employees also report on the points of sale they visit (doctor's surgeries, pharmacies, clinics, and hospitals). Answers to these questions (also called taskings) are communicated directly to those individuals who have an interest in the information (marketing employees), or those that have asked specific questions. These reports are also sent to the strategy department as a matter of routine. Besides the sale corps, BioPharm also maintains a network of human contacts outside the company to gather certain specialised information. For example, an econometric company and StatsSA (official South African country statistics body) provide macro data, and there are numerous health-related websites as well as other institutions. There are checks and balances in place to ensure that employees gather information, including incentives.

BioPharm has not yet developed specific CI legal and ethical guidelines for CI activities, although these activities are conducted under a general code of conduct that every employee has to sign. Information and sources of information need to be regularly tested for credibility and reliability to prevent

potentially damaging business decisions based on disinformation and misinformation. BioPharm SA regularly classifies its sources of information as primary or secondary and ensures that facts are corroborated. In this regard, the company knows that official statistics can be unreliable and has added other sources of information to verify facts. But BioPharm does not have an updated source database or at least a central record of reliable sources of information.

The information gathering techniques used by BioPharm SA are fairly basic, such as interviews using structured questionnaires, surveys, and Internet searches. The company does not provide training in more advanced gathering techniques like coordinating and planning information collection at trade shows and exhibits, but acknowledges that this is an area of competitive intelligence to be developed.

Secondary information is gathered through Internet searches and scanning publications and databases. The company also subscribes to various databases and news feeds. BioPharm SA's international links, and the fact that the pharmaceutical industry has excellent databases available, means that secondary source information is of very high quality.

The key problem with secondary information is that most of these databases do not sufficiently cover South Africa-related issues or local competitor activities. Furthermore, the information that is available from official sources such as CPI and GDP are of dubious integrity. The result is that BioPharm has to incur extra cost to buy that information from other sources for verification purposes. However, secondary information sources remain the dominant resource.

3.2.5 Analysis

In BioPharm SA, analysis and interpretation of information is done centrally in the strategy department. Cross-functional analytical teams are developed for specific ad hoc projects as and when required. The analysis team's

composition depends on the nature of the project. For example, if it concerns the launch of a new product, the team would contain employees from product development and sales and marketing as well as biotechnologists.

Analytical tools are still limited to basic techniques like SWOT and competitor and product profiling. The ad hoc CI analysis group regularly produces assessments that analyze and propose several outcomes of key competitors' actions, and identify the threats and opportunities these outcomes present to the company. A current analysis focus area is the impact of regulatory change.

Pharmaceutical companies have been in the news regarding their role in combating the HIV/AIDS pandemic. In a country with the highest HIV/AIDS incidence in the world, this is a government priority. Pharmaceutical companies feel significant pressure to exercise social responsibility in making available generic health products or cheap antiretroviral drugs.

BioPharm SA's CI capability is considering the use of more advanced analysis methods such as scenario planning together with other more advanced tools such as biometrics, competitor management profiling, competitor technology imaging, and in-depth competitor profiling with a focus on competitive strategies and growth direction. BioPharm tried outsourcing certain elements of research and analysis to provide it with an opportunity analysis of the South African market and to formulate growth strategies for the company. This decision yielded limited value and benefit.

Although the analyses were thorough, they lacked focus and unique insights. The company will not outsource such analysis again since no external analyst knows the company, and its culture, aims, and strategy as well as its employees. Currently research is brought in and final interpretation is done by relevant internal analysts.

Analysis and knowledge management tools have a useful role, but in the final instance it still requires a human to glean the unique meaning of an event or a snippet of information on a particular company. In BioPharm SA, there is no formal knowledge management system. The key intelligence requirements are regularly communicated to employees that might be in a position to provide useful information through weekly meetings with sales employees and emails.

The company's culture defines it as a learning organization: "Our corporate culture encourages information sharing and learning."

3.2.6 Awareness and culture

BioPharm SA employees have a generally high awareness of their CI roles and responsibilities. Also, the company recognises CI as a legitimate and necessary activity for its business. In fact, one of the key prerequisites of a successful CI capability (namely top management support, buy-in and utilization) is strongly present.

Employees, especially those primarily and directly involved in the CI activities, are regularly sensitised to their CI role and function (such as what information they should report and what information not to divulge) through weekly meetings, where they are also provided with the information needs requirements. This CI awareness is also regularly reinforced through sensitising sessions, by email and through weekly briefing sessions between the managers and employees.

CI awareness also extends to the defensive, namely not divulging sensitive information. Employees understand the basics of counter intelligence: the company's intellectual property and proprietary information should be protected and not be disclosed. But this defensive mindset is not yet sufficiently developed, and leaves the company vulnerable to CI gathering activities. BioPharm SA has also realized that fostering a defensive mindset is an ongoing activity because employees come and go.

3.3 ANALYSIS OF CI IN BIOPHARM SA

STRONG POINTS	SUCCESS BARRIERS & WEAK POINTS	ONGOING CHALLENGES
• Leader in the pharmaceutical industry in terms of its CI function (benchmark). • The strategy department functions autonomously and independently. • The company identifies its own intelligence needs on an ongoing basis. • Low employee turnover is due to high level of job satisfaction and to the company culture; a competitive culture can be developed, people remain sensitised, and continuity is ensured. • Excellent internal company support for and participation in CI strengthened by a strong company-wide competitive culture and CI awareness. • Wide recognition for the need for and benefits of CI. • The CEO is convinced of the value of and need for CI, resulting in a strong top-driven advantage. • The international connections and a foreign-based CEO provide access to information and a global mindset. • Excellent global source network exists, especially for secondary sources (databases). • The company is a learning organization that encourages training and the sharing of information – this aspect is incentivised. • BioPharm benefits from excellent primary source networks	• Financial restrictions limit developing optimal CI capability. • BioPharm SA, like most South African companies, is still too inwardly focused with too little focus on strategic matters and too much emphasis on operational issues. • Success breeds complacency and arrogance: In a market leader complacency is arguably the biggest vulnerability. • Leaving action too late and reacting on developments rather than anticipating problems and implementing action steps before a problem arises. (The wake-up call comes too late.) • Hardware and software adaptation is problematic; many systems and programs are in use and compatibility is still low. • No dedicated CIO or COO: no dedicated CI driver for the process capability means that people tasked with CI actions often get side tracked and neglect important CI issues. • The lack of a dedicated CI unit hampers the continuity and focus of the process. The CI nodes elsewhere in the company, are not well developed, except for sales and marketing. • No regular process exists for assessing and updating the key intelligence needs of the decision-makers, creating a lack of focus and direction.	• Maintain strong top management support and sponsorship as well as their utilisation of intelligence in decision-making. • Establish and continuously develop and maintain a company-wide competitive culture. • Incentives for volunteering competitive information are often an add-on activity and sometimes neglected. • Create effective information communication means (software and hardware). • Maintain a multi/cross functional approach to Key Intelligence Needs. • Create a company-wide rollout of CI, establishing individual roles and functions, and how to contribute to optimal CI work. • Sustain CI training and sensitizing. • Constant company and industry change requires change in the degree to which CI is practiced. BioPharm SA also has to ensure that intelligence use in strategic decision-making becomes routine.

