COMPETITIVE INTELLIGENCE PROCESS INTEGRATIVE MODEL BASED ON A SCOPING REVIEW OF THE LITERATURE

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ABSTRACT
For organizations, knowledge about the business environment is needed more than ever because of its rapidly evolving nature. However, due to the increasing amount of information readily available, the task of scoping the environment may be daunting and there is a need to optimize it. In the literature, structured intelligence processes take different shapes and forms. The purpose of the paper is to therefore offer a synthesis of the literature pertaining specifically to competitive intelligence processes and activities following a scoping review of the literature based on 29 articles. Competitive intelligence (CI) is defined as "the process of ethically collecting, analyzing, and disseminating accurate, relevant, specific, timely, foresighted and actionable intelligence regarding the implications of the business environment, competitors, and the organization itself." (Boncella, 2003). The cyclical CI process integrative model proposed, based on a scoping review of the literature, comprises six phases: planning and direction, collection, analysis, communication, decision and evaluation. The sub-processes that are involved in each one of the phases are further described and schematized. The model also contains contextual factors such as formal infrastructures, employee involvement as well as organizational awareness and culture that impact the competitive intelligence process. The paper allows for a better understanding of the CI process and activities and may serve as a diagnostic tool for organizations wishing to implement or optimize their own CI process.

Keywords: Competitive intelligence, Process, Cycle, Phases, Planning and Direction, Collection, Analysis, Communication, Decision, Evaluation, Scoping Review.

1. INTRODUCTION
The importance for organizations to be aware of the changes occurring in their external environment is a notion that is well documented in the literature. This makes external information, which refers to "relevant social and physical factors outside the typical boundaries of an organization which may affect its performance and future survival", most valuable (McGee & Sawyer, 2003, cited by Majid and Khoo, 2009: 14). As far as Sun Tsu's work, which dates back to 400 BC, the value of knowing both the "enemy" and the "location" was recognized. Also, the environment in which organizations operate is increasingly becoming both uncertain and complex (Zhang, Majid and Foo, 2010: 719). Indeed, knowledge about the business environment is needed more than ever because of its quickly evolving nature stemmed from "rapid globalization, technological innovations, frequent economic crises, changing lifestyles, terrorism threats, political realignments, and epidemics and natural disasters." (Majid and Khoo, 2009: 15). The ever-changing environment causes uncertainty, which in turn leads to an increase of information processing activities done by organizations. (Culnan, 1983, Daft et al., 1988, Tushman, 1977, cited by Dishman and Calof, 2008: 767). At the same time, with the recent advances in Internet technology, information pertaining to the external environment is more available than ever. Identifying and adapting to market shifts may be achieved by an organization by putting into place various mechanisms for gathering and spreading information which is then effectively used. (Belich and Dubinsky, 1999, cited by Dishman and Calof, 2008: 767). Continuous and systematic environmental scanning enables an organization to avoid surprises and gain competitive edge over its competitors through timely and effective decision-making.” (Temtime, 2004, cited by Majid & Khoo, 2009: 16). Therefore, in order to develop strategies that are aligned with the environment, organizations need to put in place appropriate information processing infrastructures. However, due to the increasing amount of information readily available, this task may be daunting and there is a need to optimize it.

In the 1980’s, Porter advocated the need for an ongoing structured intelligence process "in order to continuously and systematically identify business opportunities and threats.” (Calof and Wright, 2008:
Twenty-five years later, a survey reveals that “twenty-nine percent [of U.S.-based companies] admitted that they do not have “an organized and systematic way to deliver CI”, including 14 percent with more than $1 billion in revenue.” (Swartz, 2005: 10) “A recent Fortune 500 company survey showed that there has been a marked increase in the number of companies putting in place mechanisms to collect and analyze competitive information, many companies still struggle with the process.” (Wright and Calof, 2006, cited by Bose, 2008: 511) In the literature, structured intelligence processes take different shapes and forms. The typologies or taxonomies are diverse and there is no consensus reached for the definition of the components. The lack in consensus leads to a fragmented field. For instance, Dishman and Calof (2008: 767) showed how the intelligence process has many labels:

