



Organizational structure of competitive intelligence activities: a South African case study

Adeline du Toit

Department of Information Studies, RAU University
asadt@rau.ac.za

Marié-Luce Muller

IBIS Business and Information Services, Pretoria
mlm@ibis.co.za

Contents

1. [Introduction](#)
2. [CI function needs](#)
3. [Steps in setting up a CI unit](#)
4. [Organizing intelligence activities](#)
5. [Organizing CI activities in South Africa](#)
6. [Competitive intelligence as practised in Automaker Inc. \(South Africa\)](#)
7. [Keys to successful intelligence](#)
8. [Conclusions and recommendations](#)
9. [References](#)

Key words: Competitive intelligence, organizational structures, case study

1 Introduction

To function effectively in an enterprise, clear objectives must be determined for the competitive intelligence (CI) function and it must be established where the CI unit fits into the organizational structure of the company. There are a number of criteria to consider when deciding where to locate the intelligence function. Factors such as a company's organizational structure and culture should be considered when making this decision. There is very little empirical evidence on how South African enterprises organize their competitive intelligence activities. To answer these questions, a case study of how competitive intelligence is practiced in [Automaker Inc.](#) (a multinational company) is presented.

Multinational companies face unique challenges as far as CI is concerned. Probably the biggest challenge is to find a model for CI. Motorola's former chairman Bob Galvin said

multinationals like their government counterparts need their own intelligence programme if they are to operate and compete successfully around the world. He also realised that CI should be run by a small cadre of professionals, not amateurs or part-timers (Academy of CI 1999).

[top](#)

2 CI function needs

Without a proper intelligence process and structure, it is difficult to develop intelligence. Intelligence functions, like other corporate staffs, have a variety of needs that must be met in order for intelligence to pay measurable dividends to the enterprise. These needs fall into five broad categories: access to decision-making; visibility; links to other parts of the enterprise; funding; and nurturing.

2.1 Access to decision-making

Three components in an enterprise are responsible for the effective functioning of a CI unit, namely, top management, the staff of the CI unit and the line managers in their different functional areas. To bridge the problem of faulty decisions based on inaccurate or inadequate information, the intelligence activities of these groups must be coordinated. One proven way to bring CI into the decision-making process on an acceptable basis is to bring the decision makers into the CI process.

Intelligence units must be located so that they are in a position to support decision making by providing competitive insights, discussing alternatives and compelling action. Whether intelligence units are addressing strategic or tactical needs is almost irrelevant; intelligence must be as close to the decision maker as possible (Miller 2000:50). One mistake many companies make is to locate intelligence functions in such a way that layers of bureaucracy exist between them and the decision makers they are ultimately intended to serve. Whether the decision makers are senior corporate staff or sales managers, if they express a need for intelligence and explicitly define their exact intelligence needs, there should be no filters between them and their intelligence staffs.

2.2 Visibility

How visible should the CI unit be, both within the company and to outsiders? Specifically, should it be called a competitive intelligence unit – a name that accurately reflects what it does? According to McGonagle and Vella (1999:173), CI has become recognized as a vital, legal and ethical support for many corporate functions, such as planning and marketing, and businesses have lost that reluctance to acknowledge that they in fact conduct CI. Intelligence units should be highly visible components of corporate organizations. Organizations clearly have a need to avoid creating the impression that they are not abiding by strict legal and ethical guidelines as they manage their intelligence programmes, and failing to provide a public, visible location for them will only fuel separation (Miller 2000:51).

2.3 Links to other parts of the enterprise

Intelligence units should be located organizationally so that they have strong links to other parts of the enterprise. The majority of information that can be transformed into intelligence resides within most companies and if an intelligence unit is unable to access and acquire this internal information due to poor organizational location, it will not be able to conduct intelligence operations properly (Miller 2000:51). Intelligence functions must be able to interact with other corporate components, for example sales and marketing, planning,

purchasing and manufacturing.