3.4 LESSONS IN SUCCESSFUL CI

The analysis of the CI practice at BioPharm SA has emphasised the fact that for CI to be a successful decision-making enhancement capability, certain success factors exist.

3.4.1 CI is a top management function

Senior management should drive and facilitate the process. In most successful companies, the CEO or the managing director sponsors, supports, and acts as the custodian of the process, while a separate senior management champion manages the capability. In BioPharm SA, this prerequisite is not yet what it should be, although steps have been taken to use intelligence products in decision-making as a matter of routine. The outcomes of CI are increasingly integrated with the business planning process to develop new strategies, counter strategies, or reaffirm current strategy.

3.4.2 CI is a company-wide activity

The process of entrenching CI throughout the company is a continuous activity. This is a goal that BioPharm SA works towards. However, this is easier said than done, due to various constraints including personnel turnover, and the lack of a dedicated person to manage and drive CI. CI is gaining importance and the expectation is that, in the near future, a CI champion will be appointed.

3.4.3 Outsource certain intelligence related activities

Some CI research and analysis is outsourced including competitor analysis, customer profiling, and macro economic research in the South African context. An ongoing problem is the integrity of official macro economic data, but that can be overcome by obtaining similar information from another more reliable source.

With an information rich environment, access to the right information is not difficult, although cost can be an inhibiting factor.

Outsourcing the right activities can be a key success factor as companies are not in the intelligence business or knowledgeable on different areas such as interpretation of the impact of regulatory change. Employees are often too involved in the day-to-day running of the business to take sufficient cognisance of the external environment. Here, obtaining external expert views on issues such as a regulatory matters and macro economic trends is effective.

3.4.4 CI should permeate the whole company

CI requires participation and contribution from every employee. Fostering and cultivating such a culture is a continuous effort achieved through training, sensitizing, involving employees in gathering information, and showing value by making the intelligence usable to the lower levels of the company. BioPharm SA does this successfully through continuous interaction between employees and the users of intelligence by means of meetings, sensitizing sessions, emails and the use of the intranet as a communication tool. In BioPharm SA, CI is not a secretive activity and information is shared freely.

3.4.5 Adhere to high ethics and principles as well as good corporate governance and social responsibility

The BioPharm SA CEO says there is no compromise on these factors: "I want to clearly affirm BioPharm's commitment to integrity in all our dealings and everywhere we operate. Our colleagues at all levels are firmly grounded in the company's values, with integrity first and foremost among them." BioPharm SA's case also shows that there need not be a dedicated code of ethics for intelligence. The same principles are included in the company's code of ethics and conduct that all employees sign when appointed. Having a corporate wide code of ethics sets out the boundaries of what is acceptable and non-

acceptable behavior. The BioPharm SA case study has illustrated that there is no one blueprint for CI. The natures of companies and industries differ too greatly to attempt to suggest a benchmark for structure and how-to. There are common denominators for successful CI capabilities as found in BioPharm SA. CI is not a once-off activity, but one that requires continuous hard work and dedication. No company or industry is static. The continuous state of change requires employees company-wide to be constantly sensitised as to their role and function vis-à-vis CI. Key intelligence requirements also constantly change.

What is valid in the morning might be outdated in the afternoon. CI is an evolutionary process that takes years of honing to come to fruition.

CHAPTER 4: CONCLUSIONS AND RECOMMENDATIONS

The research purpose was principally to expand on the current limited knowledge of and research on CI as a business discipline in South Africa. The three objectives that were outlined were:

- To explore the development of CI in South Africa and to provide a chronological overview of such development.
- To research how and to what extent CI is practiced in South African companies in order to obtain a more representative picture of CI practices. The objective of this study therefore was to fill that gap by exploring the practical conduct of CI in a South African based company.
- To discuss the key findings of the research and provide recommendations and areas for further study including the CI model, required skills for CI, how to measure the effectiveness of CI and what lessons can be learnt from more advanced CI countries.

In the former chapters, the development of CI as a business instrument and the practical conduct of CI by a pharmaceutical company was examined and discussed. This chapter provides conclusions regarding the findings of the study.

These conclusions have given rise to certain recommendations for management, future development of theory in this area, as well as for future research. The conclusions on each of the research objectives are hereby provided separately.

4.1 CONCLUSIONS

4.1.1 Conclusions relevant to the development of CI in South Africa

Although research into the development of CI in South African and its application in South African companies is very limited and results cannot be regarded as being representative, certain conclusions could be made.

Most of the findings can be related to the fact that CI is still a relatively new business discipline in South Africa and that training and sensitising is still limited. The conclusions are stated as follows:

- South African companies in general still show a lack of appropriate processes or structures for CI, particularly in the formal organisation and process for CI. Also the structural support in companies for CI is lacking. Companies do not make it easy for employees to share information due to the absence or limited presence of KM tools.
- Although companies in South Africa indicated that they have no lack of sources of information and generally regard employees as their best source of information, few companies indicated that they have a central coordinating point for receiving competitive information. Without proper support structures, companies also make it difficult for employees to participate in and contribute to the CI process.
- More serious is the finding that few companies have dedicated CI units and that CI is regarded as a part time activity. Again this can be attributed to the fact that knowledge on CI and how a company can benefit from a successful CI unit is lacking. CI is furthermore mainly regarded as an isolated activity that only benefits certain departments or employees. This inhibited company-wide involvement in CI. The core CI

activity was mostly found in the marketing departments in companies probably because the initial need for CI was highest in these departments. Placing CI under a specific department could lead to CI developing a limited focus and application. This lack of company-wide CI activity can partly be attributed to the lack of CI awareness and competitive culture in many of the companies participating in the research.