- Environmental scanning (Aguilar, 1967; Fahey and King, 1977; Fahey et al., 1982; Hambrick, 1982; Sashittal and Jassawalla, 2001; Saxby et al., 2002)
- Business intelligence (BI) (Cleland and King, 1975; Benjamin, 1979; Pearce, 1976)
- Strategic intelligence (SI) (Aaker, 1983; Montgomery and Weinberg, 1979)
- Competitor analysis (CA) (Ghoshal and Westney, 1991; Rothschild, 1979)
- Competitive technical intelligence (CTI) (Albagi et al., 1996; Brockhoff, 1991)
- Market intelligence (MI) (Chonko et al., 1991; Guyton, 1962; Maltz and Kohli, 1996)
- Peripheral vision (Day and Shoemaker, 2006)
- Competitive analytics (Davenport and Harris, 2006)

Environmental scanning concepts, which are considered predecessors of CI, have appeared in literature since the 1960s beginning with Aguilar (1967). Some authors further developed the concept throughout the years with more important work being done in the 2000s (Beal, 2000; Kourteli, 2000; Saxby et al., 2002; Kumar et al., 2001; Voros, 2001; Decker et al., 2005; Vojak and Suarez-Nunez, 2005; Rajaniemi, 2005; Brouard, 2006; Knip, 2006). (Calof and Wright, 2008: 720). Since “it is believed that “competitive” intelligence (CI) may imply the true purpose of intelligence – that is, to gain strategic advantage” (Porter, 1980) we will focus solely on CI in the paper. For some scholars, the “difference between BI and CI is that BI is internal intelligence about and within one’s own company, whereas CI is external intelligence about the firm’s competitors.” (Bose, 2008: 511). While for others, “the division of business intelligence and competitive intelligence into their respective areas of interest is in contradiction with the very meaning of the term “intelligence” presuming the level of understanding that is comprehensive and supported by possession of varied, multidimensional and mutually supportive information.” (Skyrius and Bujauskas, 2011: 144). In this research, we will act according to the first conception of CI, being a separate field focused on providing actionable intelligence based on information gathered in the external environment.

Since “a value-adding competitive intelligence process is a series of systematic organizational activities that are driven by specific intelligence needs within the firm with the objective of achieving competitive advantage”, we synthesize the recent literature on competitive intelligence focusing on the activities and process that are involved in the overall CI process (Prescott, 1999: 43). The purpose of the paper is to therefore offer a synthesis of the literature pertaining specifically to competitive intelligence process and activities. Doing so, we will shed light on the steps that are taken by organizations that are scanning their external environment in the form of competitive intelligence in order to fare better in their markets. The exercise will fill a gap in the literature as, to our knowledge, no researcher has, until today, focused solely on the competitive intelligence process in a scoping literature review. This paper will be especially useful, as studies have shown that companies struggle with the process. The remainder of the paper is organized as follows: Section 2 further describes the competitive intelligence concept based on our literature review, Section 3 specifies the methodology applied, Section 4 contains the results of the research and Section 5 discusses them. In concluding, we will specify the limitations of the study and provide possible avenues for future research.

2. COMPETITIVE INTELLIGENCE CONCEPT

Many definitions of CI exist yet none has achieved acceptance amongst scholars (Franco et al., 2011: 333). Therefore, “a holistic view of competitive intelligence has not been developed yet.” (Calof and Dishman, 2002, cited by Saayman et al., 2008: 385). One definition that is cited extensively in the
literature is that of the Society of Competitive Intelligence Professionals (SCIP): “the process of ethically collecting, analyzing, and disseminating accurate, relevant, specific, timely, foresighted and actionable intelligence regarding the implications of the business environment, competitors, and the organization itself.” (Boncella, 2003, cited by Johns and Van Doren, 2010: 551).