For a multinational, links to other parts of the enterprise bring unique challenges. Motorola has a benchmark CI capability and is often quoted in business and CI journals. The company established a professional intelligence collection network to monitor the total competitive environment that Motorola's businesses operated in worldwide. This was called the intelligence Early Warning function, using a human-source collection network.

Procter and Gamble, another multinational with a benchmark CI operation, has developed CI from routine report generation to an activity embedded in strategy development.

Organizationally, CI operations have moved from being both too highly centralized and too highly decentralized, to a 'hub and spoke' structure. The company has seven global business units and market development units (Pepper 1999). The company links the central corporate CI units with each of these units. The hub provides the common vision and roadmap across the company while the spokes provide the unique information, insights, buy-in and contribution. The spokes also provide diversity of ideas and different approaches, and prevent the dangers of 'groupthink' from taking root.

In a multinational, it is important that business divisions set up and operate their own competitive intelligence units. The company's business managers, not just the executive team, should use the intelligence produced by the intelligence organization. This wider use of CI ensures wider acceptance, use of and participation in and contribution to the CI process.

2.4 Funding

Funding a CI unit is a delicate issue. If the unit charges back other departments for CI, they may be reluctant to use the unit, clouding its future. Paying for a CI unit from an overhead budget will make it more attractive for other units to use it. Without charging back, however, the unit creates a 'free' resource, and experience shows that, in time, 'free' resources are overused without regard to cost effectiveness (McGonagle and Vella 1999:175).

One solution is to start a CI unit without using chargebacks to develop a market for the services. Over time then, an interdepartmental fee structure can be gradually initiated.

2.5 Nurturing

A common mistake enterprises routinely commit in developing an intelligence capability is the failure to support it properly. Intelligence units that are to have any recognizable impact on corporate decision-making and competitiveness must have adequate staff, technology and other support (Miller 2000:52).

Suitable staff must have a business background with knowledge of information systems. Intelligence workers must display a great deal of initiative, be prepared to take risks and be able to act innovatively (Du Toit 1990:280). For a CI unit to operate most effectively and efficiently, ideally staff should have direct experience in every area of the industry the unit will monitor. A promotion line from the CI unit upward must be established, and a decision made about where the unit is located and to whom it is administratively responsible – before the unit is created, if possible. If good employees see no way out of a new unit, they will not volunteer to join that unit. If they are transferred in, they will make their own way out – usually to competitors (McGonagle and Vella 1999:183).

2.6 Top management support

Without the visible support of and utilization of intelligence by top management, the process

will be flawed. It is by nature a strategic business tool. Former Motorola Chairman and CEO Christopher B. Galvin said that unless key decision makers openly support competitive intelligence, encourage the establishment of 'intelligence standards' such as staff training and ethical guidelines and earmark monies for speeding the flow of critical competitive information, there is no use conducting CI (Academy of Competitive Intelligence 1999)

Intelligence should be applied in a wide variety of business activities, from formulating new strategies to making difficult business decisions, such as the decision to enter a new market.

[top](#)

3 Steps in setting up a CI unit

There are many ways of setting up and running a CI unit. However, there are a couple of core steps that are common to all of these:

- Dealing with internal customers
- Identifying likely targets
- Establishing feedback and reviewing processes

3.1 Internal customers

The first and most important step is to establish who are the customers for the CI and what they would or should use the CI for (McGonagle and Vella 1999:170). The key is to determine what CI will make a difference with the firm's key decision makers. One proven way to accomplish this is through internal interviews, to ask key decision makers questions designed to elicit real needs, based on experience. It is also important to determine when the internal customers need intelligence, and for what purpose.

3.2 Targets

A second, parallel task is to determine which targets the firm is interested in. Who is currently in the market and, of these firms, which are really the critical players to the firm (McGonagle and Vella 1999:171)? It is important to remember that setting up a list of targets involves more than merely asking the firm who should be targeted. It involves determining the need to include new competitors and even potential competitors, as well as the need to eliminate those that are no longer in the marketplace.

