HARMONIZING INTELLIGENCE TERMINOLOGIES IN BUSINESS: LITERATURE REVIEW

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Abstract

The principal objective of this article is to do a literature review of different intelligence terminology with the aim of establishing the common attributes and differences, and to propose a universal and comprehensive definition of intelligence for common understanding amongst users. The findings showed that Competitive Intelligence has the broadest scope of intelligence activities covering the whole external operating environment of the company and targeting all levels of decision-making for instance; strategic intelligence, tactical intelligence and operative intelligence. Another terminology was found called Cyber IntelligenceTM which encompasses competitor intelligence, strategic intelligence, market intelligence and counterintelligence. In conclusion although CI has the broadest scope of intelligence and umbrella to many intelligence concepts, still Business Intelligence, and Corporate Intelligence are often used interchangeably as CI.

Key Words: Business Intelligence, Marketing Intelligence, Competitive Intelligence and Environmental Scanning, Corporate Intelligence, Competitor Intelligence, Strategic Intelligence

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1. Introduction

Successful business strategy requires awareness about the company's external environment, including its customers, competitors, industry structure, and competitive forces (Gilad, 1997). The intelligence terminology has always been somewhat blurred and new terms emerge as intelligence discipline matures with corporate setting. Competitive Intelligence, Business Intelligence, and Corporate Intelligence are often used interchangeably or as synonymous, while Strategic Intelligence, Competitor Intelligence, customer intelligence and technologies add a dimension of specificity to the subject. But eventually all intelligence terms refer to using systematic methods to collect, analyze and disseminate information that supports decision making (Gilad, 1997). But the major predicament is the universal definition of these intelligence concepts, like the 18th century literary titan Samuel Johnson (1709-1784), once said, "Definitions to paraphrase are like watches, and none is ever exactly correct (Cannon, 1994). But viewed narrowly, there seem to be almost as many definitions of intelligence as there were experts asked to define it." (Sternberg, 1985). Despite a long history of research and debate, there is still no standard definition of intelligence. This has led some to believe that intelligence may be approximately described, but cannot be fully defined.

Since the article is reviewing different intelligence constituents in business, it is structured as follows; the researcher will begin by detailing the methodology first, and then introduce the roof concepts of intelligence constituents in business which is: competitor intelligence, business intelligence, strategic intelligence, market intelligence, competitive technical intelligence, technology intelligence, and technical intelligence and try to divide the difference. Unfortunately, the wide variety of names that those in Competitive Intelligence have used has caused, and probably will continue to cause, pandemonium between Competitive Intelligence and other knowledge-based activities. The most frequent areas of confusion are with environmental scanning, business intelligence, knowledge management, and market/quantitative research. This article is written as extensive review so that when you others read or research more about CI, they will be really sure that they are reading the right literature.

2. Methodology: Literature Review

The methodology that adopted for article was an extensive review of literature on intelligence concepts as they are used interchangeably in business. To identify relevant literature, academic databases and search engines were used. A review of references in related studies led to more relevant sources, the references of which were further reviewed and analyzed. Keywords 'business intelligence', 'marketing intelligence', 'competitive intelligence'

and environmental scanning, corporate intelligence, competitor intelligence, strategic intelligence was used in search engines to find relevant sources. To ensure reliability, only peer-reviewed articles were used.

3. Competitive Intelligence

There are a lot of definitions of Competitive Intelligence (CI) but for the sake of this article the researcher used a definition by (McGonagle and Vella 2002): Competitive Intelligence (CI) involves the use of public sources to develop data on competition, competitors, and the market environment. It then transforms, by analysis, that data into [intelligence]. Public, in CI, means all information you can legally and ethically identify, locate, and then access. The Society of Competitive Intelligence professionals (SCIP) an official US-based intelligence organization defines CI as," the timely and fact-based data on which management may rely in decision-making and strategy development. It is carried out through industry analysis which means understanding the players in the industry; competitive analysis which means understanding the strengths and weaknesses of competitors and benchmarking for instance analysis of individual business of competitors (Calof, 1997). CI is also called by a lot of other names: competitor intelligence, business intelligence, strategic intelligence, marketing intelligence, competitive technical intelligence, technology intelligence, and technical intelligence (Liebowitz, 2006).

