MARKETING INTELLIGENCE SYSTEM A “SMART TOOL” FOR THE COMPANIES

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ABSTRACT

Marketing Intelligence Systems are tools that allow organizations to conduct a new business, a new integrative vision that includes the customers’ needs, requirements and desires. The activity of the organization should focus on achieving them. The marketing knowledge and information held by the organization about customers, market, competition, suppliers, distribution channels, generally about the environment in which it operates, can be easily processed using those technologies specific to the computerized systems which support the marketing decision. Thus, there is created a strategic advantage for solving, in real time, the problems of the organization. Certainly, Marketing Intelligence Systems - implemented and operated with the efficiency of expert systems, satisfy the desire of every marketing man/woman to have a “smart tool” that emulates human thinking for activities specific to its area of expertise.

Keywords: Marketing Intelligence, Market Intelligence, Business Intelligence, Marketing Intelligence Systems,

1. INTRODUCTION

The new information technologies that brought numerous dot.com businesses have created a global market place, restructured whole industry sectors and redefined how business is done.

Romanian electronic enterprises increasingly consider information as an important resource. The challenge consists in using all the integration techniques of the day – whether they are information, data or application systems to build an marketing intelligent platform that can meet the demands of real-time businesses [1], [2].

The importance of a marketing intelligent system (MKIS) in any business is justified because is impossible to develop a competitive strategy without gathering and correctly analysing the information from the market [3].

2. INTELLIGENT SYSTEM VS. ARTIFICIAL INTELLIGENCE

The English-Romanian economic dictionary translates the concept of intelligence through: informație, stire, informatii confidentiale, inteligență (information, news, confidential information, intelligence) [1], [3].

Intelligence involves identifying the problems in the organization: why and where they occur and with what effects. This broad set of information and activities is required to inform managers on how well the organization is performing and where problems exist. For instance, consider a commercial organization marketing a large number of different products and product variations. The management will want to know, at frequent intervals, whether sales targets are being achieved. Ideally, the information system will report only those products/product variations which are performing substantially above or below the target.

In order to understand the thematic spectrum of our research, we need to introduce the concept of intelligent system. Like all powerful concepts which science operates nowadays, the concept of intelligent system is a fuzzy one and it is characterized by a significant dynamic semantics. In fact, this should not surprise us because the phrase contains the concept of intelligence, which is a powerful concept discussed and analyzed semantically. This idea was developed in the engineering sciences and then amplified in the sciences of the artificial. More specifically, in the field of research devoted to artificial intelligence. In this context, the intelligent system is that system able to perform the functions of the human brain. In particular, the name of intelligent system was given to a software system that would perform decision processes similar to those performed by natural intelligence [1], [2], [3], [4], [5].

In the context of organizational dynamics, an intelligent system [4] is characterized by the following functional properties:

- it has the ability to obtain data, information and knowledge both from its internal and external environment1.
- it has the ability to process data, information and knowledge both synchronously and asynchronously.
- it has the ability to analyze its internal condition in relation to external environmental conditions and to determine the degree of adaptation necessary for survival.
- it has the ability to decide on the optimal use of resources and capabilities to achieve a competitive advantage relative to the other competitors on the market.
- it has the ability to innovate and adapt to continuous innovation requirements of foreign competition and to the level of performance required by the internal decision environment.

1 The external environment can be defined as the field of external forces of an organization, which can directly or potentially influence it.
3. GLOSSARY OF INTELLIGENT SYSTEMS APPLIED IN MARKETING

The terms “marketing intelligence”, “market intelligence”, “market research”, “business intelligence” and “corporate intelligence” are, in general, used interchangeably in the literature [4].

We are going to present the following concepts [8]: Marketing Information System (MIS), Marketing Intelligence (MI), Business Intelligence (BI), Competitive Intelligence (CI), and Market Intelligence (MARKINT), in order to remove any confusion:

2.1 A marketing information system (MIS)
- MIS is defined as a system which is proposed “to bring together disparate items of data into a coherent body of information” [3], [6], [7].
- An MIS is, as will shortly be seen, more than raw data or information suitable for the purposes of decision making.
- An MIS also provides methods for interpreting the information the MIS provides.