The next thing is to prepare brief profiles, or baseline reports, on each of the designed targets, focused primarily on the key identified areas of concern (McGonagle and Vella 1999:172). At this point, a firm has established the core of its CI reporting pattern, which will drive its research and analysis. It knows what types of CI it needs, on which firms, to which internal clients it is to be sent and when it must be available.

3.3 Feedback

Finally, the CI function must develop a review and feedback effort, that is, a constant review that seeks answers to questions such as (McGonagle and Vella 1999:172):

- Are the targets still correct?
- Are the areas of interest still correct?
- Should the CI function add or delete targets, areas, internal customers, and so forth?

Only after a firm has defined its targets and specific areas of concern should it begin to look

to external (and internal) sources of competitive intelligence data.

[top](#)

4 Organizing intelligence activities

Until recently, little thought was given on where in a corporate enterprise to place an intelligence unit. Strategic planning, or other functions akin to it, for the most part has been the most logical fallback location. Intelligence units were concerned mainly with issues of strategic importance to a company, and the strategic planning department seemed to be the most logical choice for placing the intelligence function (Miller 2000:43).

The single most important criterion on which to base location of the intelligence function within an enterprise is the location of those decision makers who have an expressed need for intelligence and who are willing to provide requirements-based targets. The following four guidelines can be used when deciding to locate the intelligence function (Miller 2000: 53):

- Don't be surprised if the company requires more than one intelligence department. Several intelligence units are likely if an enterprise has strong needs for both strategic and tactical intelligence.
- Whatever intelligence enterprise you ultimately decide on will require flexibility to ensure intelligence continues to support decision making at all levels. As markets continue to grow more volatile, intelligence needs will change rapidly over time for most companies.
- Intelligence units must be structured so that they can maintain balance between strategic and tactical needs. Successful intelligence systems are organized and placed so that a proper operational balance can be maintained across a variety of needs.
- Intelligence systems must recognize the importance of process coordination at all levels. Duplication of effort, internal miscommunications, and incompatible intelligence products are only a few of the missteps an enterprise is likely to experience if it fails to coordinate its intelligence activities.

Companies' efforts to weigh the determining factors of strategic versus tactical needs, decentralized organizational structures and the locus of decision making lead to the availability of three general organizational structures for the intelligence function. The organizational options companies most typically face are highly centralized systems that report to a single corporate entity, decentralized systems that typically incorporate multiple intelligence units serving several organizational components, or hybrid systems that combine features of both previous options (Gilad and Gilad 1986:54). Table 1 provides a framework that companies pursuing an intelligence programme can use to help guide their decision on where to locate the unit.

Table 1 Organizational options

	Strategic vs tactical	Corporate organizational structure	Locus of decision making
Centralized	Weigh toward strategic focus	Strong corporate staff	Little empowerment
Decentralized	Weigh toward tactical focus	Highly autonomous SBUs	Complete empowerment

Hybrid	Mix of strategic and tactical needs	Balance of power among corporate and divisional staffs	Consensual decision making
---------------	-------------------------------------	--	----------------------------

(Source: Miller 2000:47)

4.1 Centralized intelligence systems

Large corporate enterprises have usually developed systematic mechanisms for monitoring of competitive environmental and individual competitors. Typically the collection, interpretation, analysis and communication of competitor information have been assigned to specialized intra organizational intelligence or competitor analysis units in order to exploit the synergy created by centralization (Pirttilä 1998:79).

Centralized intelligence systems start with the premise that strategic needs dominate, and that decisions regarding strategy are made by corporate decision makers. As a result, these systems tend to stand alone, relying on informational and analytic inputs from throughout the enterprise. They most commonly report to a senior corporate officer who is responsible for not only providing the necessary organizational support for the intelligent process – in terms of budgets, personnel, and other resources – but also for leading the effort to define and refine intelligence requirements among executive management (Miller 2000:48).

