

## Decision Conceptual Model for Innovation Ways using the Competitive Intelligence System

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### Abstract

*This paper proposes a theoretical model that can be used in making decisions regarding the innovation ways. The innovation strategy is designed with the competitive intelligence system. This model will be implemented software and will be applied in a service company. The results of the present study will be communicated in a future paper.*

**Key words:** competitive intelligence, decision making process, innovation

**J.E.L. Classification:** C89, M10, O32

### 1. Introduction

The development of new technologies and the globalization as well lead to a business environment disturbed both inside and outside a company. At company level, the managers have to make decisions under increasingly complex conditions. These conditions significantly affect the decisions by the available information, the organizational objectives, the individual decision maker objectives and the organizational culture.

Although the decision making is a dynamic and constantly evolving process, every decision must go through some basic steps. These steps are: identifying the problem, creating alternatives solutions, selecting the most beneficial alternative, implementing the chosen alternatives and obtaining feedback to assess the decision effectiveness.

Effective managers do not make many decisions. They think about the strategically important issues and do not focus on the speed of the decision making.

More and more companies recognize the need to become smart ones in order to be able to meet the current highly turbulent business environment. They also recognize that Competitive Intelligence is essential in strategic management and decision making (Breese, 2011), (Deng, Luo, 2010), (Patterson& Martzoukou, 2012, p. 44) to create and maintain the competitive advantage.

Competitive Intelligence is a managerial concept that any company can use to adapt both to the demands of its clients and the behaviour of its partners and competitors.

Competitive Intelligence allows to anticipate the market evolution by analyzing the competitors' moves and building the scenarios to understand the strengths and the weaknesses of the companies.

Beside its many benefits, the Competitive Intelligence presents several challenges, namely: building and developing a Competitive Intelligence program, being aware of the Competitive Intelligence work program, budgets constraints, lack of the qualified human resources, effective and timely collection of the relevant information and the optimal use of them.

Competitive Intelligence concept appeared since 1960 and was considered as a procedure to collect and to process the internal and external information of the companies in order to gain a strategic advantage.

In the last years, Competitive Intelligence is considered a valuable factor contributing both to the strategic decision-making and to facilitate and to promote the creativity, providing essential information for decision-making during the different stages of development of the new products and services.

## 2. Literature review

The last ten years, the companies have become increasingly interested in investing in the implementation and development of the Competitive Intelligence systems.

From the specific literature it was observed that in developed countries, the large companies often use the Competitive Intelligence techniques while the small companies use them occasionally. In developing countries, the companies use the information networks and the intelligence employees as main information sources to analyze the Competitive Intelligence. In transition countries, the companies use the Competitive Intelligence techniques similar to those practiced in developed countries but less complex.

In 2009, Erickson and Rothberg asserted that the Competitive Intelligence level is much higher than in the consumer industries (Patterson& Martzoukou, 2012, p. 44).

Many researchers have studied, how to use the Competitive Intelligence practices in the companies, such as: in Finland (Hannula and Pirttimaki, 2003, p.2), in France (Smith and Kossou, 2008), in Sweden (Hedin, 2004), in UK (Wright, 2005, p.3), in Germany (Michaeli, 2004), in China (Tao and Prescott, 2000, p.4), in USA (Bhardwaj and Prescott, 1995), in Belgium (De Pelsmacker, 2005) and so on. The authors of these studies have found large differences in the application of the Competitive Intelligence from one state to another.

Studies (Michaklysin, 1996), (Pierce *et al*, 1998), (Zangoueinezhad, Moshabaki, 2009) showed that all companies that have intelligent employees and use monitoring systems the competitors' activities, can gain the competitive advantage through innovation, enabling the manager to improve the business planning and the decision making.

Also, the specific literature points out that the companies use highly developed Competitive Intelligence systems. Yet these systems are used business information and cannot be used by managers to build strategies for obtaining long-range competitive advantage on the market.

## 3. Information and Competitive Intelligence

Competitive Intelligence is a compilation and an analysis of the data and the information provided by various human or technical sources. These analyzes predict or provide an overview of the intentions, capabilities or activities of an entity and the possible implications and consequences.

Competitive Intelligence is a specific concept, adapted to the business environment. It is understood as an economic, systematic and continuous process intended to ethically and legally collect information on chosen targets (customers, competitors, opponents, staff, technology, economic environment in general) and finished by the dissemination of the Competitive Intelligence products and services to the decision makers on all levels (strategic and tactical) in an efficient manner, safely and in due time.