![Figure 1 The marketing information system][1]

Moreover, as Kotler’s definition says, MIS is more than a system of data collection or a set of information technologies: “a marketing information system is a continuing and interacting structure of people, equipment and procedures used in order to gather, sort, analyze, evaluate, and distribute pertinent, timely and accurate information for use by marketing decision makers, in order to improve their marketing planning, implementation, and control” [10], [11].

A marketing information system (MIS) has four components: (a) the internal reporting system; (b) the marketing research systems; (c) the marketing intelligence system (MIS) and (d) marketing models [4]:
- Internal reports include orders received, inventory records and sales invoices.
- Marketing research takes the form of purposeful studies either ad hoc or continuously.
- By contrast, marketing intelligence (MI) is less specific in its purposes; it is chiefly carried out in an informal manner and by managers themselves rather than by professional marketing researchers [3], [6], [7].

2.2 Marketing research

Marketing research is defined as “the systematic and objective search for and analysis of, information relevant to the identification and solution of any problem relevant to the firm’s marketing activity and marketing decision makers” [24].

2.3 Marketing Intelligence (MI)

On Wikipedia, MI is referred to “as the information relevant to a company’s markets, gathered and analyzed specifically for the purpose of accurate and confident decision-making in determining market opportunity, market penetration strategy, and market development metrics. Marketing Intelligence is necessary when entering a foreign market. Marketing Intelligence determines the intelligence needed, collects it by searching the environment and delivers it to those marketing managers who need it.” [6], [7], [8].

Marketing intelligence is “systematic collection and analysis of publicly available information about competitors and developments in the marketing environment” [10], [11], [25].

Marketing Intelligence (MI) is not the same as Market Intelligence (MARKINT). Hence, Marketing Intelligence professionals often research information and use those tools that take data from disparate data sources like web analytics, Business Intelligence (BI), call centre and sales data, which often arrive in separate reports. It is the role of Marketing Intelligence (MI) to put this data into a single environment [5], [6], [7]. For these reasons, it is often mistakenly perceived to be (or be part of) Business Intelligence. It is also sometimes mistakenly perceived to be (or be part of) Competitive Intelligence because organizationally, Marketing Intelligence can be the name of the department that performs both the market intelligence and the competitor analysis roles [6], [7], [8], [13], [14], [15].

2.4 Market Intelligence (MARKINT)

Market intelligence is another intelligence discipline that is often confused with the other intelligence disciplines. As surprising as it may sound, it is most often misperceived to be (or be part of) Business Intelligence [7], [9].

On Wikipedia [8], Market Intelligence is referred to as a “branch of Market research, involving collation and analysis of the available and relevant information and data on specific markets. Market intelligence typically involves the collation of data from various sources such

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[1]: https://example.com/image.png
as company accounts, official statistics, data from trade bodies, interviews with business contacts, and research on consumer attitudes. Whereas, Market research is often considered a consumer-orientated discipline, Market intelligence tends to offer a broader view of markets including business and sector data - such as market-sizing, - segmentation, and - share data.”

![Image](image.png)

**Figure 2 Market Intelligence areas [7], [13], [14]**

Market intelligence yields an ongoing and comprehensive understanding of the market. Each of the four knowledge areas [7] - competitor intelligence, product intelligence, market understanding, and customer insight - interacts to form a complete understanding of the market. Each competitor’s strategies will impact their product actions, the overall trends of market growth and segment interaction will impact the strategies, and underlying all of this, the customer’s behaviors and attitudes will ultimately drive the market dynamics in terms of growth rates and product acceptance. This integration of all four knowledge areas is ultimately deliverable for market intelligence [15].

### 2.3.1 Market intelligence vs. marketing research

**Marketing research** is a critical and significant source of information. However, it does not encompass all the information areas which are covered by Market intelligence. The scope of information covered is one of the key differences between marketing research and market intelligence [16], [25].

When examining the communication feature of the market intelligence pyramid, the most important difference between market intelligence and marketing research is that good market intelligence involves a dialogue between the market intelligence analyst and the client/decision maker. Conversely, marketing research provides an assessment of a specific issue, or measures a specific market dynamic. While it clearly involves communication with the client/decision maker, it typically consists of limited interaction versus the full dialogue of market intelligence [13].

We can now see that Market Intelligence is actually a rather very different discipline from Business Intelligence, and it is actually much closer to a pure “market research” activity [6], [7], [8].