CI units face the same problem as other intra organizational service staff units. They do not participate in the daily operations of the line functions and therefore these units do not obtain competitor information in a natural way, that is in connection with daily operations in the competitive marketplace (Pirttilä 1998:83). A centralized system reduces redundancy and makes it easier for the data to be assembled and shared, since all divisions transmit their information to a single, organizing unit. This procedure enhances the coordination and sharing of data (Greene 1988:288).

When competitive intelligence is organized by giving the responsibility of monitoring competitors to one organizational unit, this in fact means that information resources are treated in much the same way as physical goods. This organizing mode assumes that information can be processed and transferred from one point to another without much difficulty (Pirttilä 1998:80). Information storage and dissemination is closely tied to functional or divisional structures and decision-making is often achieved through committees (Hall 2000:141). Information normally tracks up or down the hierarchies, but rarely across divisions.

4.2 Decentralized intelligence system

Digital technology enables more and more enterprises to adopt decentralized systems. Decentralized systems tend to consist of multiple intelligence staffs proliferated throughout the enterprise. They almost exclusively serve tactical intelligence requirements, and rarely provide intelligence to senior management (Miller 2000:49). They may or may not be accompanied by a separate, smaller corporate intelligence staff. When such a staff exists, its primary responsibility is usually to coordinate intelligence activity among the other intelligence units. The division alone determines targets and priorities, and information is rarely shared with other business units.

Two problems, however, arise from this type of enterprise. First, there is the redundancy or duplication of effort, as each department strives to collect the information it needs. Second,

CI depends on the convergence of data to function properly and, with a decentralized system, that confluence is much more difficult to achieve (Greene 1988:288).

Decentralized systems allow for easier communication of information through dependence on interpersonal networking (often individuals mix with others perceived to be outside their natural professional constituency) and spontaneous team building (Hall 2000:141).

4.3 Hybrid intelligence systems

Hybrid systems combine attributes of both centralized and decentralized systems. Senior executive needs are the overriding driving force in setting intelligence targets and requirements, though hybrid systems usually have the flexibility to be able to address *ad hoc* operational needs as well. Intelligence methodologies for the collection and analysis of information are fairly consistent throughout the enterprise, and the number and type of intelligence products are equally uniform (Miller 2000:49).

When organizing competitive intelligence activities, it should be noted, however, that information has properties that make it difficult to treat it in the same way as other resources. The first problem is connected to the value of information from organizational viewpoint. While the value of, for example, capital is always connected to its amount, information obviously lacks this property. Especially from an organizational viewpoint, information does not have intrinsic value as the value of information is inevitably connected to its applicability and exploitability. The amount of information is not essential, but what is crucial is how effectively organizational participants can exploit the collected and analysed information in endeavouring to achieve organizational goals and objectives. From an organizational viewpoint, a piece of competitor information is valuable to a corporate enterprise only if the right piece of information is in the right place at the right time. The problem of organizing competitor intelligence activities is in fact the same as solving this logistics problem (Pirttilä 1998:80).

[top](#)

5 Organizing CI activities in South Africa

Research by Viviers, Saayman, Muller and Calof (2002) indicates that South African companies are very poor in the formal organization and processing of intelligence. Few companies have a central coordinating point for receiving competitive intelligence information and only 25% of respondents indicate that they have a formal CI effort in their enterprise. The majority of these (73%) have been in operation for less than four years. Only 20,4% of the respondents have a full-time focus on competitive intelligence. The main department for CI was the Marketing Department (53%), followed by Strategic Planning (17%), Research and Development (6%) and Information Services/MIS (3%). In most cases the executive responsible for competitive intelligence was also either the marketing manager (37%) or the chief executive officer (37%) (Viviers *et al.* 2002:9–11). In conclusion it can be said that South African companies do not appear to have the necessary structures and processes to reach the same levels of intelligence capability evidenced in other countries (South Africa's intelligence... 2001).