While intelligence is based on information, it is important to understand that information is not intelligence. Information is simply defined as being factual; containing items such as numbers and statistics. Intelligence, on the other hand, is information that has gone through a screening process and has been analyzed. Decision makers are more in need of intelligence than information in order to make decisions (Kahner, 1996; Toit, 2003, cited by Zangouinezhad and Moshabaki, 2008: 264). CI was originally developed as a business discipline in Porter’s (1980) work on strategic management and competitive analysis (Peyrot et al., 2002: 748, cited by Viviers, Saayman and Muller, 2005: 577-578). CI today plays an important role in the formulation and implementation of company strategies (Dishman and Calof, 2008, cited by Adidam et al., 2009: 667). “The SCIP describes the CI cycle as the process by which raw information is acquired, gathered, transmitted, evaluated, analyzed and made available as finished intelligence for policymakers to use in decision making and action.” (Bose, 2008: 512-513). The literature is very clear about the importance of intelligence and what it is composed of, however there is no consensus on the number of phases that constitute the CI cycle which brings the intelligence available. CI should not only be performed in hard economic times, but should rather become a permanent activity providing forward thinking based on historical information (Research and Market, 2008, cited by Saayman et al., 2008: 403). An effective CI unit should be centrally located with support coming through different company entities (Research and Market, 2008, cited by Saayman et al., 2008: 403). The CI function should undoubtedly be intertwined with strategic planning and business development in a means to increase its effectiveness (Research and Market, 2008, cited by Saayman et al., 2008: 403). The function should ideally be located as directly as possible to the chief executive (Nasri, 2011b: 56).

3. METHODOLOGY

The objective of the paper is to summarize and disseminate research findings pertaining to the competitive intelligence process and activities as described in the literature. In doing so, we applied the framework for conducting a scoping study developed by Arksey and O’Malley (2005):

- Stage 1. Identifying the research question
- Stage 2. Identifying relevant studies
- Stage 3. Study selection
- Stage 4. Charting data
- Stage 5. Collating, summarizing and reporting the results

In Stage 1, we identified our research question: How is the Competitive Intelligence Process described in the literature? In Stage 2, we identified the relevant studies by applying pre-defined parameters. Due to time and resource constraints, decisions were made about the time span and the language of the articles as well as the sources from which to retrieve them. From a practical point of view, it was decided to focus on a single electronic database. Based on the recommendations of a librarian specialized in administration literature, we selected ABI/Inform Global as the electronic database from which we retrieved the scientific articles. We then identified keywords, which are specified in Figure 1. They refer to the concept of “competitive intelligence” as well as different synonyms of the term “process” so that we would answer our research question. The terms were rather precise so that the search strategy would target relevant studies. All the of terms selected are in English, therefore foreign languages were excluded because of time constraints. The query focused on the title and the “citation and abstract” of the papers.
In Stage 3, we selected the studies by specifying the criterion for inclusion of the articles. The criterions were developed a priori to eliminate those that did not address our central research question:

1. The articles must have been published between January 2005 and May of 2012;
2. The articles must include specification of the competitive intelligence process;
3. The articles must apply to the competitive intelligence process used by private organizations, those pertaining for instance to industries, regions or countries were eliminated.
4. The articles must be written in English.

The start date of 2005 was selected because the goal was to reflect the current process described in the literature and not to address its evolution over time. Whilst we opted for these parameters, we are aware that potentially relevant papers were not included in the review. The methodology led to the identification of 29 articles that were selected for inclusion in the review. The list of articles is presented in Appendix A. After a careful review of their content, three papers were excluded as did they did not meet the third criterion.

In Stage 4, we charted the data based on our research question. A uniform approach was adopted but the diversified nature of the papers analyzed meant that they did not systematically address the same aspects of the competitive intelligence process and used the same terminology. For each article, we synthesized the CI process as explained by the authors. The data extracted from each article was entered onto an Excel database in which each line represented an article and each column a pre-defined category. The categories, which ranged from general information about the article to specific information pertaining to the research question, were developed as an iterative process. The data that was selected from the papers was used as a basis for the analysis.