- The research, however, has shown that the focus of CI activities extends beyond analysing competitors to include regulatory matters as well as customers and suppliers amongst others. This was a positive observation and can probably be related to the heightened competitiveness of South African industries.
- The research also uncovered the fact that the marketing manager or the CEO is most likely to assume ultimate accountability. The latter was particularly true in smaller companies probably due to the fact that dedicating a particular person to drive and manage CI is regarded as a luxury that few small companies can afford.
- CEO and top management involvement in and support for CI is regarded as one of the main success prerequisites for successful CI. This was present in most of the companies surveyed and was a positive finding. One of the means to ensure sustained decision-maker support is to deliver intelligence that the user needs. The research however has shown that the intelligence needs of key users are not known and are therefore unlikely to be answered by the CI unit. Again this could be related to the lack of proper structures, processes and procedures for CI in South African companies.
- Further on management and CI, it was found that despite increasing competition and faster business in general, there appears to be a degree

of complacency and self-deception that is inhibiting managers from instigating effective planning to improve CI; few conduct CI in a formal systematic manner. From the research it is encouraging to note that managers do recognise a need to better integrate CI in their companies' business processes. How South African managers will meet these challenges is, however, not clear as few have actual plans to improve their ability to keep track of competitors and competitiveness.

- The research has shown that most of the time spent on CI activities was for information collection whilst it would have been preferable if companies spend more time on planning and focusing their CI activity and analysing information. The large amount of time spent on collecting information can be attributed to the fact that this is probably the 'easy' part of CI as most respondents indicated that they experienced no lack of sources of information and the right information (on the contrary, most suffered from an over supply of information). Far too little time is spent on analysis as a core CI activity and an over-reliance on basic analysis tools was detected. This can be ascribed to a lack of training that, in turn, can be ascribed to the lack of formal training programmes at higher learning institutions in South Africa. It may also be attributable to the fact that people appointed as CI analysts are not appropriately skilled and do not have the necessary experience and background to be effective analysts.
- The research indicated a lack of proper CI academic programmes to answer the increased need for top-notch CI skills. These training needs are set to increase and it is expected that training institutions in particular higher education institutions will expand on their formal CI programmes, especially in the management and information management sciences.
- The overall conclusion was that South African companies are not yet as well equipped to practice effective CI as their counterparts in the United

States, Japan, Sweden, France, Israel and others. South African companies do however acknowledge that CI can enhance competitiveness and that it is regarded as a legitimate business activity. CI is furthermore increasingly regarded a continuous and formal activity in order to gain optimal benefits. The number of companies developing intelligence groups has increased noticeably and it is not uncommon to find the job title of Manager of CI in companies.

4.1.2 Conclusions relevant to the practice of CI in South Africa

The conclusions that could be drawn from the analysis of the CI practices in a pharmaceutical company are here presented.

The case study examined and analysed the development of a CI capability in a prominent pharmaceutical company, here called BioPharm South Africa (SA). Companies active in such a highly competitive, research and development driven as well as knowledge driven industry, have to constantly be competitive and able to generate sound and timely intelligence.

Regarding the conduct of CI by the pharmaceutical companies examined for the case study, the CI process was taken as premise and the company's CI activities examined according to the process. The six key areas or constructs that form the intelligence model were described in Chapter 2 and briefly include the following actions:

- Planning and focus (planning to focus on issues of highest importance to senior management and ensuring that sufficient resources are available to conduct CI).
- Collection (collecting the right information from a variety of sources using a variety of collection techniques. It is also about ensuring that information is validated).

- Analysis (analysing and interpreting information using basic and more advanced analysis tools to create actionable intelligence).
- Communication (communicating intelligence in an actionable manner to the right people.)
- Process/structure (ensuring that the right policies, procedures and formal infrastructure is available so that employees can contribute effectively to the CI system as well as gain the benefits from the CI process).
- Organisational awareness and culture (ensuring that employees in the company are sensitised as to their awareness of CI and to instill a culture of competitiveness. This means employees should gather the right information and share information).

Concerning the CI process, empirical data has shown that the company follows the four phases, which are planning and direction, collection, analysis, and dissemination as described in the theoretical frame of reference. This is the logical chain of actions in the CI process and this will enhance the competitiveness of the company.

4.1.2.1 Planning and focus

To ensure focused information gathering, companies must be able to accurately identify the variables within their competitive environment. These are often their key intelligence requirements. The aim of proper planning is not to be surprised by threats and opportunities; the competitive environment should be scanned continuously, not only when danger lurks or profits fall. BioPharm SA regularly prepares profiles on its competitors, and specifically looks at competitor plans and intentions, as well as the competitor's partners, alliances, suppliers and distributors. Focus is therefore not only on competitors but also on other elements in the competitive environment that could impact on the company's business. This is regarded as a positive finding as a lack of or the wrong focus can lead to the company developing business blindspots.

The company recognises the importance of understanding of the intelligence users' needs and time constraints and this is done by way of "knowing the mindset of the executives," interviews and obtaining specific taskings from the intelligence users. However, no process of regularly determining, updating, assessing, and analysing the users' intelligence needs exists. Therefore there is no long-term systematic intelligence plan. There is also very little communication of the company's intelligence requirements to other parts of the company although most important, the planning phase receives too little time and attention.

Employees therefore do not know what information is important or should be gathered, communicated and shared. This leads to the conclusion that although company leaders do recognise the need for CI to enhance competitiveness, too little time is spent on this important action in the CI process and limits the potential pro activeness of the CI capability. The CI unit does not conduct projects without being specifically tasked leaving the company far too reactive to reap the full benefits of a proper CI capability.

4.1.2.2 Process and structure

Process and structure concern the presence of policies, procedures and infrastructure to ensure optimal employee participation in and contribution to CI. Best practice shows that CI, as a strategic management tool, is best placed as close as possible to top decision-makers to facilitate focus on crucial strategic management issues and to ensure a constant flow of intelligence into the strategic planning process. But, CI should also be a company-wide activity with operational units actively involved in the process on a more tactical level.