To understand CI, one must first clearly understand what is meant by ''public'', that is, where the raw data you will need is located (McGonagle, & Vella, 2012). The term is to be taken in its very broadest sense–it encompasses much more than studies that the US Department of Commerce releases or what you can find reported in The Chicago Tribune. ''Public'' in CI is not equivalent to published; it is a significantly broader concept (McGonagle, & Vella, 2012). In CI, public encompasses all information you can legally and ethically identify, locate, and then access. It ranges from documents filed by a competitor as a part of a local zoning application to the text of a press release issued by a competitor's marketing consultant describing its client's proposed marketing strategy (McGonagle, & Vella, 2012) where the marketing firm also extols the virtues of its contributions to the design of a new product and the related opening of a new plant. The CI process is usually formally divided by CI professionals into five basic phases, each linked to the others by a feedback loop. These phases, making up what CI professionals call the CI cycle, are:

- Establishing the CI needs. This means both recognizing the need for CI and defining what kind of CI the end-user needs. It entails considering what type of issue (strategic, tactical, marketing, etc.) is motivating the assignment, what questions the end-user wants to answer with the CI, who else may also be using the CI, and how, by whom and when the CI will ultimately be used.
- Collecting the raw data. First, a CI professional translates the end-user's needs into an action plan, either formally or informally. This usually involves identifying what questions need to be answered, and then where it is likely that he/she can collect the data needed to generate the answers these questions. The CI professional has to have a realistic understanding of all significant constraints, such as time, financial, organizational, informational, and legal. Then he/she can identify the optimal data sources, that is, those that are most likely to produce reliable and useful data, given the goal and the constraints. From there, the collection begins, both of secondary and primary data.
- Evaluating and analyzing the raw data. In this phase, the data that was collected is evaluated and analyzed, and is transformed into useful CI. That may be done by the person doing the collection or by a separate CI analyst. In practice, there are always two ways in which analysis is used in the entire process. The first is the use of analysis to make a selection, such as deciding which of a dozen news articles is most important to read. The second is the use of analysis to add value to one or more pieces of data. That would mean, for example, adding a statement to a summary of an article indicating why and how its contents are important to the end-user. While CI analysts provide both types of analysis, endusers most frequently only regard the latter process as really being analysis. Of course this is not true. If you do not use some analysis during the collection process, you will waste hours of time collecting useless information that takes you nowhere.
- Communicating the finished intelligence. This involves preparing, and then presenting, the results in a usable format and in a timely manner. The CI may have to be distributed to those who asked for it and, in some cases, to others who might also profit from having it. That secondary distribution is not as common as it could be.
- Taking Action. This means using the end-user actually uses the CI in decision-making. The CI may be used as an input to decision-making, or it may be the first of several steps in an overall assessment of, for example, a new market. The decision of how and when it is used is made by the end-user, not by the analyst
- Establishing your CI needs. This means recognizing that you need CI. It means considering what type of issue (strategic, tactical, marketing, etc.) is motivating you, and what questions you want to answer with the CI. For you, it also means.

3.1 Different kinds of Competitive Intelligence

Today, CI, as it is practiced, is often divided into different, but overlapping, types, which can be divided into strategic, competitor, tactical, and technical. The terms are simple, and communicate how the CI is intended to be used (McGonagle, & Vella, 2012).

3.2 Strategic Intelligence

Fleisher, & Wright, (2009), observe that strategic intelligence (SI) is a term used for intelligence activities in the context of strategic planning and strategic management. SI addresses the needs of high-level decision-makers and it is mainly focused on proactive activities. Seitovirta, (2011) observe that strategic intelligence can support strategic management especially by contributing to the collection, analysis and distribution of information. They find that the higher the level of decision making, the more consolidated the information must be and the more conclusions and suggestions should be added to it. Pirttimäki (2007) argues that strategic intelligence is about having a realistic situational understanding and using it to develop a strategy that is appropriate, suits the circumstances and works. Okkonen, Pirttimäki, Hannula, & Lönnqvist, (2002) asserts that the goal of SI is to understand where a company is going and how it can maintain its long term competitiveness in the face of future challenges and changes.