Stage 5 consisted of actual collating, summarizing and reporting the results. The first step was to assess the year of publication, the publication and the methodology. The information pertaining to these categories is summarized in Table 1 in Appendix B. We then extracted information pertaining to the conceptual definition of “competitive intelligence” used by the author. Since it is sometimes presented in the literature as a four-step process: “planning and direction, data and information collection, analysis and dissemination of intelligence to those who will use it.” (Nasri, 2011a: 64), we have decided initially to categorize the information following the same structure.

It is important to acknowledge the limitations of the scoping review methodology taken. The decisions that were made as to the breadth and depth of the sources that were entered in the review have an impact of the outcome. Also, the weight accorded to each article in the discussion might differ.

4. RESULTS
The results presented will first cover the highlights of the definitions of CI provided in the different articles contained in the scoping review. Then, we will give key elements pertaining to the CI process depicted in the different articles.

4.1 CI Definition
The scoping review of literature confirmed that the concept of CI has numerous definitions and labels, “which have combined to yield a partitioned and fragmented literature.” (Mollayaaghobi and Badie, 2011: 526). The elements present in the definition are usually the process and the outcome, which are more or
less broad. For instance, some definitions encompass only the notion of competition as the subject of research: “A systematic process that converts bits and pieces of competition information into strategic knowledge for decision making: knowledge about current competitor’s position, historical performance, strengths and weaknesses as well as specific future intentions.” (Tyson, 2006, cited by Skyrius and Bujauskas, 2011: 143). Other definitions are broader and include the environment as a whole such as in the following: “Process involving the gathering, analyzing, and communicating of environmental information to assist in strategic decision-making process.” ([Dishman and Calof], [2008], cited by Nasri, 2011a: 62). Several definitions highlight the impact of CI on strategy as in: “An activity of strategic management of information that aims to allow decision makers to forestall the market trends and moves of competitors, identify and evaluate threats and opportunities that emerge in the business environment, circumscribing actions of attack or defense that are more appropriate to the development strategy of the organization.” (Jakobiak, 1991, cited by Franco et al., 2011: 333). SCIP’s definition was cited by several authors: “The process of ethically collecting, analyzing, and disseminating accurate, relevant, specific, timely, foresighted and actionable intelligence regarding the implications of the business environment, competitors, and the organization itself.” (Boncella, 2003, cited by Johns and Van Doren, 2010: 551).

4.2 CI Processes
As it was the case with the definition, there are also numerous CI processes proposed in the literature. Common elements are present in each process however the name and the number of phases diverge. A key differentiator is the form that it is given: some authors refer to it as a process while others as a cycle. Here is an example of a four-phase process: "Theoretically, it is postulated that Competitive intelligence process consists of planning and focus, collection, analysis, and communication of intelligence."(Nasri, 2011a: 65). SCIP’s cycle consists of five phases: “The SCIP describes the CI cycle as the process by which raw information is acquired, gathered, transmitted, evaluated, analyzed and made available as finished intelligence for policymakers to use in decision making and action. There are five phases which constitute this cycle: planning and direction, collection, analysis, dissemination and feedback.” (Bose, 2008: 512-513). SCIP also takes into consideration the utilization of the intelligence: “The process elements of Competitive intelligence process consist of the following: Identify the intelligence needs of the Decision-makers (Planning), determine what information is required to generate the intelligence (Planning), Acquire the necessary information (Collection), transform the information into the required intelligence (Analysis), dissemination the intelligence to the Decision-Makers (Dissemination), actively promote the utilization of intelligence to the Decision-process (Utilization). Each element in the process is important of the overall function.” (Nasri, 2011a: 69). More recently, contextual influences were added to the process. “According to Calof and Dishman (2002), the Competitive intelligence process can be affected by certain contextual influences, namely organization culture/awareness, the formal infrastructures and as employee involvement.” (Nasri, 2011a: 65)

4.3 CI Phases
In discussing the CI phases results, we will describe each one of the phases of the CI process by quoting the work analyzed in our scoping review. We will further describe each phase of the Competitive Intelligence Process by grouping them under the following six phases: planning and direction, collection, analysis, communication, decision, and evaluation. We took the liberty of grouping the elements based on the their descriptions under those labels even though authors might have labeled them differently. We will also highlight contextual factors that emerged in our scoping review.