BioPharm has a hybrid CI system meaning that it has a centralised CI capability, based in the strategy department with nodes of informal, ad hoc CI activity elsewhere in the company. The best-developed node is in the Marketing and Sales Department. The people directly involved in CI are all

highly skilled and educated. This is a positive finding. CI in BioPharm SA is therefore in various stages of development. It is foreseen that well-functioning CI nodes will over time be developed in other departments although no structured plan for the development of CI exists.

Relevant information is fed to the central unit and employees are made aware of the information needs during regular meetings. In BioPharm, most primary information is captured by sales employees according to pre-determined questions. These information requirements (product sales, patent comments, doctors' comments and display information) are developed at meetings and discussions by various role-players, including product developers, account managers, and sales and marketing employees.

Information gathered is communicated directly to those individuals who have an interest in the information (marketing employees), or those that have asked specific questions. As a matter of routine, these reports are also sent to the strategy department. These communication channels are effective and fast and ensure that relevant information is continuously available.

Besides the human intelligence network, there is also an Intranet (although not exclusively for CI use) and computer programmes that facilitate easy communication and sharing of information. The company also ensures that its employees are sufficiently trained. However, BioPharm has no dedicated CI team and people are multi-tasked which inhibits optimal development of CI.

Another shortcoming is that there is no central pooling point where people can report their information, observations, or findings. When it comes to storing the information, empirical data shows that most companies store information in some kind of form but that few have an intelligence database. This is also the case with BioPharm SA. Thus, although people are collecting and reporting information, the company does not make it easy to report to the right channels.

In BioPharm SA, there is also no formal knowledge management system. The key intelligence requirements are regularly communicated to employees that might be in a position to provide useful information through weekly meetings with sales employees and emails. The company's culture defines it as a learning organization: "Our corporate culture encourages information sharing and learning."

The conclusion can be made that BioPharm has a part-time CI model with various nodes in various stages of development.

4.1.2.3 Collection

Data shows that the company uses both primary and secondary sources of information that were described in the theoretical framework. More precisely, it makes use of its own employees as primary source. They are regarded as the company's sensory organs in the field where unique bits and pieces of information can be picked up. Besides the sales corps, BioPharm also maintains a network of human contacts outside the company to gather certain specialized information. Human contacts are regarded as the best sources of information.

BioPharm also uses the Internet as secondary source mainly because competitor information is easily retrievable from competitors' or potential collaboration partners' websites. The company has access to an abundance of secondary sources (although this is often costly). This is likely to be the case since the latest scientific developments often are communicated on websites and since pharmaceutical regulations require companies to publish a wide range of information including product trial information. In such an information rich industry, finding information from secondary sources is no challenge, although the cost factor associated with purchasing research can be inhibiting. Secondary information is gathered through Internet searches and scanning publications and databases. The key problem with secondary information is

that most of these databases do not sufficiently cover South Africa-related issues or local competitor activities. The result is that BioPharm has to incur extra cost to buy that information from other sources for verification purposes. It can be concluded that secondary information sources remain the dominant information resource.

BioPharm SA recognises the value of human intelligence and field observations but does acknowledge that decision-making based on gut-feel and unverified information should be avoided. It regards as important the fact that information and sources should be tested for validity and credibility and therefore regularly classifies its sources of information as primary or secondary and ensures that facts are corroborated. But BioPharm does not have an updated source database or at least a central record of reliable sources of information.

The company is concerned with how it collects information as it is concerned about their reputation. That concern drives the need to gather information legally and ethically. It is aware that unethical behaviour in respect to CI may damage the corporate image. BioPharm, however, has no specific CI legal and ethical guidelines for CI activities, although these activities are conducted under a general code of conduct that every employee has to sign.

The information gathering techniques used by BioPharm SA are fairly basic, such as interviews using structured questionnaires, surveys, and Internet searches. The company does not provide training in more advanced gathering techniques like coordinating and planning information collection at trade shows and exhibits, but acknowledges that this is an area that requires development.

From the discussion above, conclusions can be drawn concerning the collection phase of the CI process:

- The company makes use of both primary and secondary sources when collecting information.
- Primary data is mainly collected from members within the company.

- The company makes use of subscription databases.
- BioPharm SA collects information in a lawful manner.
- The main source of secondary data is the Internet.
- It has no intelligence database.
- Employees are not trained in more advanced information collection techniques.

4.1.2.4 Analysis

According to the theoretical framework analysis concerns the analysing and interpreting information using basic and more advanced analysis tools to create actionable intelligence.

In BioPharm SA, analysis and interpretation of information is done centrally in the strategy department by cross-functional analytical teams assigned for specific ad hoc projects as and when required. The main CI analysts are all MBA graduates. The analysis team's composition depends on the nature of the project.

Research has shown that analytical tools are still limited to basic techniques like SWOT and competitor and product profiling. Lack of time for elaborate analyses might be a reason for the failure to use more advanced analysis techniques. It does, however, develop scenarios. Ad hoc CI analysis groups regularly produce assessments that analyse and propose several outcomes of key competitors' actions and identify the threats and opportunities these outcomes present to the company. BioPharm is considering the use of more advanced analysis methods such as scenario planning together with other more advanced tools such as biometrics and competitor management profiling.

Although BioPharm tried outsourcing certain elements of research and analysis, the results had limited value and benefit due to a lack of focus and unique

insights. This might be because an outside company is not able to gauge the particular needs of the company.

From the above discussion, it seems reasonable to conclude that:

- Analysis and interpretation of information is done centrally in the strategy department.
- Cross-functional analytical teams are assigned for specific ad hoc projects.
- The company is good at utilising basic analytical tools and techniques.
- The application of more advanced analysis tools is limited.
- The CI analysts, although not dedicated fulltime to the CI function, are highly and appropriately trained.

4.1.2.5 Communication

Communication as a key construct in the CI process means communicating intelligence in an actionable manner to the right people.

The company follows the suggested guidelines for the manner in which intelligence is presented i.e. presenting analysis that is responsive to the user's needs (focused, timely delivered, inspiring a high level of trust).

If the intelligence is not presented in accordance with the guideline proposed, its usefulness and reliability will diminish. The communication channels presented in the frame of reference were used e.g. newsletters, written reports, e-mails, meetings, personal presentations, informal conversations, and the Intranet.

