

The Relevance of Competitive Intelligence

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November 3, 2008

Contents

1	The problem: 5 2 ½ 20	3
2	What can organizations gain?	4
3	How can the concept of relevance contribute?	7
4	Which organizational measures should be implemented?	9
5	The functionality of a supporting tool: Astragy	10
6	Roadmap	13
7	About the authors	15
8	Notes	16

1 The problem: 5 2 ½ 20

Five years from now, managers will make twice as many decisions, in half the time, based on twenty times more information than today. The importance of managing information and knowledge will, therefore, increase.

Making the right decisions assumes the presence of appropriate business knowledge, based on a thorough understanding of the business itself and its environment. The development of this valuable knowledge, presupposes the availability of both relevant and validated data.

Whereas in the pre-internet era, data collection could be a problem because of the unavailability or troublesome elicitation of data, the rise of the internet has eliminated this problem. Data-availability is exploding. Popular estimates indicate that by 2011 the total volume of available information will double every 11 hoursⁱ.

This ever-increasing potential data overload causes new data collection problems that cannot (at least not completely) be solved in the collection phase of the famous BI-Cycleⁱⁱ. The continuous determination of the relevance of data for the use in business decision making has become the key competitive factor in an information-intensive world. Especially in Competitive Intelligence, where the ever-changing complex business environment is the object of knowledge, sustainable competitive advantages can be built on the right determination of relevance. To state it in more popular wording: If everyone can find information about the business environment everywhere, the competition will lie in finding the right facts for the chosen purpose. Organizations that are better able to do this over time, will be more successful than others.

This whitepaper sheds light on the way in which organizations in CI can deal with the problem of increasing data availability and how they can translate this into pragmatic solutions. Four main questions will be answered:

1. What can organizations gain by solving the data overload problem?
2. How can the concept of relevance contribute to the solution of the problem?
3. Which organizational measures should be implemented?
4. Which requirements must be met by IT tools to support the solution of the problem?

2 What can organizations gain?

The value of better decision making is intangible and difficult to quantify. However, we usually believe that having access to the right information increases the quality of decision making. Effective decision making in terms of increased competitive power, operational results or growth can be achieved by providing better (more relevant) information to the decision makers.

However, collecting as much information as possible about markets and competitors will not aid any organization in reaching its goals faster or better than its counterparts. Even if the organization manages to set up a large data warehouse which distributes all the 'right' data, at the right time to the right people in a consistent manner, it will not necessarily outperform its competitors. If the people receiving the data do not use it in their work, all efforts will amount to nothing. But if they do, something special happens: the organization will be better prepared, more consistent in its decision making, more reliable in the execution of actions and accountable on hindsight for the successes and failures of the past. The chances of better decision-making increase if the relevant information is both available and used. In his well known book *Good to Great* Jim Collins states that "The key [to becoming great], then, lies not in better information, but in turning information into information that cannot be ignored."ⁱⁱⁱ

To generate better information, organizations make available considerable resources to develop information infrastructures that support the planning and control cycle. Especially when it concerns the control part, organizations have invested a lot in databases, ETL tools, data warehouses and reporting tools to optimize measurements on organizational performance. By comparing the available measurements with the desired values, we can select and implement measures to optimize performance. However, despite all investments, organizations are not always 'in control' as various incidents in the recent past obviously show.

When it comes to the planning process (whether it is strategic, competitive, marketing or operational), the information process to support the strategy and the matching desired values is organized even less professionally. In a best case scenario, organizations appoint business analysts that, on an input basis, are allocated to identify, collect and analyze information about the business environment to support planning processes. A specific set of resources is made available to organize the external information process in the best possible way (given the conditions set by the resources made available).

In these kind of circumstances, collecting this much information about (potential) markets and competitors will not aid any organization in reaching its goals faster or better than its counterparts. However, customized analysis of competitive situations, environmental trends, product launches etc., does! To allow a business analyst to spend a considerable amount of time on this kind of value added analyses, a proper realization of the fundamental and basic environmental information and data requirements is required. For clarification purposes: The repetitive time analysts spend on the identification and collection of data about the business environment cannot be spent on value-added analysis. Therefore the basic determination of information and data needs should be taken care of. When properly formalized, it is usually possible to automate the unstructured data collection process, thereby optimizing the time available for analysis (and building a consistent common data language about the business environment).