Planning and Direction
In describing the planning and direction phase, some authors highlight the importance of certain drivers of the CI process: support and goals. “The implementation of a formal process should be seen as a project that involves several areas of the company and also has the support of the high management.” (Nasri, 2011b: 63). “During this phase, an assessment is made of what intelligence is required (Fleisher, 2001, cited by Saayman et al., 2008: 365). The decision-makers initiate the CI process by pinpointing the intelligence needed to make effective decisions. (Nasri, 2011a: 61). “The company needs is defined in terms of what is needed? Why is this necessary? And when this information is true?” (Bose, 2008 cited by Dollata bady et al., 2011: 941). At this stage, CI practitioners work with decision-makers to “discover their intelligence needs and then translating those needs into their specific intelligence requirements or “key intelligence topics” (KITs).” (Nasri, 2011b: 56). “When the intelligence requirements are understood by the
Competitive intelligence group, the next step involves transforming the intelligence requirements into information requirements. (Nasri, 2011a: 64). Gilad and Gilad, as well as Herring stress the importance for CI to focus on the issues that are of the highest importance for upper management (1998). This phase is required to determine the necessary resources for CI project in the light of its purpose. (Saayman et al., 2008: 385). In all, “the planning phase not only initiates the Competitive intelligence process, but also includes managing the end to end process as well as acting as the forum for feedback between the Competitive intelligence group and decision Makers.” (Nasri, 2011a: 64).

FIGURE 2. CI PLANNING AND DIRECTION PHASE

Note 1. The mention Decision-Makers and CI Team refer to the leading team


Johns and Van Doren propose 20 questions to “gain a competitive advantage over the competition”. They shed light on the type of questions of interest to the decision-makers and that are susceptible to be researched by CI advisors. For instance, they propose inquiring about the companies in the competitive set, their positioning in the market place, the lists of services and products they provide, their size, their weakness and strengths, their expertise, their history, merger and acquisition potential, etc. (Johns and Van Doren, 2010: 556).

Collection Phase

The collection phase is amply described in the articles included in this review. The collection process, techniques and sources consulted are further described. “Collection activities: involves identifying all potential sources of information and then investigate and collect correct data from all available sources and placing it in a regular form.” (Bose, 2008 cited by Dollatabady et al., 2011: 941). “The data should be acquired “legally and ethically […] and put it in an ordered form.” (Herring, 1998, cited by Nasri, 2011b: 56).

FIGURE 3. CI COLLECTION PHASE


“A variety of sources are utilized, including internal and external sources, sources that are both qualitative and quantitative in nature, as well as using both textual and human information sources.” (Dishman and
Calof, 2008: 780). Also, “collection is about ensuring that the information and sources of information are tested for reliability and credibility.” (Saayman et al., 2008: 385). “Employees of the company in question represent the most important primary source of information, while Internet publications are the most important secondary source of information.” (Pranjic, 2011: 284).

**Primary Sources**

“One of the greatest sources of information comes from employees of the firm itself, therefore an effective communication infrastructure must exist to support the acquisition of the information.” (Nasri, 2011a: 64). According to Tyson (1998), 80 percent of the necessary information about competitors already exists within the internal knowledge of the organization; (Mélo and Medeiros, 2007: 208). The so-called “unpublished information” originates from: “sales people, engineering personnel, distribution channels, suppliers, advertising agencies, professional meetings, companies specializing in competitive intelligence, reverse engineering, etc. (Mélo and Medeiros, 2007: 208). Also competitors themselves are a source of information through mystery shopping initiatives. (Johns and Van Doren 2010).

**Secondary Sources**

The secondary sources are numerous and diversified. “Some common secondary sources include magazines, TV, radio, analyst reports, and professional reports.” (Nasri, 2011a: 64) Also, “articles, books, theses, works presented in congresses and similar presentations, periodicals, government documents, speeches, analytical reports, government archives and those of agency regulations, registers of patents, etc.” (Mélo and Medeiros, 2007: 208) As the Internet evolved it became the go-to source for CI practitioners. “With the emergence of Web 2.0, an increasing number of customers now have opportunities to directly express their opinions and sentiments regarding products through various channels, such as online shopping sites, blogs, social network sites, forums and so forth. These opinions data, coming directly from customers, become a natural information source for CI.” (Xu, Liao, Li and Song, 2011: 143).