A restrictive view of the Competitive Intelligence is that it is a distinct activity, it runs only for the decision makers and it ends when the intelligence products are delivered. This approach is based on the company's governance model in which intelligence is collected and analyzed by the intelligence community and disseminated to the decision makers. It is important to maintain the intelligence distinct from the decision-making process, so that it is never be politicized and does not influence the democratic process of decision making. The essence of the model considers the intelligence as "information provider acting in a decision-making".

The dictum "knowledge is power" has never been more true than now, in today's complex and quick business environment. Success of any business increasingly depends more and more on the knowledge of the rapidly changing events with impact on the organization. However, in many companies, managers still working with large amounts of raw data, little information with added value derived from the analysis and very little the intelligence properly applied in a company.

A preferable approach is to develop the decision-making process providing the decision makers, with a larger amount of intelligence and a smaller one of information and data.

Most managers make decisions using some knowledge and more "instinct". Intuition is required; in fact, in many cases, it is a determining factor for success. Leaders in many areas have acquired status, largely through intuitive abilities.

In a time of dynamic changes the past experience is not enough. It may not be the same frame of reference to judge the events and the circumstances. In such periods, the decision makers need more external support. They need an intelligence mechanism that can continuously produce the organizational knowledge.

When there are several sources of a product or service, the competition is a natural and inevitable consequence. Suppliers take action in order to isolate the activities from the aggressive competition but, invariably, they have to engage themselves in some form of fighting with the others in order to gain some market share.

On mature markets, the quality of the competitive strategy is now as important as the strategies related to the determination of the company performance.

All strategies require information and the competitive strategies are not excepted, so this situation has created an increased demand for Competitive Intelligence.

At present, the companies contain differentially the whole spectrum of the Competitive Intelligence activities.

At the lowest level there are companies contented with press reading and on-line searches. Internet has a profound propagation for Competitive Intelligence. At the upper level are the progressive companies which develop fully institutionalized Competitive Intelligence, with their own staff and a substantial budget, illustrating aggressive practices.

Experienced managers know that the effectiveness of a decision is determined by two criteria: the quality of decisions and the attachment to those who must implement it. Using Competitive Intelligence enhances the decision quality. The quality of decision is determined by the way the making decisions process is developed. A quality decision if not correctly implemented is ineffective. Decision implementation is determined by the attachment, which is why the involvement of those who will implement the decision is vital for the decision making.

Both the decision quality and the involvement of those who apply it must be taken into account when developing the decision-making procedures.

#### **4. Short presentation of the theoretical model**

Owing to the competitive environment specific to the market economy, the basic condition for the success of a company is the permanent search for solutions allowing one of the best possible positions on the market.

In this way two business attractive opportunities, namely the development of new services to attract new profits and the reduction of operation costs for existing services without a diminution of clients satisfaction.

There are three directions used by companies to develop business opportunities for services innovation:

