INTRODUCTION TO COMPETITIVE INTELLIGENCE

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Executive Summary

**Competitive intelligence can be defined as knowledge and foreknowledge about the external operating environment. The ultimate goal of each intelligence process is to facilitate decision-making that leads to action.**

Successful business strategy requires awareness about the company’s external environment, including its customers, competitors, industry structure, competitive forces etc. Information about these issues is the key target of competitive intelligence. Competitive intelligence can be defined as knowledge and foreknowledge about the external operating environment. The ultimate goal of each intelligence process is to facilitate decision-making that leads to action.

The intelligence process enables turning information into intelligence by processing it via analysis, interpretation and synthesis and utilizing it in the future-oriented decision-making. Managing the future does not only mean being able to anticipate what will happen outside the company but also being able to shape the happenings through own actions, i.e. to proactively create one's future.

Competitive Intelligence is not market research or industrial espionage. While market research often focuses on fulfilling a specific information need or set of needs, intelligence is a completely legal ongoing process of developing a holistic picture of the operating environment including competitors, customers and markets. An effective intelligence process continuously contributes to an organization’s knowledge base and leads to cumulative organizational learning.

The intelligence terminology has always been somewhat blurred, and new terms emerge as the intelligence discipline matures within the corporate setting.

- Competitive Intelligence,
- Business Intelligence,
- Market Intelligence and
- Corporate Intelligence

are often used interchangeably or as synonyms, while

- Strategic Intelligence,
- Customer Intelligence,
- Competitor Intelligence and
- Technology Intelligence

add a dimension of specificity to the subject. Eventually, all intelligence terms refer to using systematic methods to collect, analyze and disseminate information that supports decision-making.

According to one of the views, Competitive Intelligence (CI) is regarded as the broadest scope of intelligence activities covering the whole external operating environment of the company and targeting all levels of decision-making, i.e. strategic, tactical and operative. At the same time, it should be emphasized that the key goal of CI is to facilitate more effective strategic planning and, as such, it’s one of the most important strategic tools that management possesses.

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1. Definition of Competitive Intelligence

Herring (1992) identifies two categories of information needed for business strategy formulation:

- information about the company’s own resources and capabilities, and
- information about the company’s external environment.

The latter (information related to customers, competitors, industry structure and competitive forces) shapes the industry and is the target of every Competitive Intelligence process.

Sawka (1996) defines Competitive Intelligence as knowledge and foreknowledge about the external operating environment. He considers CI a prelude to informed decision-making, and further argues that intelligence can be viewed as actionable information about a customer, market situation, regulator, competitor or any other external influence. The information is made actionable through careful analysis and interpretation, which turns it into intelligence.

The notion of actionable information is essential in the context of Competitive Intelligence. The ultimate goal of each intelligence process should be to facilitate decision-making that leads to action. Therefore, information not leading to intelligence that can be acted upon is useless and should be eliminated over the course of the intelligence process before reaching the decision-maker.

It is characteristic for today’s intelligent companies to seek, process and use information about their outside environment to manage their future (McGonagle & Vella 1996, 9). What turns information into intelligence, according to the above definition, is processing it into forecasts and utilizing it in future-oriented decision-making. Hence, managing the future does not only mean being able to anticipate what will happen outside the company but also being able to shape the happenings through own actions, i.e. to proactively create one’s future.

In other words, although information and intelligence are sometimes used as synonyms, they are at different levels of the ‘intelligence pyramid’ (Figure 1). Going up the pyramid we move from quantity (huge amounts of data and information available to everyone) to quality (intelligence leading to specific decisions and actions which can ensure competitive advantage).

This difference is noted also by Kahaner (1996, 20-21) who argues that while information is factual, consisting of numbers, statistics and scattered bits of data, intelligence, on the contrary, is a collection of pieces of information that have been filtered, distilled and analyzed. In other words, the purpose of the intelligence production is to put the fragments of information into a coherent puzzle, a picture of the forthcoming future. The essential notion, again, is that information is turned into something that can be acted upon.

Intelligence is the lifeblood of strategy.

This view is supported by Taylor & Farrell (1994, 95) according to whom transforming information into intelligence calls for intellectual activity such as analysis, interpretation and synthesis into a form easily digestible for the users. It also involves forecasts and opinions about the future instead of just observations about historical and present situations, i.e. differently from ‘traditional’ analysis, it is not about what happened, but about what is going to happen.