McGonagle, & Vella, (2002) assert that SI should act as a radar that alerts the company to threats and opportunities in its external environment. Calof, & Wright, (2008) also emphasizes SI‟s role in providing early warnings. Moreover, Herring (1992) points out that SI should contribute to challenging the underlying assumptions that affect a company's strategic thinking, to implementing the strategy and adjusting it to changes in the competitive environment and also to determining when a strategy is no longer sustainable (Seitovirta, 2011). Liebowitz (2006) adds that SI aims at making the best strategic decisions for maximizing a company's success. By the way strategic intelligence is an overarching concept that covers signals coming from all of the levels of intelligence – business intelligence, competitive intelligence and competitor intelligence (McDowell, 2008). The aim of SI is to gather, analyze and disseminate signals that assist decision making on a strategic level. The following figure illustrates the relationship between the concepts:

Strategic intelligence is CI supporting strategic, as distinguished from tactical, decision-making. This means providing higher levels intelligence on the competitive, economic and political environment in which you firm operates now and in which it will operate in the future (Fleisher, & Wright, 2009). Strategic intelligence typically is used by senior managers and executives who make and then execute overall corporate strategy. Its most common applications are in the development of the following (Liebowitz, 2006).

- Long-term (3–5 year) strategic plans
- Capital investment plans
- Political risk assessments
- Merger and acquisition, joint venture, and corporate alliance policies and plans
- Research and development planning.

3.3 Focus of Strategic Intelligence

Strategic intelligence usually focuses on the overall strategic environment. A firm's direct competitive environment and its direct competitors are, of course, included in that focus. It should also include its indirect competitors. In addition, strategic intelligence should develop CI on the long-run changes caused by, as well as affecting, all of the forces driving industry competition, including (Bozeman, 1992):

- Suppliers
- Customers
- Substitute products or service, and
- Potential competitors.

Strategic intelligence‟s focus is less on the present than it is on the past, and is primarily on the future. The time horizon of interest typically runs from 2 years in the past to 5 or even 10 years in the future (Bozeman, 1992). In terms of an interest in the past, one will be collecting and analyzing data so that the firm can evaluate the actual success (or failure) of its own strategies and of those of your competitors (Bozeman, 1992). This, in turn permits leaders better to weigh options for the future. You are looking to the past to learn what may happen in the future. With respect to the future, the leader is seeking a view of your firm's total environment: competitive, regulatory and political. As with radar, you are looking for warnings of impending problems, and alerts to upcoming opportunities—always in time to take needed action.

3.4 Competitor Intelligence

Competitor intelligence focuses on competitors, their capabilities, current activities, plans, and intentions (Fuld, 1995). Competitor intelligence is most often used by strategic planning operations or by operating managers within strategic business units (SBUs). It may also be useful to product managers, as well as to those involved with product development, new business development, and mergers and acquisitions (Ghosha, & Westney, 1991)

3.5 Competitor Intelligence's focus

Competitor intelligence usually helps you answer a wide variety of key business questions for example (Ghosha, & Westney, 1991)

- Who are our competitors right now?
- Who are our potential competitors?
- How do our competitors see themselves? How do they see us?
- What are the track records of the key people at our competitors? What are their personalities? What is the environment in their own company? What difference do these people make in terms of our ability to predict how these competitors will react to our competitive strategy?
- How and where are our competitors marketing their products/services? What new directions will they probably take?
- What markets or geographic areas will (or won't) be tapped by our competitors in the future?
- How have our competitors responded to the short and long-term trends in our industry in the past? How are they likely to respond to them in the future?
- What patents or innovative technology have our competitors or potential competitors recently obtained or developed? What do those changes and innovations mean to us?
- What are our competitors' overall plans and goals for the next 1–2 years in the markets where they currently compete with us? What are their plans and goals for their other firms and how will those affect the way they run their business competing with us?
- Competitor intelligence's time horizon typically runs from 6–12 months in the past to 1–2 years in the future. (Pellissier, , & Kruger, 2011).

3.6 Market Intelligence

Market intelligence is focused on the very current activities in the marketplace (Maltz, & Kohli, 1996). The primary users of market intelligence are usually the marketing department, market research, and the sales force. To a lesser degree, market intelligence serves those in market planning by providing retrospective data on the success and failure of their own sales efforts (Maltz, & Kohli, 1996

3.7 Market Intelligence's focus

Market intelligence's focus is on sales, pricing, payment and financing terms, promotions being offered and their effectiveness. Market intelligence's time horizon typically runs from 3–6 months back to no more than 6 months in the future. Some of the time, however, the horizon is actually measured in terms of weeks, or even days, rather than months (McGonagle, & Vella, 2012).