[top](#)

6 Competitive intelligence as practised in Automaker Inc. (South Africa)

6.1 Overview

Different companies approach competitive intelligence in different ways. Automaker Inc. South Africa conducts competitive intelligence in close cooperation with the mother company abroad. It has a strong marketing focus regarding the South African market and the local competitive environment. Automaker Inc. SA started business in the early sixties and has grown to become a respected global player.

6.2 Automaker Inc. SA's approach to competitive intelligence

The competitive environment of Automaker Inc. South Africa has become complex, unpredictable, rapidly changing, impossible to predict accurately and impossible to quantify, despite what others might claim. The best thing to do is to interpret any given situation (be it a present trend or future forecast), try to understand and make sense of it and base ideas on future developments on current situations. Previously Automaker Inc., like many other companies and industries in South Africa, was fairly protected from the forces of global business, but now it is suddenly part of a bigger, largely unprotected environment, which requires it to look at a bigger environment and system.

Automaker Inc.'s systems approach is a way of thinking, a philosophy in Automaker Inc. The firm sees the enterprise as an integrated complex of interdependent parts that are capable of accurate interactions among themselves and within their respective environments. Adding to the complexity is the fact that all these internal variables should be integrated with external variables. These bits and pieces should somehow be integrated and viewed as pieces of a large picture that should then be analysed and interpreted. Possible outcomes must then be derived on which counter measures and actions can be based.

Automaker Inc. approaches its CI or its competitive position as being part of an open system comprising input, process, output and feedback within an environment. Its organizational structure can be described as a hybrid intelligence system. It is similar to Procter and Gamble's hub and spoke model.

6.3 External variables

It is important for companies to accurately identify the important variables within their competitive environment. Many companies are so fixated on competitors that they lose sight of other factors in their competitive environment that could impact on their competitiveness.

Being a motor vehicle manufacturer, it goes without saying that, besides competitors, priority would be given to marketing intelligence, technological intelligence, suppliers and customers. Being part of a global company, Automaker Inc. SA does not indulge in tracking technological advances or research and development but does, as a matter of priority, track macro events (e.g. the impact of the 11 September terror attack on its competitors, the export and import market, on European car manufacturers, on local buying power, etc.), legislation such as labour regulations, customer behaviour and preferences, etc.

6.4 Technology

Technology obviously has an unmistakable influence on a car manufacturers and exporters. This aspect is handled by the Automaker Inc. mother company that conducts technological research into relevant technical tracking, innovation and predicting. For example, the mother company investigates vehicles powered by alternative fuels (fossil fuels or hydro), but it is Automaker Inc. SA's responsibility to check the local market's acceptance level for such vehicles and remain informed on similar developments by competitor companies.

6.5 Customers

Customer behaviour and changing preferences, and also the choice the present buyers can exercise, require massive research into local buyer preferences and lifestyle. It is required of Automaker Inc. SA to live, eat and drink the South African market and to track and predict changes far into the future because a car manufacturer works with production cycles of up to 10 years. Automaker Inc. SA has a full research department that is dedicated to look into new products to suit market needs far into the future.

6.6 Competitors

The global automotive industry is highly competitive and competitor focus is undeniably important. Competitors not only include the major brands and manufacturers, but also other modes of transport, for example the planned rapid train between Pretoria and Johannesburg (Gautrain), and factors impacting on the lucrative local taxi industry, such as the regulation of the industry and the impact thereof on vehicle brands.

6.7 Suppliers

Being globally competitive means working on the basis of a totally integrated value chain in which suppliers are highly important. Especially exporters need a reliable, quality-focused supplier. Strong local manufacturing content is required from local manufacturers that which to export. Intelligence on suppliers and their ability to supply on a continuous basis ranks as one of the key intelligence needs of Automaker Inc.