From the discussion above, it may be concluded that:

- BioPharm SA presents intelligence in accordance with certain guiding rules, i.e. the analysis must be responsive to the users' needs, focused, timely delivered, objective and user friendly.

- The CI dissemination channels most often used are newsletters, written reports, e-mails, meetings and presentations.

4.1.2.6 Organisational awareness and culture

This construct concerns the importance of ensuring that employees in the company are sensitised as to their awareness of CI and to instil a culture of competitiveness.

Empirical research has found that BioPharm SA employees have a generally high awareness of their CI roles and responsibilities. It is also important to note that the company recognises CI as a legitimate and necessary activity for its business. In fact, one of the key prerequisites of a successful CI capability (namely top management support, buy-in and utilisation) is strongly present.

Regular sensitising sessions take place with selected employees. Employees are also sensitised during weekly meetings at which information needs are communicated with them. This leads to excellent internal company support for and participation in CI, strengthened by a strong company-wide competitive culture and CI awareness.

CI awareness also extends to the defensive, namely not divulging sensitive information. Employees understand the basics of counter intelligence: the company's intellectual property and proprietary information should be protected and not be disclosed. But this defensive mindset is not yet sufficiently developed, and leaves the company vulnerable to CI gathering activities. BioPharm SA has also realised that fostering a defensive mindset is an ongoing activity because employees come and go.

From the above research it can be concluded that:

- BioPharm's employees are well sensitised as to what CI is and what their role and function in terms of CI is.
- The company's top management support CI and recognises CI as a valid business tool.
- The company recognises the need to instill a defensive mindset amongst its employees so as to prevent them from divulging sensitive information to unauthorised entities.

4.1.3 Conclusions regarding areas of further research

The assessment of the CI practices of South African companies leads the author to conclude that many identified development areas, including weak analysis capabilities and a lack of appropriate supporting structures for CI, can be directly related to a lack of skills, understanding, training and knowledge of CI in South Africa.

4.2 RECOMMENDATIONS

4.2.1 Recommendations pertaining to the development of CI in South Africa

Recommendations that arose pertaining to the development of CI in South Africa, include:

- Further study on key development areas in CI should be encouraged.
- Joint research projects between academic institutions and CI practitioners in the CI industry should be undertaken.
- Formal CI training programmes, ideally on MBA level, should be developed and promoted. This will ensure that people with the right CI skills will be available in the CI job market.
- CI as a means to enhance the competitiveness of South Africa and South African companies and industries should be promoted. This could

be done by means of establishing academic chairs, associations and developing government intelligence support and participation in CI.

4.2.2 Recommendations pertaining to the case study

In order for BioPharm SA to develop an effective company-wide CI capability the following can be recommended:

- Ensure that top management maintains its support for and use of CI by providing a constant flow of focused, timely and accurate intelligence. CI is a top management function - senior management should drive and facilitate the process. A company would benefit from a regular process for assessing and updating the key intelligence needs of the decision-makers thereby creating focus and direction.
- The outcomes of CI, i.e. the intelligence that is generated by an effective CI capability, should be integrated with the business planning process to develop new strategies, counter strategies, or reaffirm current strategy.
- It is also important to embark on a systematic and continuous programme of sensitising to maintain and develop and hone a company-wide competitive culture.
- The company should make CI a formal, continuous activity and dedicate sufficient resources to the CI function. Many companies, especially smaller ones would regard allocating resources exclusively for CI purposes as a luxury. Should resources be limited, companies could outsource certain aspects of CI e.g. macro economic research, environmental tracking and scanning, information collection etc. Outsourcing the right activities can be a key success factor as companies are not in the intelligence business or knowledgeable on different areas such as interpretation of the impact of regulatory change. Employees are often too involved in the day-to-day running of the business to take sufficient cognizance of the external environment. Here, obtaining external expert views on issues such as a regulatory

matters and macro economic trends is effective. Employees, however, remain the best CI asset any company could have in terms of information collection and sharing.

- Ensure that people that could contribute and participate in CI have appropriate means to communicate and share information. Encourage sharing of information by incentivising this aspect.
- Ensure that the company has a low employee turnover by increasing job satisfaction; this will ensure continuity and will enhance the development of a competitive culture.
- BioPharm SA could prevent CI from becoming an isolated capability by making use of cross functional teams to research intelligence needs and roll out the capability company-wide – the more people benefit from CI, the more they would contribute. CI requires participation and contribution from every employee. Fostering and cultivating such a culture is a continuous effort achieved through training, sensitising, involving employees in gathering information, and showing value by making the intelligence usable to the lower levels of the company. The process of entrenching CI throughout the company is a continuous activity and ideally a dedicated person, a CI champion, is required to manage and drive CI. Having a dedicated CI unit will greatly benefit any CI capability.
- Develop a programme in terms of which people are trained in various aspects of CI e.g. analysis techniques, information gathering techniques, networking, communications skills and skills in the management of CI. This programme's aim should be to sustain CI training and sensitising.
- Companies should ensure that the ethical guidelines for CI are well entrenched and should mirror the company's values. Companies need not have dedicated sets of ethical rules for CI if the company code of conduct sets out the boundaries of what is acceptable and unacceptable behaviour of its employees.
- Finally, the nature of companies and industries differ too greatly to attempt to suggest a benchmark for structure and 'how-to' in terms of CI.

What is universally valid is that CI is not a once-off activity, but one that requires continuous hard work and dedication. The continuous state of change requires employees company-wide to be constantly sensitised as to their role and function vis-à-vis CI.

There is no single best way to organise for successful CI. First, managers need to identify the nature of the intelligence needed. Questions like who needs the intelligence, what sort of intelligence is needed, have to be answered. Furthermore, managers have to consider the organisational structure and culture in order to find a suitable way to integrate CI successfully. A degree of centralisation is, however, recommended, as a CI function could then possess an overall view of the business operations.

4.2.3 Recommendations for theory

The possible contribution to the theory that this study has offered is simply that it has provided the observation of a phenomenon in a specific company. The author has utilised past research in the area in order to come up with a set of research questions. These questions allowed for exploring, describing, and to some extent explaining how CI is conducted and integrated into a company, as well as what problems that companies may encounter in this respect. Consequently, this study's contribution to the theory consists of a set of observations but much remains to be explored, described, and explained.

4.2.4 Recommendations for future research

Additional research is required to determine the validity and reliability of the generalised measuring instruments. It is also recommended that future studies should focus on larger samples in order to instill confidence in study findings.