On average, knowledge workers (including business analysts, and also marketing managers and sales managers) spend up to 35% of their time searching for information. They are successful only half of this time. The rest of the time they either act without data at all, or try to recreate the data they were looking for from other means. This means that the average knowledge worker spends up to one day per week not finding what he/she is looking for^{iv}. There is a lot to gain by formalizing processes and providing a single source of reliable and consistent data on designated topics. Staff should be trained and cultivated to act upon this data. This way, organizations not only become more decisive and flexible, they also become more cost effective in the process.

Increasing the efficiency of the data collection structure requires a proper definition of the data needs. Based on the concept of the BI-Cycle, an adequate definition of data needs is only possible if proper attention is paid to the direction phase. It is in this direction phase that relevance needs to be determined. When it comes to the organization of structural and continuous CI, relevance can only be determined by the users of intelligence and the CI-professionals themselves. Usually this is done based on a proper picture of the organization's line of business and its competitive position. This determines which environmental parameters need to be monitored and scanned on a continual basis.

The correct and precise definition of environmental parameters allows for significant operational benefits. By formalizing the parameters, companies can define relevant data items, sources, storages and data retrieval strategies. Because of its repetitive and continuously stable character, this process can be automated. This leads to an increase in consistency, reliability and improved availability of core data. In addition, time spent by expensive analysts on manually collecting data now becomes available to spend on both analysis and the identification of data needs with respect to ad hoc and less repetitive intelligence needs. The analysis becomes easier because data sets can be allocated to categories defined in advance and analysis is performed using more reliable and consistent data.

The fundamental essence of this 'professionalization by formalization'-process is the structuring of an experienced unstructured business environment. This is an important step in the direction phase of the Intelligence Cycle. Although the process can be supported by applications, structuring should be done by humans and cannot be automated. Therefore, it needs to be organized as part of a social process (for instance in workshops or business strategy games). As a result, analysts can formalize data requirements, data retrieval, storage process and pre-analysis for the consequential data needs.

In conclusion, two interrelated requirements are essential to put information about the business environment to work and to create added value in organizations. First, organizations should be able to define the 'right' data and information needs. This is called the issue of relevance and can be done by (re)structuring the business environment. Second, organizations should secure the use of this information. If they involve the potential users of the information in the process of determining relevance, the chance of the users placing value in (the use of) the information will increase considerably.

3 How can the concept of relevance contribute?

Ubiquitous knowledge hides the problems of harnessing it in plain sight. If everyone can find knowledge everywhere, competition will be in finding the right facts for the chosen purpose. Similar to the days when finding any information at all was the challenge, the difficulty today lies in deciding which information is important (relevant, timely) and which is not. The ability to prioritize, analyze and act on the exact, correct subset of data from all available knowledge is decisive. It solves the problem of data overload and allows the information process to become efficient. However, organizations can only use this ability to its full extent if they know the big picture: an overview of the current business reality including a future outlook (assumptions and analysis: what we believe will happen), vision (creativity and belief: where we believe we should be going) and direction (leadership: let's go!).

For anything to be relevant, it needs to be more important than similar items at the time the importance is measured. Information becomes relevant when it is more important than other facts in the current situation. This may seem obvious, but in a dynamic business environment 'the current situation' is constantly changing, and something relevant today may be insignificant tomorrow. Competitive Intelligence, therefore, is as much about identification, measurement and interpretation of the 'big picture' as it is about deciding on the relevancy of topics within this environment and the right way to gather data on them in preparation for actions.

The problem with the big picture is that it seems only partially based on facts. Instead of being a topic of explicit discussion in the Direction phase of the BI-cycle, a large part of the big picture is usually made up of implicit assumptions, interpretations and cultural beliefs. Consequently, the image of the big picture is colored by corporate culture, current events, media coverage and (corporate) politics. As if this is not enough, in deciding which details are relevant to a company, management and employees have a predetermined set of ideals and presumptions that effect the future outlook, either as wishful thinking or as experienced preparation. The future outlook (and with it the 'big picture') are further influenced by the organization's mission, vision and previously chosen strategic direction.

The big picture is the point of reference or context to which the importance of intelligence topics is measured and by which relevance is determined. In this way, the big picture directs the data collection process and, as a result, affects the possible analysis and use of the analyzed results. This role of the big picture is far too important to be played in an implicit way. Constructing the big picture, as such, should be made an explicit topic in the direction phase of the BI-cycle. However, this is more complex than it seems to be on first sight.