Differently from rather common misunderstanding, Competitive intelligence is not market research, nor is it industrial espionage. It is a completely legal and increasingly essential element in the formulation of corporate competitive strategy. It provides the decision-maker with invaluable insight into the competitor’s capabilities and intentions. Furthermore, it serves as an early warning of future events, which may have an impact on company performance. Bernhardt who calls intelligence “the lifeblood of strategy” takes the idea of essential and vital intelligence even further. He argues that a strategy without intelligence is not strategy, it is merely guessing. Meanwhile intelligence is about ‘guessing right’.
Introduction to Competitive Intelligence

While market research often focuses on fulfilling a specific information need or set of needs, intelligence is an ongoing process of developing a holistic picture of the operating environment including competitors, customers and markets. Thus, an effective intelligence process continuously contributes to an organization’s knowledge base and leads to cumulative organizational learning.

Competitive Intelligence has always been part of the competitive corporate world. Corporate executives are particularly interested in marketing data, competitor financials and industry trends in their effort to better position their own company in the marketplace. Competitive Intelligence can also reveal weaknesses in the company’s own security operation and help protect itself against industrial espionage, fraud and other similar threats (ibid.).

Figure 1. The Intelligence Pyramid
2. Levels and Terminology of Competitive Intelligence

Eventually, all intelligence terms refer to using systematic methods to collect, analyze and disseminate information that supports decision-making.

The intelligence terminology has always been somewhat blurred, and new terms emerge as the intelligence discipline matures within the corporate setting. Generally speaking, the exact term that each organization prefers to use typically originates from the subject area where intelligence procedures are being applied. Competitive Intelligence, Business Intelligence, Market Intelligence and Corporate Intelligence are often used interchangeably or as synonyms, while Strategic Intelligence, Customer Intelligence, Competitor Intelligence and Technology Intelligence add a dimension of specificity to the subject. Eventually, all intelligence terms refer to using systematic methods to collect, analyze and disseminate information that supports decision-making (Gilad, 1997, ref. Calof 1997; Ettorre, 1995).

Figure 2. The Scope of Competitive Intelligence
The Society of Competitive Intelligence Professionals (SCIP), an official US-based intelligence organization, defines Competitive Intelligence as “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 an industry; competitive analysis, which means understanding the strengths and weaknesses of competitors; and benchmarking i.e. the analysis of individual business processes of competitors” (Calof, 1997).

Gelb & Zinkhan (1985) discuss Competitive Intelligence with an emphasis on competitors. They separate defensive intelligence from offensive intelligence, both of which refer to rivalry between companies. By defensive intelligence, companies strive to learn about competitors’ plans for new products, product features, price changes etc. and prepare for the realization of these measures. Offensive intelligence, in turn, focuses on identifying competitors’ weaknesses and equipping a company with strategies to attack these weaknesses.

According to Bernhardt (1994), Competitive Intelligence increases management’s understanding of the strengths and weaknesses of competitors.

McGonagle & Vella (1996) have introduced a concept called Cyber Intelligence™, which encompasses Competitive Intelligence, Strategic Intelligence, Market Intelligence and Counterintelligence. In addition, the authors include such areas as crisis management, benchmarking and reverse engineering.

As it can be seen from the above review of different views, the terminology and scope of Competitive Intelligence efforts in organizations should be determined on a case-by-case basis both in terms of contents (i.e. elements, see Chapter 3) as well as the decision-making level(s) it is primarily intended to serve.
3. Elements of Competitive Intelligence

In order to target intelligence efforts in a coordinated way, it is feasible to divide the field of Competitive Intelligence into elements that correspond to the company’s business information needs. This way, Competitive Intelligence efforts can be first targeted at the most critical elements, while development regarding less critical elements can be started in later phases.

The elements of Competitive Intelligence reflect strongly the categorization of business information types.

For instance, Ghoshal and Kim (1986) divide Competitive Intelligence into the collection and analysis of information on markets, new technologies, customers, competitors, and broad social trends. A simpler and rather typical approach is to divide Competitive Intelligence into competitor intelligence, customer intelligence and market intelligence. An extension to this view is to divide 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.

According to Novintel, the field of Competitive Intelligence can be divided into eight Competitive Intelligence elements, which can be visualized in a three-dimensional matrix as depicted in Figure 4. The horizontal axis reflects the industry value chain, while the vertical axis in the matrix determines the scope of the Competitive Intelligence operations, i.e. whether the focus is on companies, industries or general trends prevailing in the business environment. Finally, the third axis highlights the geographical dimension of business information.

![Figure 4. Competitive Intelligence Elements](image-url)
While most of the elements concentrate on one part of the value chain, the category “General Trend Intelligence” includes business information types and themes along the whole length of the value chain. Examples of these include environmental issues, political environment and general business trends such as the impact of industry consolidation on the value chain. Similarly, the category “Interest Group Intelligence” covers companies that don’t belong to the company’s value chain but are strongly linked with it. Examples of interest groups are partners, owners, research companies, regulative bodies and academia.