6.8 Distributors

Automaker Inc. has a countrywide dealer network and each dealer's financial statements are analysed and interpreted on a regular basis. There is a close relationship between the dealers and Automaker Inc. SA. Today's players have to process masses of information and face a constantly changing environment in which customer *wants* also change continuously. Basic customer needs largely remain unchanged; *wants* however, change constantly, unpredictably and variedly. The dealer network is the front section that provides invaluable information on market and customer developments.

[top](#)

7 Keys to successful intelligence

What then is important when conducting competitive intelligence?

7.1 Integrity of information

Accurately, updated and verified information is needed and a realization that information is only as intelligent as its source, in other words, it is imperative to verify and test information.

7.2 Ethics and principles

As a public, global player, Automaker Inc. regards adherence to ethics as good business practice and vitally important. Spying and bugging and trashcan digging are not activities it would encourage its employees to indulge in. It would not risk the company's image by condoning such activities. Furthermore, it is not necessary to stoop to such lows. A proper competitive intelligence capability makes illegal, unethical practices unnecessary.

7.3 Analysis and interpretation

Information must be analysed and interpreted before it can be used in decision making. Albeit highly important, this activity is difficult, involved and complicated. Having the right information does not necessarily provide a company with a competitive edge. Information is accessible to all and only once it is interpreted through a process of thorough research, can it be translated into competitive advantage. That should also be the focus of CI (Ward 1988:176).

The better the analysis and interpretation, the less the danger of relying on gut feel and the more accurate the anticipated future. Being a leading competitor also means that it can create its own future.

7.4 Sharp, brief reports

Automaker Inc. SA functions on the principle that the message is most important and enjoys priority above the means used to get to the message, in other words the analysis and interpretation processes employed. Reports are short, focused and to the point and should always answer the question: So what? The business plan is also short, concise and to the point and only contains the intelligence necessary for proper strategic planning.

7.5 Information sharing

The principle of knowledge and information sharing lies at the core of intelligence success in Automaker Inc. Automaker Inc. has war rooms filled with graphs and sheets of information and it focuses on providing a constantly updated visual status of the competitive environment at any given time. All the information important for decision making is displayed in analysed and interpreted form. Automaker Inc. also has virtual war rooms to enable different parts of the world to interact and integrate intelligence and knowledge. All divisions are parts of one whole.

7.6 Link to strategy

Outcomes of the competitive intelligence process should be integrated into strategy and business planning. A company should not fall into the trap of analysis without end because analysis, albeit most important, remains a means to an end – the end being adjusting plans and strategy (Gilad and Gilad 1986:60).

The process followed encompasses gathering of information, analysis, impact, devising counter measures, implementation through modelling and simulation, and making new projections for the next five years. This planning is an integrated, participative process. All analysis should lead to calculating the real impact on the business.

7.7 Counter measures

Analysis, simulation, interpretation, sharing, etc should lead to an end goal – a ‘what to do next’ – based on the new situation. The process should be simple to conduct, understand and utilize. Planners should be able to look at all inputs from various sectors that were required to make contributions (stressing the importance of following an integrated, cross-functional and team-based approach) that might involve products, finance, distribution, internal and external sources, macro factors such as trade agreements, competitor analysis and their focus and business strategies (Fleisher and Bensoussan 2002:9).

Although each input is important, particular focus is afforded to competitors and questions such as how they see the future of the motor vehicle and the transport industry, customer preferences (wants) of a brand and how this would impact on sales. It is important, in the

final instance, to have a strategic intelligence process based on strategic business issues, integrated into a business plan through a process of constant input and a regular update of the business plan, keeping pace with constantly changing variables.