### 2.5 Business Intelligence (BI)

Although **Business intelligence** (BI) is widely used by companies today, its terms and exact definition is often confused and mixed with other types of intelligence (marketing intelligence, market intelligence, and competitive intelligence) an organization looks to gather. It is therefore important for us to “put things in order” and help in order to better distinguish between these types of intelligence [7], [8], [9].

**CIO.com** [12] defines BI as “...an umbrella term that refers to a variety of software applications used to analyze an organization’s raw data. BI as a discipline is made up of several related activities, including data mining, online analytical processing, querying and reporting. Companies use BI to improve decision making, cut costs and identify new business opportunities. BI is more than just corporate reporting and more than a set of tools to coax data out of enterprise systems. CIOs use BI to identify inefficient business processes that are ripe for re-engineering.”

On Wikipedia [8], BI is defined as “...computer-based techniques used in identifying, extracting, and analyzing business data, such as sales revenue by products and/or departments, or by associated costs and incomes. BI technologies provide historical, current and predictive views of business operations. Common functions of business intelligence technologies are reporting, online analytical processing, analytics, data mining, process mining, complex event processing, business performance management, benchmarking, text mining, and predictive analytics.”

The main mission of **Business Intelligence** is to support better business decision-making and it is often referred to as a “decision support system”. While BI is sometimes used as a synonym for competitive intelligence, because they both support decision making, BI uses technologies, processes, and applications to analyze mostly internal, structured data and business processes. It goes without saying that both disciplines are important for organizations to utilize [3], [5], [7].

### 2.6 Competitive Intelligence (CI)

**Competitive Intelligence** - the action of defining, gathering, analyzing, and distributing information about products, customers, competitors and any aspect of the environment needed to support executives and managers in making strategic decisions for an organization [7], [8], [9], [15], [17].

We like to look at it much more simply: “to stay ahead of the competition, you need as much relevant data as possible to make good decisions. That’s where clear competitive intelligence comes in. Being able to easily monitor any information or webpage allows businesses to focus on what they do best - running their business” [5], [17].

The term **Competitive Intelligence** is often viewed as synonymous with **Competitor Analysis**, but **competitive intelligence** is more than just analyzing competitors — it is about making the organization more competitive relative to its entire environment: customers,
competitors, distributors, technologies, macro-economic data and more [8], [17].

2.5.1 Market Intelligence vs. Competitive Intelligence

Market Intelligence (MARKINT) focuses on providing a company with a view of a market using the existing sources of information in order to understand what is happening in that marketplace, to identify its issues and its market potential. It may also concern the attitudes, opinions, behavior, and needs of individuals and organizations within the context of their economic, environmental, social, and everyday activities. The emphasis is often on consumers – product, price, place, promotion, but, of course, this is not always the case [8], [9].

2.5.2 Business Intelligence vs. Competitive Intelligence

Business intelligence is concerned with Information Technology (IT) solutions for transforming the output from large data collections into intelligence; usually, it is made through the integration of sales, marketing, servicing, and support operations. It often covers activities such as: Customer Relationship Management (CRM), Enterprise Resource Planning (ERP), and E-commerce using Data Mining techniques [8], [9].

Many practitioners have defined the key differentiation between Business Intelligence (BI) and Competitive or Market Intelligence as follows. Business Intelligence (BI) maintains an inward focus towards the organization, whereas Competitive Intelligence (CI) and Market Intelligence is typically focused outwardly [6], [7], [8].

2.7 Competitive Intelligence Software (Ci)

Ci – is defined as the "experience a better way to monitor Internet data so you can spend more time analyzing and forming conclusions about your market and competition." [5], [6], [7], [15]

By using clear Ci flexible and competitive monitoring technology, you can automatically track almost any web page on the Internet, providing you with complete Competitive and Market Intelligence [8] for multiple functional or product areas within each organization. And since clear Ci was designed to detect, gather and deliver timely information to you, you can receive change alerts and updates via email or online using software application (SaaS) in the cloud (cloud computing) [15], [17].

2.7.1 Cloud computing

Cloud computing is a process where a task is solved by using a wide variety of technologies, including computers, networks, servers, and the Internet. Cloud computing is very similar to grid computing; however, usually, it is differentiated from grid computing due to its use of Internet tools [9], [18].