Explication of the 'big picture' of the business environment should be done by the users of the intelligence to be produced. This increases the chance of usage of the produced intelligence considerably. When defining the big picture of the business environment, one should keep in mind the system's theoretical nature of the concept of the business

environment. In a way, the business environment is defined as the environment of something else: in this case, the business organization.

Definition of the business, therefore, is a main anchor point for the explicit definition of the business environment. If we determine what we as a business organization want to be, what our main core competences are, what products or services we deliver etc., we can then define what is relevant of the general environment and define a relevant business environment. This is a considerable improvement to the situation in which this process is implicit because it enables the formalization of the information process by the availability of a self structured picture of the business environment. The latter is important because, of course, the environment is dynamic.

Realization of the fact that the business environment is a self-structured reality enables us to formalize the data collection and retrieval process. This enables analysts, on the one hand, to analyze the stable situation of the actual position of the company in its environment on an efficient and effective manner. On the other hand this allows analysts to spend time on the reflection of the 'big picture' itself and monitor circumstances that invite for a reconstruction of the actual business environment. By doing this, the organization achieves a higher level of environmental sensitivity

4 Which organizational measures should be implemented?

Going through the direction phase of the BI-cycle explicitly serves the main conditions to realize the possible added values of environmental business information: relevance and usage.

In this social, and therefore human, process the prerequisites are created for a successful competitive intelligence process. The actual business environment is explicitly defined by the potential users of the intelligence. This can be done by first describing the business

organization itself and using this picture as an anchor point for defining relevant business environmental items. Different theoretical business concepts can be used to define the business organization in workshops.

When this business environment is defined, it is possible to formalize the business information needs. Different organizational entities may determine different information needs, leading to multiple internal 'information customers' for the CI department. Each of these customers can, independently from other customers, agree on different deliverables from the CI department, formalized in Service Level Agreements that describe the content, number and frequency of recurring reports and ad-hoc information availability.

Based on the combination of business information needs and customer requirements for the reporting and distribution of data, the structured retrieval storage and pre-analysis of relevant (external) data can be set up. Because of the formalized nature, the process can be supported by ICT tools such as Astragy. This speeds up the information process extensively and allows analysts and users to concentrate on the analysis and usage (the added value) of the information.

Furthermore, as a result, analysts can concentrate on the reflection of the defined big picture of the business environment. This, again, requires data needs. By defining these needs, relevant developments that ask for adjustment of the big picture of the business environment can be monitored. And consequently, alternative business environments can be generated and defined, again, as reference point for collection and storage processes....

5 The functionality of a supporting tool: Astragy

Typically, information needs in organizations exist as either:

1. Ad-hoc requests for insights and data to support a specific decision.
2. A continuous or repetitive process of collection and analysis of data, to gain insight into market dynamics and trends and the position the various players have in it.

3. The Key Intelligence Topic: topical areas of interest which, for various reasons, form the subject of further scrutiny by the organization, such as a proposed new law, and newly discovered technology or a merger between two competitors.

Astragy supports the formalization of a self structured business environment and organizes a professional information process that is customized for this business environment. In essence, Astragy supports both the reflection on big picture business environments, the generation of alternative business environments and the translation from data to answers that employees can instantly act upon. This is the case because the functionality of Astragy is in the collection, retrieval, categorization and distribution of unstructured information connected to a relevant business environment and desired functionality. Whether this functionality is in the monitoring, in reflecting on or generating a business environment doesn't matter. The definition of the organizations information needs is a human and organizational/social process. The collection of source data, structuring, pre-analysis and dissemination of information, however, are preferably operated and supported by the tool.

The ability to act on information resides in the organization, not in the tool. However, embedding the tool in the organization allows for quick and efficient execution of tasks based on relevant information. The tool should not merely collect and distribute data to users, but also translate "lessons learned" into a change in the collection, structuring and distribution. This calls for a different process in the organization and the tool because, as we described in the first chapter, forming the big picture that enables organizations to decide which information is relevant and which is not, requires different information than the data that is collected, meticulously analyzed and acted upon using the tool.

Typically, existing tools are based on one of three specific core technologies:

1. Enterprise search engines create an index of as much data as is available from any number of sources. Users can then search these indices (determining relevance) "Google style", based on the input in user queries.

2. Text mining and pattern recognition. This technology collects data from a given number of sources and automatically groups topics around similarities and frequent occurrences in documents.
3. Thesaurus-based formatting of the environment, in which the subject matter is carefully registered and described in order to allow technology to match available data with predefined areas of interest.