Other recommendations for future research within the CI field are:

- Investigating how best to organise the intelligence process by researching case studies and identify best practices especially the centralised vs. decentralised debate.
- Further investigation into the barriers faced when conducting CI and how best to overcome them. These barriers are typically shown in the case study discussed in Chapter 3 i.e. informal ad hoc CI, insufficient analyses, ineffective information communications, as well as a lack of proper structures for CI and the absence of a dedicated CI unit.
- To investigate the differences between large and small companies, with respect to the CI process and the integration of CI in various industries. Although some research has been conducted into the CI practices of South African companies, it is still too limited to start drawing conclusions on the way different companies of various sizes in different industries conduct CI.
- To investigate the key roles and skills required when conducting CI. CI, being a fairly new business discipline in South Africa requires a unique set of skills. Investigating what these skills are and how best to develop them are areas that require further research. Simultaneously, the various key roles and responsibilities of CI practitioners e.g. CI managers, CI coordinators and CI analysts should be further researched.
- To investigate the role government could fulfill in expanding and supporting CI in South Africa as a means to enhance national competitiveness. Research has shown that in countries where CI is furthest developed, e.g. in France and the USA, government plays an important supporting including providing CI training to companies (in the case of France) and the gathering of innovative technology and sensitive business information for companies (in the case of Japan). Swedish banks openly admit their role in CI along with the Swedish government and its embassies around the world. The latest IMD and WEF global

competitiveness rankings indicate that South Africa shows weak points in especially business infrastructure and government efficiency i.e. the extent to which government policies are conducive to competitiveness.

REFERENCES

- Aaker, D. 1983. Organizing a strategic information scanning system. *California Management Review*, 25 (2): 76-833.
- Aguilar, F.J. 1967. Scanning the Business Environment. MacMillan: New York.
- Albagli, A., Dawson, P. & Hasnain, S. 1996. Competitive science and technology intelligence. *International Journal of Technology Management*, 12: 320-329.
- All-BI Business Intelligence Solutions [No date]. [Online]. Available from: http://www.all-bi.com/news_archive.html. [Accessed: 23 January 2004].
- Ansoff I. 1979. Managing strategic surprise by response to weak signals. *California Management Review*, 18(2): 21-33.
- Ashton, W.B., & Stacey, G.S. 1995. Technical intelligence in business: Understanding technology threats and opportunity. *International Journal of Technology Management*, 10(1): 79-104.
- Aurora Worldwide Development Corporation [No date]. CI 201: Competitive Technical Intelligence: Product Tear-Down, Reverse Engineering, Patent Bibliometrics & Technology Comparisons. [Online]. Available from: <http://www.aurorawdc.com/ci201.htm> [Accessed: 23 January 2004].
- Bisson, S., (2003) Intelligence that means business. *The Guardian*, 31 July
- Blagg, M. 2002. European growth of competitive intelligence. [Online]. Available from: www.emeaconsulting.com/Critical_Eye/Critical_EYE_aug_2002.pdf. [Accessed: 4 March 2004].
- Brockhoff, K. 1991. Competitor technology intelligence in German companies. *Industrial Marketing Management*, 20:91-98.
- Calof, J.L. & Breakspear, A. 1999. Competitive intelligence practices of Canadian technology firms. National Research Council/Canadian Institute of Scientific and Technical Information.

- Calof, J., 1998. Increasing your CIQ: The Competitive Intelligence Edge, *The 1998 Economic and Technology Development Journal of Canada*. [Online]. Available from: <http://www.edco.on.ca/journal/item22.htm>. [Accessed 4 March 2004].
- Calof, J.L. & Miller, J. 1997. The status of CI across the globe. Proceedings of the 12th Annual Conference of the Society of Competitive Intelligence Professionals: 213-223.
- Calof, J.L. & Viviers, W. 2001. Adding Competitive Intelligence to South Africa's Knowledge Management Mix. *Africa Insight*. June, 31(2): 61-67.
- Calof, J.L. & Viviers, W. 1995. Internationalisation behaviour of small and medium sized South African enterprises. *Journal of Small Business Management*. 33(4): 71-79.
- Canadian Information Processing Society. 2002. Newsletter: March [Online]. Available from: <http://local.cips.ca/ottawa/Newsletters/20012002/March02/march02.htm>. [Accessed: 13 March 2004].
- Cleland, D. & King, W. 1975. Competitive business intelligence systems. *Business Horizons*. 19(6): 19.
- Choate, P., 1990. Agents of Influence: How Japan's Lobbyists in the United States Manipulate America's Political and Economic System. New York.
- Chonko, L.B., Tanner, J.F. & Smith, E.R. 1991. Selling and sales management in action: The sales force's role in international marketing research and marketing information systems. *Journal of Personal Selling & Sales Management*. 11(1) 69-70.
- Clark, F., Herring, J., Paap, J., Rosenkrans, W., & Tessun, F. 1998. Developing Processes and Infrastructure to Meet Management's CTI Needs: A Roundtable Discussion. Society of Competitive Intelligence Professional's 2nd Annual Competitive Technical Intelligence Symposium. October.
- Collins, B. 1997. *Better Business Intelligence: How to learn More About Your Competitors*, Letchworth.

- Daft, R., Sormunen J. & Parks D. 1988. Chief executive scanning, environmental characteristics, and company performance: An evaluative study. *Strategic Management Journal*. 9:123-139.
- Du Toit A. 1990. Marketing Intelligence: A Competitive Weapon. *South African Journal for Library Information Sciences*. 58(3): 277-281.
- Du Toit A. 1995. Managing Intelligence: A New Paradigm for South Africa. *Management Dynamics*. 4(3): 17-36.
- EMR Consulting Group. Roots in the Past [No Date]. [Online]. Available from: <http://www.intelligenceexperts.com/knowledge/introduction/mainframe.html>. [Accessed: 4 March 2004].
- Fahey, L. 1998. *Competitors: Outwitting, Outmanoeuvring, and Outperforming*, New York: John Wiley & Sons.
- Fahey, L. & King, W. 1977. Environmental scanning for corporate planning. *Business Horizons*. 20(4): 61-71.
- Fahey, L., King, W. & Narayanan, V.K. 1982. Environmental scanning and forecasting in strategic planning the state of the art. *Long Range Planning*. 14:32-39.
- Fleischer C.S., & Bensoussan B. 2000. Managing the Analysis Process.' *Competia Newsletter*. June.
- Flynn, R., 1996. NutraSweet Faces Competition: The Critical Role of Competitive Intelligence. *Competitive Intelligence Review* 7(Supp. 1): S25-S28.
- Francis, D.B. and Herring, J.P., 1999. Key Intelligence Topics: A window on the Corporate Competitive Psyche. *Competitive Intelligence Review*, 10(4).
- Fuld, L., 1999. Your Say: Competitive Intelligence & Knowledge Management. *Knowledge Management Magazine*. November: 3(3) [Online]. Available from: <http://www.kmmagazine.com/xq/asp/sid.0/articleid.5F8EF7B9-702B-4837-9474-E6E82C801DCC/qx/display.htm>. [Accessed: 5 March 2004].