4. Marketing Intelligence Systems (MkIS)

A marketing intelligence system is a set of procedures and sources used by managers to obtain their everyday information about pertinent developments in the environment in which they operate. “The marketing intelligence system supplies data about the market” [11].

- Another definition of marketing intelligence system is that “it is a system for capturing the necessary information for business marketing decision making” [22].

The fundamental purpose of marketing intelligence is to help marketing managers make decisions they face each day, in their various areas of responsibility.

- A marketing intelligence system is a set of procedures and data sources used by marketing managers to sift information from the environment, information that they can use in their decision making. [15].

4.1. Intelligence using Open Source Data

More often, companies began using open source data in developing marketing intelligence. The term is defined as “the scanning, finding, gathering, exploitation, validation, analysis, and sharing with intelligence-seeking clients of publicly available print and digital/electronic data from unclassified, non-secret, and "grey literature” sources”[17].

Open source intelligence “is the most frequently used form intelligence gathering in business enterprises, desirable because it is easy, inexpensive and produces abundant raw material for further processing”[15], [17].

Managers have been known to spend several hours a day searching for information, later realizing that much of the information they acquired has little relevance or value toward meeting their needs. Companies typically spend far more time gathering information than they processing, analyzing and exploiting it. This study shows that practitioners would like to reverse this equation, and spend more time processing, analyzing and exploiting data as opposed to just gathering it.

4.2. Collecting Marketing Intelligence on the Internet

According to Kotler and Keller, the marketers can research the strength and weaknesses of the competitor’s online on five different ways; (a) independent customer goods and service review forums; (b) distributor or sales agent feedback sites; (c) combo sites offering customer reviews and expert opinions; (d) customer complaint sites; (e) public blogs [26].

This scanning of the economic and business environment can be undertaken in a variety of ways, including:
The manager, by virtue of what he/she reads, hears and watches exposes him/herself to information that may prove useful. Whilst the behavior is unfocused and the manager has no specific purpose in mind, it is not unintentional.

Again, the manager is not in search of particular pieces of information that he/she is actively searching but does narrow the range of media that is scanned. For instance, the manager may focus more on economic and business publications, broadcasts etc. and pay less attention to political, scientific or technological media.

This describes the situation where a fairly limited and unstructured attempt is made to obtain information for a specific purpose. For example, the marketing manager of a firm considering entering the business of importing frozen fish from a neighboring country may make informal inquiries as to prices and demand levels of frozen and fresh fish. There would be little structure to this search with the manager making inquiries with traders he/she happens to encounter as well as with other ad hoc contacts in ministries, international aid agencies, with trade associations, importers/exporters etc.

This is a purposeful search for information in some systematic way. The information will be required to address a specific issue. Whilst this sort of activity may seem to share the characteristics of marketing research, it is carried out by the manager him/herself rather than by a professional researcher. Moreover, the scope of the search is likely to be narrow in scope and far less intensive than marketing research.
responsibility. This may be a named individual or a small group of people who have the distinctive skills needed [13].

4.4. The features of a Marketing Intelligent System (MkIS)

A Marketing Intelligent System (MkIS) cannot replace the manager’s intelligence and creativity. Huster [23] sees MIS as “the ability to fully understand, analyze, and assess the internal and external environment associated with customers, competitors, markets, industry and use the acquired knowledge for long and short term strategic planning”. This tends to reinforce the view that the intelligence obtained is then used to aid marketing-related decisions.

The Marketing Intelligent System (MkIS) is a part of the company’s management [20]. The importance of any system of marketing intelligence lies not in the logic, elegance, or harmony of its technological components. Its value is measured in its ability to help the decision. Therefore [14], a marketing intelligent system must be part of the company’s management system - its processes have to be included in the daily activities of the company’s marketing department and also in all its departments.

The system must not result in mountains of paper - it is necessary to make a synthesis of information. The output format of information is less relevant and depends on the importance the management gives to a marketing intelligent system [21].

What managers can expect from a marketing intelligence system is to help them get current decisions, to follow the development of their goals and to make you aware of competition and market changes.