In this general categorization, the value chain only includes three nodes but it can naturally be extended at both ends. On the supplier side, information may be needed on previous stages, starting from raw material extraction. On the customer side, it may be necessary to consider end-user segments as the ultimate business drivers. Yet another dimension to consider is intelligence about end-users. On the other hand, an organization may trust that its customers have taken their own customers into account when making operative business decisions. Thus, sophisticated customer intelligence will likely bring in good intelligence about the end-customers as well.

The matrix framework is useful when considering target areas for a company’s Competitive Intelligence development. However, the presented framework is very generic and it should always be adapted to each company’s specific requirements.
4. Competitive Intelligence Cycle

The core of any intelligence system in a company is an intelligence cycle (Kahaner 1996, 43). In discussing the transformation of data and information into actionable intelligence, a process perspective is useful given that a continuous chain of action is required. The process, usually called the Competitive Intelligence cycle, begins with determining the intelligence needs.

Companies are encouraged to adopt the classical four-step intelligence cycle used by the U.S. Central Intelligence Agency (CIA) and other national security organizations throughout the world.

The cycle includes setting goals, obtaining data, comparing information from different sources and estimating possible future developments. Finally, the results have to be utilized in a timely fashion.

Bernhardt (1994) introduces a Competitive Intelligence cycle with five phases: planning and direction, collection, processing, analysis and production and, finally, dissemination. In his model, adapted from the CIA, the author includes need determination in planning and direction. The collection phase is followed by processing, which in Berhardt’s model refers to computerized activity.

Kahaner (1996, 44) describes only four phases: planning and direction, collection, analysis and dissemination. In this context, too, all the start-up activities, including need determination, belong under the planning and direction phase.

McGonagle & Vella (1996) also discuss a four-stage cycle starting with establishing the intelligence needs. The required information then has to be collected and analyzed. The authors incorporate preparing, presenting and utilizing the intelligence into the final stage in the cycle.

Obvious, there are separate, yet interrelated stages in the intelligence process. Some of the phases can be further divided into more specific phases. From both theoretical and practical perspectives, it is useful to discuss each phase in more detail.

According to Sawka (1996), defining the intelligence needs is an absolute prerequisite that ensures management will be fully engaged in the process. Before any data or information is collected, the strategically relevant needs of all intelligence users must be articulated (Bernhardt, 1994), preferably through direct communication between decision-makers and intelligence professionals. Direct contact is important because intelligence users may have difficulty in expressing their needs and prior knowledge due to its tacit nature. The role of need determination has become extremely important especially in the era of an expanding information overload. Asking the right questions (‘what do we need to know’) at the beginning of the cycle helps to ensure that the produced intelligence is used by decision-makers.

Effective intelligence processes set the intelligence customers, i.e. the users, as the starting point for the entire function. The users are given intelligence they require, analyzed to a level that serves them best, and delivered in a form they desire (ibid.).

Numerous sources need to be continuously monitored in order to find the appropriate material. Monitoring can be seen as continuous surveillance of formal and informal sources, whereas the actual collection calls for a more specified need. On the other hand, active monitoring is also likely to create new needs.

In practice, monitoring and collection are overlapping phases in the intelligence cycle. The needed information calls for active gathering measures often implemented by a corporate library function, especially in the case of using external sources. The role of human intelligence, i.e. intelligence that is not documented but possessed by individual employees, is also significant.

It is argued that human intelligence, also referred to as “tacit knowledge”, seems to set organizations apart regarding their intelligence capabilities and, eventually, competitiveness.
The gathering phase also requires processing the information so that it can be transmitted and stored, and that electronically stored information can then easily be reformatted into a form conducive to analysis (Kahaner 1996, 44). Bernhardt (1994) also stresses the role of processing between collection and analysis. The gathered information calls for structuring and elimination before the actual analysis. Despite a thorough need determination, it is highly possible that irrelevant information will also be gathered when monitoring the environment, considering the recent information overload phenomenon. Therefore, the role of systematic elimination is considered a significant element of an information system so that only relevant material qualifies for analysis.

The information gathered requires analysis that results in reasoned judgments and conclusions (Sawka 1996). It is through analysis that intelligence activity is actually tied to executive decision-making. This is the phase where information will be transformed into more actionable form. Analysis is the most challenging stage in the intelligence process, as it requires great skills to evaluate the information, look for patterns and come up with scenarios. Analysis however, cannot always be based on logical reasoning alone; it must involve educated guessing as well. For example, Langabeer (1999) emphasizes the value adding role of CI, focusing on the four key ‘I’ variables crucial to effective analysis: Information, Impression, Insight and Interpretation. This is particularly true when analyzing strategic information which requires future-oriented estimates (Kahaner 1996, 44).