Although all three technologies are unique and certainly useful in their own respect, they are all centered on their dominant technical feature, rather than on the solution to the CI problem. Power searches, even with the best of breed technologies, will not present the user with clear insights and developments in markets or instant answers. Furthermore it is fully dependent on user input in the search query and has virtually no way to determine relevance of the results in the sense that is described in this whitepaper. Text mining may reveal interesting topics, even ones that prove 'relevant' to the organization, but it specifically focuses on the content available in the sources instead of focusing on the information needs of the organization. Any relevance, therefore, is the result of chance rather than of targeted action. Thesaurus-based search moves the focus from the data source to the information needs but (in order to be effective) often requires a very rigid description of the business environment. This contradicts with the business need for a flexible tool that can easily adapt to a continuously changing environment and easily redefined business information requirements.

Rather than focusing on a specific technology, Astragy uses best of breed functionality to create a CI tool that will adapt to a transforming environment, without the need to be reconfigured or adapted to a new situation, in laborious ICT projects. It supports the organizational process of determining relevance and allows this relevance to be easily modeled into an operational tool for the collection, structuring, pre-analysis and dissemination of information to the right users. This enables the organization to act quickly and consistently on relevant information.

6 Roadmap

As has been pointed out several times, necessary conditions for a successful CI process and system are both the availability and quality of relevant data and the use of this information.

When implementing a CI system, organizations have to choose a development approach and roadmap that acknowledges the importance of both aspects. ICT oriented development approaches do not acknowledge this and, therefore, often fail. The main reasons for these failures are a lack of understanding of the needs of the users and an inappropriate concept of the user-context at the beginning of the project. Users are not conceptualized as people with specific interests. Information needs and motivations are not taken into account properly. Consequently, starts worrying about motivating people to use and contribute to the system only *after* the tool is realized. Most of the time, this is far too late and the system development implodes. One can easily imagine what might happen if users cannot fulfill their information needs with the process and the newly developed database system. In such a case they will not use it.

An appropriate development approach is an approach that takes relevance and usage into account from the start of the project (and not only of partially at the end). Relevance is determined in relation to the goal the information is used for by its users. The system will be used if it produces relevant information and when its future users see it as *their* system. For both reasons, a proper development approach should involve the users from the outset. A participative (infrastructural) development approach is required.

An infrastructural approach^v is the opposite of an ICT-driven approach. In the infrastructural approach the motivational and acceptance problem of the ICT tool does not appear. In the infrastructural approach, a set of different measures is directed at the realization of the CI process. ICT is an important element but only one aspect of this infrastructure. Without attention to other elements the ICT cannot be brought to value. Consequently, the ICT tool is not the reference point for the development of a CI system. Instead, the CI process itself

is the starting point for organizing and implementing competitive intelligence. This CI process, therefore, is seen as a joint process of parties (users and sources) who all have their own interests. By contributing to the CI process they want to realize their personal interest.

In an infrastructural development approach, one starts by worrying about the organizational context in which the CI process has to be realized. Information requirements per organizational role and personal interests are taken into account from the start of the development process. This can be done by choosing a participative development approach with a representative user group. Representation is defined in relation to the organization roles that need to be supported by the competitive intelligence. The participative approach can be realized by doing a basic pilot case with the user group that follows the BI-cycle and defines both information needs (relevance!) and collection, analysis and distribution requirements for the process and system to be build.

In such a development context, the realization of a CI process is the collective aim. This CI process serves the different needs for the different user groups and therefore they will use the resulting system. Furthermore, because it serves everybody's interest, everybody will contribute to the system. With this approach, acceptance will not be a problem. The users have, in fact, developed the system themselves and will act as enthusiastic champions for its implementation in their organizations. In the infrastructural development approach aspects like the necessary personal skills of people, the division of CI activities in the organization and, for instance, the division of responsibilities with respect to CI in the organization, will come to bear. These are also very important factors that determine whether people are going to use the resulting tool in a sustainable manner.

7 About the authors

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Egbert Philips lectured Business and Competitive Intelligence at the Radboud University of Nijmegen, The Netherlands. He is co-author of the book 'Business Intelligence' and has written multiple publications and presented many lectures on the subject. In his role of senior consultant, Mr. Philips has broad experience in the development, implementation and execution of Business and Competitive Intelligences processes. Mr. Philips is active as the Manager Corporate Business Intelligence at Royal Friesland Foods and is founder and CEO of BC Intelligence. BC Intelligence offers tailor made solutions and services for Business Intelligence, Competitive Intelligence and strategy development.

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8 Notes

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