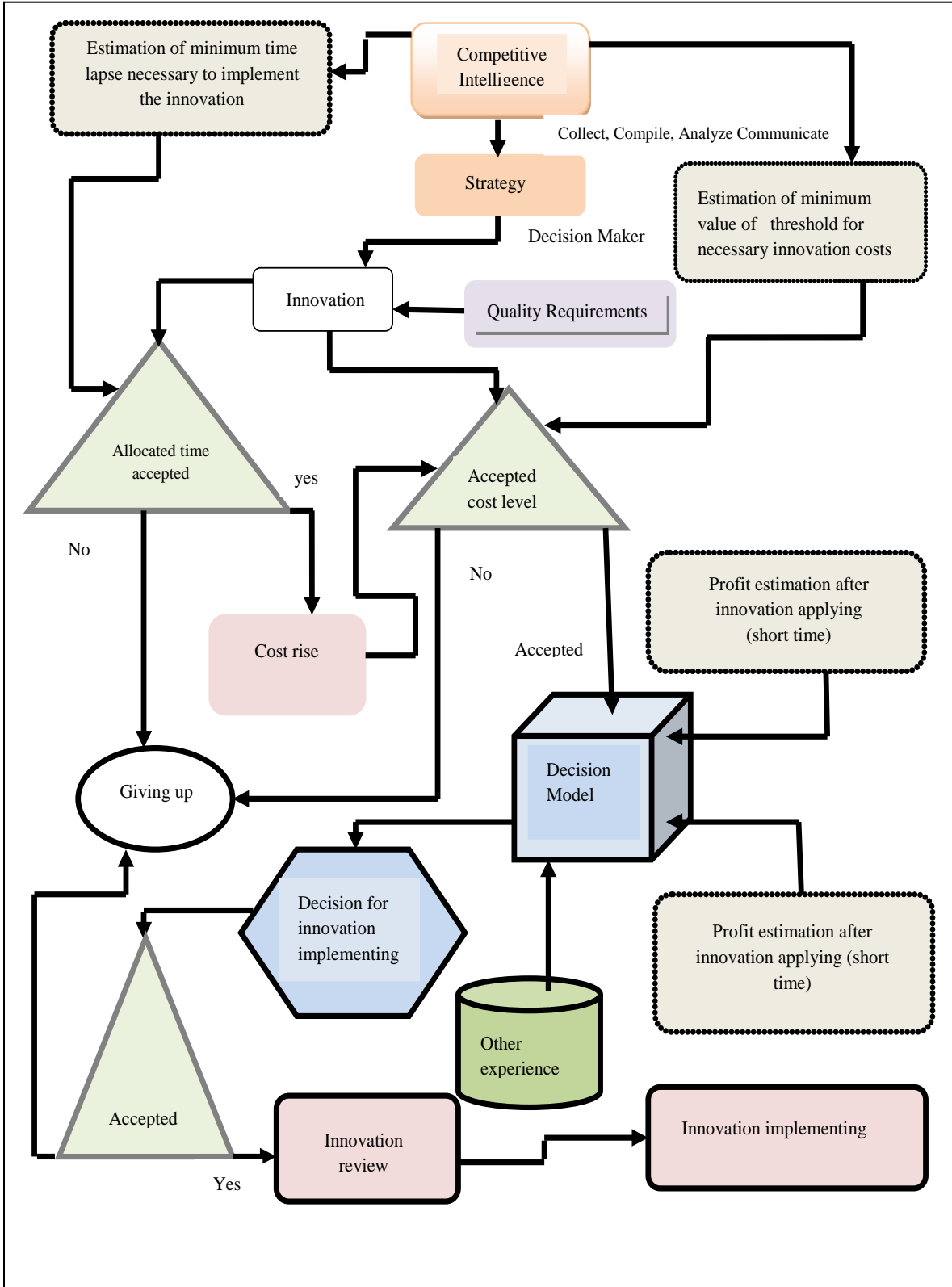
- Service model innovation – establishing the service strategy and the service business model for the company;
- Service operational innovation – severe reduction of existing services operation cost in the same time with the continuous improvement of services level at the client and of his experience;
- Innovation in services improvement –creation, development and delivery processes management keeping the same discipline and strictness as for the new products.
- Also, the innovation activity in the company is hindered by some factors like:
- Effort excessive concentration on products and/or on technologies existing in the company;
- The economic crisis;
- Exaggerate avoidance of risk factors at the level of company management;
- Uncertainty regarding the evolution of raw material prices/ demand for the new product;
- Tackling by the company of an activity field for which there is no experience;

- Communication and information difficulties.

Fig.1 presents the scheme of a model showing Competitive Intelligence influence on innovation in a service company.

In this model, the Competitive Intelligence has a deciding role in finding innovation possibilities.

Figure no.1 Conceptual model for the innovation ways using the competitive intelligence system



Source: Created by authors

Competitive Intelligence is a tool for generating the knowledge to implement the innovation. This tool facilitates the creation of the strategies and the solutions in critical stages of the innovation process.

To achieve the innovation strategies the Competitive Intelligence collects and analyzes perceptions and opinions of the customers about the specific products and services.

The implementation of the innovation takes time. A long time to implement the innovation leads to increase the costs and thus the innovation process becomes unprofitable.

Implementation of the innovation is influenced by several factors such as: costs, estimated profit, experience of other companies or other sources of the innovation. Thus, all these factors go into a decision support system. Once the decision is taken, the innovation must be reviewed and adapted according to the additional constraints due to all disturbing factors.

If the innovation can be implemented then it is a necessity result indirect by the company's strategic planning, process controlled by the Competitive Intelligence.

According to the data structure and the type of innovation it determined how to approach the model building and optimization.

## 5. Conclusions

The model presented in this paper will be used and improved in a service which develops innovative procedures, the results will be communicated in a future work.

The knowledge base of this system should be built on a distributed data base system because of the necessity of previous experience in innovation of other systems. It is preferable to store this information in NoSQL type data bases because the data structure is variable (e.g. as a function of innovation procedures type).

If this system is implemented and developed in companies, this will help to the construction of strong collecting and knowledge exchange cultures playing an important role in the stimulation of services innovation.

The use of Competitive Intelligence systems in service companies lead to lower costs in general procedures of the companies and creates durable innovation.

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