**FIGURE 4. CI SOURCES OF INFORMATION**

![Sources 3. Adapted from Nasri 2011a, Mélo and Medeiros, 2007, Xu, Liao, Li and Song, 2011.]

Therefore, “the information is collected from a variety of sources (primary and secondary) using various techniques” (Viviers et al., 2005, cited by Nasri, 2011a: 64). “Collection [...] involves various acquisition methods including environmental scanning (Aguilar, 1967; Lenz and Engledow, 1986; Daft et al., 1988), surveys, telephone interviews, observation, media scanning and networking.” (Nasri, 2011a: 64). “Competitive intelligence scanning is usually iterative and cumulative, and varies from person to person.” (Qiu, 2008: 816). These differences impact the scope of scanning and the frequency of scanning:

- “Scope of scanning [...] how extensively they scan information from six sectors: customer, supplier, competitor, company resources, technology and socioeconomic sectors.” (Qiu, 2008: 822).
- “Frequency of scanning [...] how frequently they scan each of the six sectors: customers, competitors, supplier, company resources, technology and socioeconomic.” (Qiu, 2008: 822).

**Analysis Phase**

The analysis phase described in the scoping review detail both the analysis process and the techniques used by the CI team. “It is an essential step, which included analysis of collected data to determine patterns, relationships and its present activity, that will improve planning and decision making and makes it possible to development[sic] strategies that offer a sustainable competitive advantage.” (Bose, 2008...
cited by Dollatabady et al., 2011: 941) "It is converting information into usable intelligence on which strategic and tactical decisions may be taken (Gilad, 1989; Gilad and Gilad, 1985; Kahaner, 1996; Calof and Miller, 1997: Herring, 1998, cited by Nasri, 2011a: 64-65)

**FIGURE 5. CI ANALYSIS PHASE**

![Diagram of CI Analysis Phase]

Sources 4. Adapted from Nasri, 2011a, Bose, 2008.

*Analysis Process*


*Techniques*

The analytical techniques used by competitive intelligence professionals are greatly diversified. According to Nasri, “the best analytical approaches are forward-looking, relevant to the company, accurate, resource-efficient, objective, useful, bias free, and current with the competitive landscape.” (Nasri, 2011b: 63). “Marceau and Sawka (1999) say that for intelligence to be relevant, advanced and appropriate analytical tools must be used such as SWOT (strengths, weaknesses, opportunities and threats) analysis PEST (political/legal, economical, socio-cultural and technological) analysis, scenario analysis, and competitor profiling” (Nasri, 2011a: 65). “Fleischer and Bensoussan, 2003, have identified several strategic analytical techniques including the BCG growth/share portfolio matrix, the GE business screen matrix, industry analysis (Porter Five Forces Model), strategic group analysis, [...] financial ratios, and value chain analysis [...] SATELLITE.” (Bose, 2008: 519). “SWOT analysis is the most commonly used method of analysis.” (Pranjic, 2011: 284). “While CI tools cannot supply the final judgments with these methods, the tools can help analysts to uncover hidden knowledge in the collected datasets that can be applied to the analytic techniques.” (Bose, 2008: 519). “The data analysis tools mainly consist of data mining, statistical analysis and BI [Business Intelligence] tools (Wee, 2001, cited by Bose, 2008: 520)

*Communication Phase*

The communication phase is not detailed as much as the previous phases in the articles analyzed in the scoping review. An element that is noted is that the CI Team needs to communicate the results of its worth to “to those with the authority and responsibility to act on the findings” within the organization. (Saayman et al., 2008: 385). The CI Team has to chose the appropriate communication channel based on the type of information to share. For instance, “intelligence communication can take place via ad hoc reports, alerts, e-mails, presentations, news briefs, competitor files and special memos.” (Fleisher, 2001,
cited by Nasri, 2011a: 65). Pranjic noted “e-mail has become more important than printed reports, interviews and presentations.”(Pranjic, 2011: 284).