- Fuld, L. M. 1995. *New Competitor Intelligence: The Complete Resource for Finding, Analyzing and Using Information about your Competitors*, New York: John Wiley & Sons, Inc.
- Gambardella, A., Orsenigo L., Pammolli, F. 2001. Global competitiveness in pharmaceuticals: A European perspective. *Enterprise Papers*. No 1
- Garvin, D.A. 1993. Building a learning organization. *Harvard Business Review*. 71(4): 78-91.
- Ghoshal, S. & Kim, S.K. 1986. Building effective competitive intelligence systems for competitive advantage. *Sloan Management Review*. 28(1):49-58.
- Ghoshal, S. & Westney, D.E. 1991. Organizing competitor analysis systems. *Strategic Management Journal*. 12(1): 1-15.
- Gilad, B., 2001. Next Step in the Evolution of Competitive Intelligence. Academy of Competitive Intelligence.
- Gilad, B., 2000. An ad hoc Entrepreneurial model. *Competitive Intelligence Magazine*. 3 (4) October-December 2000: 33-39.
- Gilad, B., 1999. Your Say: Competitive Intelligence & Knowledge Management. *Knowledge Management Magazine*. November: 3(3). [Online]. Available from:
<http://www.kmmagazine.com/xq/asp/sid.0/articleid.5F8EF7B9-702B-4837-9474-E6E82C801DCC/qx/display.htm>. [Accessed: 4 March 2004].
- Gilad, B., 1996a. Commentary or rather a convoluted personal reaction: In Simon, N. and Blixt, A. *Navigating in a sea of change*. SCIP.
- Gilad, B. 1996b. *Business Blindspots*. Probus Publishing Company: Chicago.
- Gilad, B. 1989. The role of organized competitive intelligence in corporate strategy. *Columbia Journal of World Business*. 24(4): 29-36.
- Gilad, T., & Gilad, B. 1988. *The Business Intelligence System – A New Tool for Competitive Advantage*, New York: Amacom.
- Gilad, T., & Gilad, B. 1986. Business intelligence - the quiet revolution, *Sloan Management Review*. 27(4): 53-60.

- Gilad, B. & Gilad, T. 1985a. A systems approach to business intelligence. *Business Horizons*. 28(5): 65-70.
- Gilad, T., & Gilad, B. 1985b. Strategic planning: improving the input. *Managerial Planning*. 33(6): 10-14.
- Gilad, B., & Herring, P. J., 1996. *The Art and Science of Business Intelligence Analysis*, JAI Press Inc.
- Gilad, B. & Smith, R. 1998. Why Pharmaceutical Companies Lack Real Competitive Intelligence, *Pharmaceutical Executive*. May: 94-104.
- Ghoshal, S. & Kim, S.K. 1986. Building effective competitive intelligence systems for competitive advantage. *Sloan Management Review* 28(1):49-58.
- Ghoshal, S. & Westney, D.E. 1991. Organizing competitor analysis systems. *Strategic Management Journal*. 12(1): 1-15.
- Global Competitiveness Report. 2003. World Economic Forum. [Online]. Available from: <http://www.weforum.org>. [Accessed 4: March 2004].
- Government Communication and Information Service (GCIS). 2002/03. *South Africa Yearbook 2002/03: Overview*. [Online]. Available: from: www.gcis.gov.za/docs/publications/yearbook03/ch3.pdf. [Accessed: 4 May 2004].
- Guyton, W.J. 1962. A guide to gathering marketing intelligence. *Industrial Marketing*. March: 84-88.
- Hall, C., 2002. SCIPAust Presentation. [Online]. Available from: <http://www.scipaust.org.au>. [Accessed: 5 January 2004].
- Hall, C. & Bensoussan, B. 1996. The State of Competitive Intelligence in Australia. [Online]. Available from: http://www.scipaust.org.au/1996_survey_result_summary. [Accessed: 3 February 2004].
- Hambrick, D.C. 1982. Environmental scanning and organizational strategy. *Sloan Management Review* 3:159-174.
- Hamrefors, S. 1999. *Spontaneous Environmental Scanning – Putting “putting into perceptive” into perspective*, Stockholm

- Hendrix, J. 1996. Spy Away (competitive intelligence for small companies). *Entrepreneur*. March 2000 28 (3): 98.
- Herring, J. 1998. What is intelligence analysis? *Competitive Intelligence Magazine*. 1(2): 13-16.
- Herring, J. 1988. Building a Business Intelligence System. *Journal of Business Strategy*, 9(3): 4-9.
- Huber, G. 1990. A theory of the effects of advanced information technologies on organizational design, intelligence, and decision-making. *Academy of Management Review*, 15(1): 47-71.
- Hurley, R.E., Thomas, G. & Hult, M. 1998. Innovation, market orientation, and organizational learning: An integration and empirical examination. *Journal of Marketing*, 63(3):42-55.
- IMD. 2004. *World Competitiveness Yearbook*. [Online]. Available from: <http://www01.imd.ch/documents/wcy/content/ranking.xls>. [Accessed: 4 May 2004].
- Joyal, P., 1996. Industrial Espionage Today and Information Wars of Tomorrow. 19th National Information Systems Security Conference. Baltimore, USA. October.
- Kahaner, L. 1997. *Competitive Intelligence. How to gather, analyse and use information to move your business to the top*. 1st ed. New York. Simon & Schuster.
- Lackmann C.L., Saban, K. & Lanasa, J.M. 2000. Organising the Competitive Intelligence function: A Benchmarking Study. *Competitive Intelligence Review*, 11(1): 17-27.
- Lenz, R.T.& Engledow, J.L. 1986a. Environmental analysis units and strategic decision-making: A field study of selected leading-edge corporations. *Strategic Management Journal*. 7(1): 69-89.
- Lenz ,R.T. & Engledow J.L. 1986b. Environmental analysis: the applicability of current theory. *Strategic Management Journal*. 7(4): 329-346.
- Maltz, E. & Kohli, A. 1996. Marketing intelligence dissemination across functional boundaries. *Journal of Marketing Research*. 33(1):47-61.