[top](#)

8 Conclusion and recommendations

In conclusion, successful competitive intelligence has a few prerequisites:

- Competitive intelligence is a top management function. Top management should drive and facilitate the process. In Automaker Inc., the company chair manages the process and a team of senior managers conduct it.
- No single person can conduct business planning and strategy but it does require a dedicated person to manage, coordinate and facilitate CI planning.
- Outsourcing certain CI activities can be conducive to effective CI. Automaker outsources certain aspects of CI, namely macro economic trends analysis. Analysis and important elements/variables are measured weekly and changes that require action are dealt with immediately. Automaker Inc. says it is a manufacturer, not an information or intelligence generating company – there are others who are better at this.
- Competitive intelligence, like a competitive culture, should permeate the whole company and requires participation and contribution from every employee.
- Information should be shared company wide and this sharing is cross functional. Sharing does however rest on the need to know principle and requires a competitive mindset.
- Competitive intelligence should not be a secretive process.
- Competitive intelligence should be externally and future focused.
- A proper analysis and interpretation capability is of paramount importance.
- Proper competitive intelligence practice requires resources (including people, time, priority, money and infrastructure).
- Competitive intelligence requires proper planning. The planning aspect should take 80% of the input and the actual execution only 20%.
- The outcomes of competitive intelligence should be integrated with the business and strategic planning process. It should never be regarded as a stand-alone activity.
- Applying modelling and simulation (i.e. more advanced CI analysis tools) is most important – failing to do this compels companies to start guessing about the future and about the potential impact of events and this might be dangerous and costly.
- Implement results and develop new strategies, counterstrategies or reaffirm current strategy on a continuous basis, based on sound, verified and interpreted information.
- Design and establish a CI structure that is fitting for the company – no two companies are the same and there is also no blueprint for CI structures.

[top](#)

9 References

Academy of Competitive Intelligence. 1999. [Online]. Available WWW: <http://www.academyci.com/News/IntelligenceAward/motorola.html>. (Accessed 14 January 2004).

Du Toit, A.S.A. 1990. Bemerkingsintelligensie: 'n mededingende wapen. *South African Journal of Library and Information Science* , 58(3):277-281.

Fleisher, C.S. and Bensoussan, B.E. 2002. *Strategic and competitive analysis: methods and*

techniques for analyzing business competition . New Jersey: Prentice-Hall.

Gilad, T. and Gilad, B. 1986. Business intelligence: the quiet revolution. *Sloan Management Review*, 27:53-61.

Greene, H.F. 1988. Competitive intelligence and the information center. *Special Libraries*, 79(4):285-295.

Hall, H. 2000. Online information sources: tools of business intelligence? *Journal of Information Science* , 20(3):139-143.

McGonagle, J.J. and Vella, C.M. 1999. *The Internet age of competitive intelligence*. London: Quorum Books.

Miller, J. 2000. *Millennium intelligence: understanding and conducting competitive intelligence in the digital age*. Menford, N.J.: CyberAge Books.

Pirttilä, A. 1998. Organising competitive intelligence activities in a corporate organization. *Aslib Proceedings*, 50(4):79-84.

Pepper, J. 1999. Competitive intelligence at Procter and Gamble. Keynote address SCIP CEO Roundtable. [Online]. Available WWW: http://www.scip.org/news/cireview_article.asp?id=48 . (Accessed 5 February 2004).

South Africa 's intelligence – or lack thereof? 2001. [Online]. Available WWW: <http://www.scipsa.org.za/saci.html>. (Accessed 18 December 2003).

Viviers, W., Saayman, A., Muller, M.L. and Calof, J. 2002. Competitive intelligence practices: a South African study. *South African Journal of Business Management*.

Ward, J.M. 1988. Information planning for strategic advantage. *Journal of Information Technology*, 3:169-177.

Disclaimer

Articles published in SAJIM are the opinions of the authors and do not necessarily reflect the opinion of the Editor, Board, Publisher, Webmaster or the Rand Afrikaans University. The user hereby waives any claim he/she/they may have or acquire against the publisher, its suppliers, licensees and sub licensees and indemnifies all said persons from any claims, lawsuits, proceedings, costs, special, incidental, consequential or indirect damages, including damages for loss of profits, loss of business or downtime arising out of or relating to the user's use of the Website.

[_top](#)



ISSN 1560-683X

Published by [InterWord Communications](#) for the Centre for Research in Web-based Applications,
Rand Afrikaans University