3.2.1 Benefits of the marketing intelligence system[22]

a. A Marketing Intelligent System can:
   - Follow the company’s progress on a long run;
   - Help managers take current decisions;
   - Establish a link between marketing and back-office operations;
   - Consider the impact of strategies on different sections simultaneously;
   - Reduce costs by automating many time consuming processes;
   - Help managers earmarking the budget for different marketing actions;
   - Help serving customers efficiently;
   - Help improving performance at all levels through better planning and control;
   - Make managers aware of the unusual behavior of competition;
   - Improve the control of marketing or non-marketing activities;
   - Offer marketing and economic information about problems that can be solved;
   - Anticipate the competitors’ movements in real time, in order to counter them.

b. A Marketing Intelligent System cannot:
   - Substitute the manager’s judgment;
   - Give all the necessary information for managers to make faultless decisions;
   - Function well without being supported by the managers;
   - Function well if not trusted;
   - Function well without being properly maintained and continuously adapted to the needs of information.

4.5. Improving the system – ways and solutions

Kotler also believed that there are four steps to improve the quality and quantity of marketing intelligence system [11]:

- **First**, train and motivate the sales force to spot and report new developments; because they are the company’s “eyes and ears,” they are in an excellent position to pick up the information missed by other means;
- **Second**, motivate distributors, retailers, and other intermediaries to pass along important intelligence;
- **Third**, purchase information from outside suppliers/research firms; they gather data at a much lower cost than the company could do on its own.
- **- And, finally, establish an internal marketing information centre to collect and circulate marketing intelligence.** Marketing intelligence is clearly a broad and complex function whose effectiveness dramatically affects the quality of marketing decisions.

4.3.1.10 commandments for attaining high marketing productivity and profitability

Now it’s up to you. Applying the solutions – improving marketing intelligence system, will turn the actual manager’s responsibilities into the 10 commandments [11] for attaining high marketing productivity and profitability. Here are the 10 commandments:

1. **Segment your market, chose the best segments**, and develop a strong position in each segment.
2. **Map your customers’ needs, perceptions, preferences, and behavior**, and motivate your stakeholders to obsess about serving and satisfying the customers.
3. **Develop a good understanding of your major competitors**, and their strengths and weaknesses.
4. **Build partners** out of your stakeholders, and generously reward them.
5. **Develop systems for identifying and stimulating opportunities**, ranking them, and choosing the best ones.
6. **Manage a marketing planning system** that leads to insightful long term and short-term plans.
7. **Exercise stronger control** over your product and service mix.
8. **Create strong brands** by using the most cost-effective communication and promotion tools.
9. **Build marketing leadership** and a team spirit among your various departments.
10. **Constantly add technology** that will give your business a competitive advantage in the marketplace.

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5. CONCLUSIONS

- Sometimes, marketing intelligence systems were also called expert systems because they have integrated within their knowledge a series of domain-specific knowledge, at the level of human expertise. Despite the successes in information technology, specialists have failed so far to achieve intelligent computational systems that replicate human intelligence. This did not prevent professionals to continue and even expand the semantic field of the concept of intelligent research.

- Marketing Intelligence Systems are intended to support management decision making processes. Management has five distinct functions and each requires support from an MkIS. These are: planning, organizing, coordinating, decision and controlling.

- Marketing Intelligence Systems have to be designed to meet the way in which managers tend to work. Research suggests that a manager continually addresses a large variety of tasks and is able to spend relatively brief periods on each of these. Given the nature of the work, managers tend to rely upon information that is timely and verbal (because this can be assimilated quickly), even if this is likely to be less accurate than more formal and complex information systems.

- Some enterprises will approach marketing intelligence gathering in a more deliberate fashion and will train its sales force, after-sales personnel and district/area managers in order to take cognizance of competitors’ actions, customer complaints and requests and distributor problems. Enterprises with vision will also encourage intermediaries, such as collectors, retailers, traders and other middlemen to be proactive in conveying market intelligence back to them.

- Managers play at least three separate roles: interpersonal, informational and decisional. Marketing Intelligence Systems, in electronic form or otherwise, can support these roles in varying degrees. Marketing Intelligence Systems have less to contribute in the case of a manager’s informational role than for the other two.

- Three levels of decision making can be distinguished from one another: strategic, control (or tactical) and operational. Again, Marketing Intelligence Systems have to support each level. Strategic decisions are characteristically one-off situations. Strategic decisions have implications for changing the structure of an organization and therefore the Marketing Intelligence Systems must provide precise and accurate information. Control decisions deal with broad policy issues and operational decisions concern the management of the organization’s marketing mix.

6. REFERENCES