**FIGURE 6. CI COMMUNICATION PHASE**

<table>
<thead>
<tr>
<th>Choose the Appropriate Support to Share Analysis Results and Implications</th>
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<tbody>
<tr>
<td>• Ad Hoc Reports</td>
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<tr>
<td>• E-mails</td>
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<tr>
<td>• Presentations</td>
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<tr>
<td>• News Briefs</td>
</tr>
<tr>
<td>• Competitor Files</td>
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<tr>
<td>• Special Memos</td>
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</tbody>
</table>

Source 5. Fleisher, 2001

**Decision Phase**
The decision phase is also not detailed as much as the previous phases in the articles reviewed. It is the phase where decision-makers decide whether or not to take action based on the intelligence provided. This shows a gap in the competitive intelligence literature reviewed. At the same time, this phase is outside of the realm of the CI Team as the people with the power to act on the findings have the final say on the how the organization acts.

**Evaluation Phase**
The evaluation phase is comprised of “the evaluation of the Competitive intelligence process, the identification of its benefits and the assessment of its effectiveness in the decision making process.” (Santos, 2010, cited by Nasri, 2011a: 65). “Feedback from the users is also important in the development and improvement of future Competitive intelligence plans, as well as the review and reassessment of the organizational strategy.” (Fleisher, 2001, cited by Nasri, 2011a, 65). As it was the case with the two previous phases of the CI process, the papers reviewed did not provide much explanation regarding the process by which it is done.

**4.4 Contextual Influences**
Our literature review highlighted three contextual influences that have a great impact on the CI process and its outcomes: formal infrastructures, employee involvement as well as organizational awareness and culture. We will address them shortly as they are shown to influence the CI process and its chances of success. First, the CI process benefits from “appropriate policies, procedures, and a formal or informal infrastructure so that employees may contribute effectively to the CI system as well as gain from the benefits of the CI process.” (Cox and Goodwin, 1967; Cleland and King, 1975; Porter, 1980; Gilad and Gilad, 1985, 1986; Ghoshal and Kim, 1986).” (Saayman et al., 2008: 386) Second, Saayman et al. also highlighted the importance of employee involvement. “To be effective, CI must reach the right people within the organization, and they must be willing to act on it and contribute towards CI. Company-wide support for CI is vital to the success and justification of CI. Besides the fact that a sensitized workforce will probably be better users and contributors to CI, it requires them to understand what CI and their role in CI is. Various methods can achieve this including sensitizing meetings, training, information sharing, fulfilling intelligence needs and regular communication. CI must be seen to add value to strategic and tactical users alike. Ensuring contributions from the workforce might prove to be a challenge and incentivizing contribution and providing information that enhances their job execution, are methods that promote participation.” (Saayman et al., 2008: 403). Third, literature shows the importance of an organizational awareness of CI. In fact, “for a firm to utilize its CI efforts successfully there needs to be an appropriate organizational awareness of CI and a culture of competitiveness (Garvin, 1993; Sinkula, 1994; Slater and Narver, 1995). Studies have shown that CI units benefit from management support (Evangelista, 2005), since management support establishes legitimacy and importance (Fehringer et al., 2005, cited by Saayman et al., 2008: 386).
5. DISCUSSION
In this discussion, we will present the Competitive Intelligence Process Integrative Model that we developed following this scoping review. We will briefly describe its components. In the articles that were consulted for this scoping review, the CI process was rarely schematized. Based on the work of Saayman et al. (2008: 387 adapted from Calof and Dishman, 2002), Kahaner (1996), Fleisher and Bensoussan (2003), Dishman and Calof (2008: 779), Bose (2008: 513) and Mélo and Medeiros (2007: 209), and on our literature review, a model of the intelligence process is thus proposed. Our proposal provides additional insight as to the significant factors related to the various phases. The proposed model follows in the form of a schematic diagram under the heading Figure 7. Competitive Intelligence Process Integrative Model. Its content draws on the work of several authors whose work was contained in our scoping review.