- Marceau, S. & Sawka, K. 1999. Developing a World-Class CI Program in Telecoms. *Competitive Intelligence Review*, 10(4): 30-40.
- Marchand, D.A. 1995. Managing Strategic Intelligence. Mastering Management, part 4. *The Financial Times*. Nov 1995: 11.
- Mboweni, T.T., (2000). "Global Competitiveness – Is South Africa Ready?" *Address by the Governor of the South African Reserve Bank at the Black Management Forum Conference 2000, Gauteng.*
- McGonagle Jr., J.J & Vella, C.M. 1999. *The Intelligence Age of Competitive Intelligence*, Westport: Greenwood Publishing Group, Inc.
- Meyer, H., 1987. Real-World Intelligence: Organized Information for Executives.
- Menon, A. & Varadarajan, P.R. 1992. A model of marketing knowledge use within firms. *Journal of Marketing*. 56(4): 53-71.
- Metayer, E., 1999. Demystifying competitive intelligence. *Ivey Business Journal*. November 1999, 64(2): 70.
- Miller, S.H., 1997 Competitive Intelligence: Out from the shadows. Open Source Publishing: 2(1). [Online]. Available from: <http://www.osint.org/osq/v2n1/shadows.htm>. [Accessed: 3 February 2004].
- Montgomery, D.B. & Urban G.L. 1970. Marketing decision-information systems: an emerging view. *Journal of Marketing Research*. 7:226-234.
- Montgomery, D.B. & Weinberg, C.B. 1979. Toward strategic intelligence systems. *Journal of Marketing*. 43: 41-52.
- Moorman, C. 1995. Organizational market information processes: cultural antecedents and new product outcomes. *Journal of Marketing Research*. 21:137-147.
- Muller, M-L. 1999. SA: An emerging CI Player. *Competitive Intelligence Review*. 10(4): 74-78.
- MultiQuest Consultants [No date]. [Online]. Available from: <http://www.mqcinc.com> [Accessed: 23 January 2004].
- Pearce, F.T. 1976. Business intelligence systems: the need, development and integration. *Industrial Marketing Management*. 5(2,3): 115.

- Peyrot, M., Van Doren, D., Allen, K. & Childs, N. 1996. Competitor intelligence among industrial wholesalers: An exploratory study. *Journal for Marketing Management*. 5:46-60.
- Pinkerton. 1969. How to develop a marketing intelligence system (five articles). *Industrial Marketing*. 5(4-8): various.
- Pole, J.G., Madsen, E. & Dishman, P. 2000. Competitive Intelligence as a Construct for Organizational Change. *Competitive Intelligence Review* 11(4):25-31.
- Porter, M.E. 1980. *Competitive Strategy: Techniques of Analyzing Industries and Competitors*. The Free Press: New York NY.
- Prescott, J.E. 2001. The Private Sector: Espionage, ethics and 'competitive intelligence'. *Post-gazette.com*. October. [Online]. Available from: <http://www.post-gazette.com/businessnews/20011009forum1009bnp6.asp>. [Accessed: 3 February 2004].
- Prescott, J.E. & Herring, J. 1997. Competitive and Business Intelligence Consortium Benchmarking Study. The American Productivity and Quality Centre.
- Prescott, J.E. & Smith, D.C. 1989. The largest survey of 'leading-edge' competitor intelligence managers. *Planning Review*. 17:6-13.
- Prescott, J.E., Herring, J. & Panfely. 1998. Leveraging Information for Action: A Look into the Competitive and Business Intelligence Consortium Benchmarking Study. *Competitive Intelligence Review*, 9(1): 4-12.
- Ramaswamy, V., Gatignon, H. & Reibstein, D.J. 1994. Marketing behavior in industrial markets. *Journal of Marketing*. 58:45-55.
- Rothschild, W.E. 1979. Competitor analysis: the missing link in strategy. *Management Review*. 68(7): 22-28f.
- Rouach, D. & Santi, P. 2001. Competitive Intelligence Adds Value: Five Intelligent Attitudes. *European Management Journal*. Vol 19 (5):552-559.
- Sawka, K., 2000. Are we strategic? *Competitive Intelligence Magazine*. July – September 2000, 3(3): 55-57.

- Saxby, C.L., Parker, K.R., Nitse, P.S. & Dishman, P.L. 2002. Environmental scanning and organizational culture. *Marketing Intelligence and Planning*. 20(1): 28-34.
- Slater, S.F. & Narver, J.C. 2000. Intelligence generation and superior customer value. *Journal of the Academy of Marketing Science*. 28(1): 120-127.
- Society of Competitive Intelligence Professionals [No date]. [Online]. Available from: <http://www.scip.org>. [Accessed: 15 February 2004].
- Society of Competitive Intelligence Professionals. 1997. *Navigating through the Gray Zone: A Collection of Corporate Codes of Conduct and Ethical Guidelines*. SCIP Publications.
- Viviers, W., 2001. Competitive advantage. Intelligence - What intelligence. *Finance Week*, 23 Jun: 47.
- Viviers, W., & Calof, J.L. 2001. Creating an Intelligence Society in South Africa. *Africa Insight*. June, 31(2): 61-67.
- Viviers, W., Saayman, A., Calof, J.L. & Muller, M-L. 2002. Competitive Intelligence practices: A South African study. *South African Journal of Business Management*. 33(3) September: 27-37.
- Williams, R. 2002. Knowledge-enabled Competitive Intelligence: CI Across Business Functions. *APQC report on User-Driven Competitive Intelligence*.
- Wu, J., 2000. What is Business Intelligence? *Data Mining Review*. [Online]. Available from: http://www.dmreview.com/article_sub.cfm?articleID=1924. [Accessed: 15 February 2004].