The value adding role of analysis in the intelligence process is highlighted by Bernhardt (1994) who stresses that it is the options and recommendations emerging from the analysis that facilitate senior managers’ strategic decision-making.

When the relevant information has been thoroughly analyzed, it needs to be disseminated to users. The role of the dissemination phase is to ensure that the right people receive the right intelligence at the right time. Dissemination is an extremely significant part of the intelligence cycle as the basis of the entire function may be eroded if the intelligence product is delivered too late. The decisions have to be made and actions taken before an anticipated situation will occur.

Most decision-makers seem to prefer a timely answer to a totally accurate answer. It is argued that only 70 percent of the delivered intelligence needs to be totally accurate if it is delivered on time.

Although modern technical tools such as intranets are extremely useful in disseminating timely intelligence, other means of communication are needed as well. It is typical that the intelligence function developers today eagerly employ new technological solutions. However, as intelligence is a human process, human interaction is an essential part of disseminating it. Hence, various means of communication such as telephones, faxes, oral presentations and meetings (especially with the key decision-makers) are also considered significant in disseminating intelligence.

The processed and communicated intelligence needs to be adequately stored. The role of modern technology is increasingly important in storing intelligence. It is essential to guarantee that intelligence is easily available for further reference. Top-ranking professionals in particular seem to appreciate easy access to both current and past intelligence. In the storing stage it is also essential to consider safety issues so that valuable intelligence will not flow into the hands of those that it does not concern. Not everybody needs to know about the intelligence behind strategic issues.

The final stage of the intelligence cycle is the utilization of the processed information, which in turn will lead to determination of new needs. Gilad (1989) identifies five basic targets for utilization: identifying new business opportunities, sharing ideas, improving the organization’s ability to anticipate surprises, improving managers’ analytical skills and integrating diverse ideas.

Referring to a study involving 20 U.S. top-managers, Gelb et al. (1995?) argue that intelligence is mainly used for improving corporate processes, decision making and overall performance of managers. Secondly, problems and opportunities are better anticipated through adequate intelligence activity. Moreover, intelligence processes help companies understand how they are performing relative to immediate competition and to plan accordingly.
Effectiveness of the utilization phase is highly dependent on the successful implementation of the earlier phases. First, if the needs are not carefully determined, the usefulness of the intelligence is clearly low. Second, if not thoroughly analyzed, the gathered information might not meet the requirements of the decision-makers. Timeliness is guaranteed through smooth dissemination. Intelligence delivered too late will not likely lead to correct actions no matter if thoroughly analyzed or not.

In addition to the time horizon of an intelligence cycle, the processing and analyzing requirements may also change depending on the level of decision-making involved. The higher the decision-making level, the more sophisticated the processing and analysis required.

The intelligence cycle refers to what Prescott (1995) calls the “doing” of intelligence. He separates “managing” intelligence - which mainly includes stipulating the intelligence mission, structuring the intelligence unit and defining characteristics of the intelligence staff, etc. - from the rest of the intelligence activities in the cycle. It is suggested that managerial input, i.e. adequate planning and direction, is needed in order to initialize the cycle and then keep it functional. This applies to the whole intelligence cycle but is especially important in the need determination phase.
5. Conclusion

Competitive intelligence is not market research, nor is it industrial espionage. It is a completely legal and increasingly essential element in the formulation of corporate competitive strategy which provides the decision-maker with invaluable insight into the competitor’s capabilities and intentions. It serves as an early warning of future events, which may have an impact on company performance.

While market research often focuses on fulfilling a specific information need or set of needs, intelligence is an ongoing process of developing a holistic picture of the operating environment including competitors, customers and markets. An effective intelligence process continuously contributes to an organization’s knowledge base and leads to cumulative organizational learning.

Although the terminology and scope of Competitive Intelligence efforts in organizations should be determined on a case-by-case basis both in terms of contents and the decision-making level(s) it is primarily intended to serve, a useful definition of CI was offered by SCIP. According to this organization, Competitive Intelligence is a “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 an industry; competitive analysis, which means understanding the strengths and weaknesses of competitors; and benchmarking, i.e. the analysis of individual business processes of competitors”.

In discussing the transformation of data and information into actionable intelligence, a process perspective is useful given that a continuous chain of action is required. It can be argued that the core of any intelligence system in a company is an intelligence process or cycle. The key stages of this cycle are:

- definition of the intelligence needs;
- collection of information and continuous monitoring of various sources;
- processing the collected information;
- analysis;
- dissemination and storage;
- utilization.

The managerial input, i.e. adequate planning and direction, is essential in order to initialize the cycle and then keep it functional.
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