FIGURE 7. COMPETITIVE INTELLIGENCE PROCESS INTEGRATIVE MODEL

We opted for a cyclical process since each one of the steps is required to reach the overall desired outcome of providing actionable intelligence for strategic decision-making. In our opinion, CI is more an iterative and ongoing process therefore a cyclical schematization is more appropriate. The cyclical process comprises of six phases: planning and direction, collection, analysis, communication, decision, and evaluation. "The competitive intelligence process is very much a human driven process" and "the key player involved [...] are the decision-makers and the CI Team." (Nasri, 2011a: 63-64). To our knowledge, however, a distinction regarding the key player involved in each phase has never been included in a CI process model. However, throughout the CI cycle, the responsibility is either under the CI Team or the Decision-makers. This distinction has quite an impact on the process in our opinion. Therefore, our model also specifies the leading entity in charge of these steps. Also, this sheds light on a particularity of the CI function that is the collaboration required between the CI Team and those who have the authority to act on the findings. Based on the work of Calof and Dishman, 2002, we also added the contextual factors as elements that influence the process, being: formal infrastructure, employee involvement, organizational
awareness and organizational culture. This shows the importance of collaboration and support to allow the function to reach the desired outcomes.

6. CONCLUSION

Following a scoping review of the literature comprising of 29 articles, we synthesized the recent literature on competitive intelligence focusing on the activities and processes that are involved in the overall CI process. The paper therefore provides a synthesis of the literature pertaining to competitive intelligence processes and activities. Doing so, we shed light on the steps that are taken by organizations that are scanning their external environment in the form of competitive intelligence to fare better in their own respective markets. The proposed cyclical competitive intelligence integrative model process, based on a scoping review of the literature, is comprised of six phases: planning and direction, collection, analysis, communication, decision and evaluation. The sub-processes that are involved in each of the six phases were described. The model also contains contextual factors such as formal infrastructures, employee involvement as well as organizational awareness and culture that impact the competitive intelligence process.

One of the limitations of the paper is that it focused solely on articles published on ABI/Inform Global. This may pose a bias on idea representation. Also, due to the fact that no consensus has been reached on the definition of “competitive intelligence” which has led to fragmented literature, we may have excluded articles of interest that were categorized under a different label. This also reduces idea representation. Further work could focus solely on the decision and evaluation phases to allow for a better understanding of these phases of the cycle that are not detailed as much in the literature. Additional scoping review could also include more electronic databases to allow for a larger breadth of the sources of information consulted. Nonetheless, the article is meant as a tool to help practitioners and decision-makers compare their own processes to those present in the literature in order to identify strengths and weaknesses and identify areas for improvement. Therefore, it may serve as a diagnostic tool for organizations wishing to implement or optimize their CI process. It also paves the way for empirical studies pertaining to the CI process.

The analysis shows that even though the quantity of information pertaining to the external environment of a firm may seem overwhelming, there are processes to optimize this task that ultimately help identify optimal strategies to fare better in the environment. A key to reaching this goal is for decision-makers to communicate their needs to the CI team and at the same time to use the information provided to them. Collaboration between the two groups as well as the other members of the organization in sharing information is of the utmost importance and is highlighted in the model. Building trust and legitimacy for the function over time will further optimize the process and its chances of success.

7. REFERENCES


Rajaniemi, K., Framework, methods and tools for acquiring and sharing strategic knowledge of the competitive environment, Industrial Management, University of Vaasa, Vaasa, 2005.


APPENDIX A. ARTICLES INCLUDED IN THE SCOPING REVIEW


APPENDIX B. SUMMARY OF THE ARTICLES ANALYZED IN THE SCOPING REVIEW

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Note: Methodology for the 26 articles that respected all criterions.

8. AUTHOR PROFILE

Amélie Cloutier is a Ph.d. candidate in administration (management) at Université Laval from which she received an M.B.A. in management. Prior, she worked as a competitive intelligence advisor for two Pan-Canadian financial institutions.