3.8 Technical Intelligence

Technical intelligence permits you to identify and exploit opportunities resulting from technical and scientific changes as well as to identify and respond to threats from such changes (Coburn, 1999). Technical intelligence is particularly useful if one is involved with the firm's research and development activities. According to Cobum (1999), using basic CI techniques, those practicing technical intelligence now often can determine the following:

- Competitors' current manufacturing methods and processes.
- A competitor's access to, use of, and dependence on, outside technology, as well as its need for new technology.
- Key patents and proprietary technology being used by, being developed by, or being acquired by, competitors.
- Types and levels of research and development conducted by competitors, as well as estimates of their current and future expenditures for research and development.
- The size and capabilities of competitors' research staff.
- Technical Intelligence's focus.

Cobum (1999) posited that technical intelligence has a slight overlap with both competitor and market intelligence, particularly with respect to its interest in suppliers and customers. However, instead of dealing with market trends, Technical intelligence is usually focused on technology trends and scientific breakthroughs. Technical intelligence projects can develop information on opportunities for your firm as well as threats to the firm. Technical intelligence's time horizon typically runs from 12 months in the past to 5+ years in the future

4. Environmental scanning, Business Intelligence, Knowledge Management, and Market/ Quantitative research

According to Jaworski et al (1993) the wide variety of names that those of in Competitive Intelligence have used has caused, and probably will continue to cause, confusion between Competitive Intelligence and other knowledge-based activities. The most frequent areas of confusion are as mentioned above; environmental scanning, business intelligence, knowledge management, and market/quantitative research. They are further explained below in the following succeeding subsections.

4.1 Environmental Scanning

As the term ''environmental scanning'' is used today, its emphasis is on the future, not the present or the past. In addition, its stress is generally heavily on data acquisition to generate an early warning of problems, rather than on subsequent analysis, to support a wide

range of decision-making (McGonagle, & Vella, 2012)

4.2 Business Intelligence

‘‘Business intelligence’’ is a particularly difficult term to deal with. At one time, this term was actually used by some CI professionals to describe CI in a very broad way, and to describe only intelligence provided in support of corporate strategy by others (McGonagle, & Vella, 2012). Now its use seems to have been fully co-opted by those involved with data management and data warehousing. There, it can refer to:

- The software used to manage vast amounts of data,
- The process of managing that data, also called data mining, or
- The output of either of the first two.

In any case (McGonagle, & Vella, 2012), virtually all of the reported applications and successes of business intelligence deal with processes which are internally-oriented, from process control to logistics, and from sales forecasting to quality control. The most that can be said of it its relationship to intelligence is that: data mining and related techniques are useful tools for some early [terrorism intelligence] analysis and sorting tasks that would be impossible for human [intelligence] analysts. They can find links, patterns, and anomalies in masses of data that humans could never detect without this assistance. These can form the basis for further human inquiry and analysis (McGonagle, & Vella, 2012).

IBM researcher, Hans Peter Luhn used the term Business Intelligence the first time in his article “automatic method to provide current awareness services to scientists and engineers” in 1958. He defined intelligence as “the ability to apprehend the interrelationships of presented facts in such a way as to guide action towards a desired goal” (Cecilia, Olexova` 2014). ”. It was later popularized in 1990s by Dresner, a Gartner analyst who was of the idea of making use of data in IT systems to aid business processes. Ancient kings developed ways and methods to collect information and used intelligence although in terms we call today espionage (Calof and Wright 2008). But (Ghoshal, Kim 1986 and Gilad 1985) defined BI as a managerial tool that is used to manage and enrich business information and to produce up-to-date knowledge and intelligence for operative and strategic decision-making. Pirttimäki (2007) asserts that the concept refers to a) information and knowledge describing the business environment, a company itself, and its state in relation to its markets, customers, competitors, and economic issues and b) the process of producing insights, suggestions, and recommendations for the management and decision-makers. Ghoshal and Kim (1986) went further to view BI as an activity that gathers and analyzes information about competitors, customers, markets, new technologies, and broad social trends. According to Pirttimäki (2007), BI is about identifying information needs and processing the data and information gathered into useful and valuable managerial knowledge and intelligence. She asserts that through gaining more knowledge of the company itself and its external environment, BI improves proactive decision-making, business planning, and strategy.

4.3 Knowledge Management

McGonagle, & Vella, (2012) expounded that most knowledge/data management systems (KMSs) are essentially quantitative in focus, while CI, as a discipline is most often qualitative in focus. Those conducting CI often need to be able to access the people who provided the data as well as the data. Why? Data gives only the past; people can help you to see into the future. But, again, most KMSs are keyed to storing and manipulating data. They rarely allow precise identification of a human source(s), much less information on obtaining immediate and direct access to him/her (McGonagle, & Vella, 2012). Most KMSs are not set up to capture data on anything that does not involve

the firm itself. Yet firm personnel, from the CEO down, interface daily with customers, from whom information on competitors can be developed, as well as with suppliers, distributors and the like. All of those in the supply chain, for example, can be powerful sources of useful CI data (McGonagle, & Vella, 2012).

4.4 Market Research and Quantitative Research

Malhotra, Birks, Palmer, & Koenig-Lewis, (2000) posited that while CI does use some quantitative methods in conducting its analysis, it does not do so to the degree that most quantitatively-oriented researchers do. To draw a somewhat imprecise line, market research focuses on competitors and the firm’s own interface with its customers on an historic and real-time basis. CI focuses on a broader horizon, including potential competitors, the supply and distribution chains, and research and development. In addition, its perspective is most often forward-looking. To play off an advertising slogan, CI seeks answers to questions like ‘‘Where do they want to go tomorrow?’’ Finally, CI, because it is forward looking, is heavily qualitative (stronger, weaker) in comparison with more market research and qualitative research. McGonagle and Vella (1996) have introduced a concept called Cyber Intelligence TM which encompasses competitor intelligence, strategic intelligence, market intelligence and counterintelligence.

5. Findings and discussion

According to the literature review Competitive Intelligence is coming out as the broadest scope of intelligence activities covering the whole external operating environment of the company and targeting all levels of decision-making for instance ; strategic intelligence, tactical intelligence and operative intelligence. The review discovered that the key goal of CI is to facilitate more effective strategic planning and as such, it is one of the most important strategic tools that management possesses. According to Ghoshal and Kim (1986), competitor intelligence, customer intelligence and market intelligence are elements of CI, because they include collective and analysis of information on markets, new technologies, customers, competitors and broad social trends. An extension of this view is to further divided market intelligence into smaller components such as industry/product intelligence and country intelligence. In some cases, supplier or partner intelligence is brought in as an additional category under competitive intelligence.

BI produces the kind of information that is used in strategic, long-term decisions. The concept entails the whole relevant environment of a company, not just the company itself. The scope of CI is narrower and it includes elements of the external environment, such as competitor, industry and market information. CI is sometimes defined as an alternate concept for BI in the literature (Gilad, 1996) and McGonagle and Vella (1996) introduce CI as a concept that has been previously known as BI. However, Mintzberg (1994) consider CI as a part of BI because BI has a broader scope than CI. Mintzberg (1994) views CI as a synonym for competitor intelligence.

6. Conclusion

Competitive Intelligence is the broadest scope of all intelligence activities covering the whole external operating environment of the company and targeting all levels of decision-making for instance; business intelligence, market intelligence, corporate intelligence. These terms are often used interchangeably or synonymously as strategic intelligence, customer intelligence, competitor intelligence and technology intelligence. Choo (2002) and Fleisher and Bensoussan (2007) argue that as an organizational function, CI ranges in scope between the broader area of business intelligence (BI) and the narrower version of competitor analysis. It is a roof concept for competitor intelligence because CI focuses on competitive and market information in addition to competitor information. The most common difference among them is that the targets of the intelligence gathering differ (Jaworski 1993). However, what those who are developing it all do is essentially the same (Flynn, 1994):

• They identify the information that a decision-maker needs on the competition, or the competitive environment;

• They collect raw data, using legal and ethical means, from public sources;

• They analyze that data, using any one of a wide variety of tools, converting it into intelligence, on which someone can take action (‘‘actionable’’); and

• They communicate the finished intelligence to the decision-maker(s) for their use.

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