

A REALITY FOR ANY FIRM – THE INFORMATION TECHNOLOGY

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Abstract: In a fast moving economy, no organization can expect good results without implementing new technologies. Computers, networks, software systems are a reality and denying it will eventually lead to a negative impact on the organizations' results. In this, we refer to some aspects of information technology and the advantages and disadvantages that software systems can provide to a manager or management team and, in the end, to an organization.

Key words: informational system, informatics system, DSS

The millennium in which we develop our activity is considered one of information, well selected and well invested. The present environment of competition growth, of diversification of opportunities on the market, makes absolutely necessary valuing the data and the information that we have this being possible only using advanced technical methods.

Using the computer to monitor the activity of commercial companies has as purpose, first of all, systemizing information and easy access to it, and secondly allows using a whole series of informational systems, in order to ease the day to day activity. The main advantages of using the calculating technique are excluding subjectivity and user's lack of experience in developing the activity, as well as easy access to the data base.

In the day to day life, computers are something common, even absolutely necessary in some cases and we are right to say that we live in an informatics society. Today, computers are everywhere, many times connected between them and creating thus computers networks. Still, we must not forget that a computer is in fact a "machinery" that processes a series of information which the user provides. Information is thus the main element in this chain. In practice, we encounter, among other things, two concepts related to this, which are the informational system and the informatics system.

The informational system represents all the elements implicated in the process of collecting, transmitting, processing information, its role being to transmit the information between different elements. Inside this system we have: the rumored information, the documents carrying information, the personnel, the means of communication, information processing systems, etc.

Most of the activities meant by the elements inside the informational system are being developed based on the calculation technique. The primary data is being processed, the result is being transferred forwardly to another processing department and the transfer is made electronically.

All the elements implicated in this whole electronic process and data transmission make up an informational system.

We can thus say that, the informational system is included in the informatics system, the latter being a main element of the first.

One of the most informatical branches today is economics. From ancient times, the man, even without being conscious of this, has been preoccupied with the area of economics. The motivation was a simple one – in order to satisfy certain needs, it is necessary to use certain goods, certain resources, all the used elements in producing new necessary goods are called economical resources. These resources are limited, thus needing to be managed correspondingly, in order to satisfy the main needs.

Thus it has appeared the general economical problem related to resources management and its way of use, which represents a man's work to choosing and using resources to better satisfy his needs.

We are aware that the process of introducing and use of new information technology in organizations is based on the skills of experts, who, along with their specific knowledge, have to master a series of interdisciplinary skills, too. Besides knowledge, different forms of organizing and managing human resources, long term planning, employment, training, motivating, encouraging creative work and proper stimulating are significant. Accompanying psycho-sociological and managing processes depend also on conditions, forms and area of work, human resources and skills available, working atmosphere, and other factors.

The informatics system covers all the problems of the economical agent, to create interdependencies between components, thus the physical structure from the system attached to the economical agent has another structure in the informational plan. He comes between the decision and execution systems being subordinated to them. By implementation of some mathematical methods and using the electronic calculation technique, *the informatics system gives increased values to the informational system under quantity and quality aspect*. Thus, we witness an increase in the calculation capacity, under the aspect of the amount of data processing and operations, increasing the information exactitude, increasing the information operation, in the conditions of increasing the complexity of economical activities. All these determine a closeness of all the phenomena and economical processes it coordinates, with all the positive economical effects which derive from it.

The fast changes in the business environment determine informatics systems to reach an essential component of the organization in fulfilling its purpose (mainly, obtaining profit). Thus, using information technology has become a necessary in the organization's functioning especially today when we sense new tendencies in the evolution of organizations like:

- using the Internet at organizational level locally or globally, which has become a main means of communication for the commercial activity, an important means of promotion etc;
- the emergence of Internet organizations, which develop their business only in this area, these organizations using Internet, Intranet and Extranet as well as other networks to ensure commercial activity support;
- globalization, the relation of this phenomenon being a relation in which every factor determines the other one, both being ample elements, tendencies of emphasizing (developing);
- reformulating the business process, a consequence of the globalization tendencies, because the business environment is in continuous change and new techniques and methods of elaborating this process are being imposed.

In a company with more activity spheres, any activity must be founded at the

level of product groups' level which will be the purpose of commerce and not at a level of a corporative strategy. The company is afterwards divided in *main activities*, like, for example, the sale process, and *auxiliary activities*, like human resources management which creates the necessary general frame for the functioning of the company, but which cannot be directly correlated with any of the individual parts, examining afterwards the way in which we consider that each part contributes to generating value inside the company and the difference towards competitors in the area.

Economical modeling has proved to be a very helpful instrument in this situation, which in time has become a main element of the decision founding process inside companies. Economical modeling represents an instrument useful to the managers, economics being an area in which the application of experimental methods is rarely used, because in most of the cases it leads to extremely negative results (maybe even bankruptcy) for the economical agent, proportionally direct with the number of possible action alternatives.

Modeling and simulating economical processes – frontier economical area with mathematics and calculation technique – deals with founding managerial decision, in conditions of efficiency for the company, with the help of some flexible models and with the possibility of using the simulation technique.

The necessity of elaborating some economical models resides in the fact that the economical problems cannot be accurately modeled through strict, fixed models, mainly due to the fact that they cannot identify the special dynamics of the economical phenomenon, preferably we will use multiple elements from the theory of probabilities, heuristics, vague sets, dynamic programming, simulation techniques etc. Thus, in elaborating some models for the economical problems we must take into account, for example, the economical aspects, the decision type, the human behavior or the informatics systems, all these influencing directly the managerial decision.

Thus, the necessity for a market for developing solutions has appeared – decisions founded according to the evolution of commerce and the existing business environment. And the question the managers must answer is: which would be the most feasible way of founding and implementing a decision in such a manner in which to offer good advantages to the firm at a good relation between quality and price?

The answer derives from the opportunity of the technical environment itself, through administration programs of internal resources, of manager programs, soft programs for achieving different investments. The achievements in computer area and electronic industry have opened a lot of doors for product and services diversity. One of these fully developing sectors has resulted from the continuously increasing telecommunication industry. This sector is formally names “information technology”. The concept of “information technology” (and the products and services it implies) as well as computer integration and networks, have changed the way in which business and personal communication are done. In the present competitive and difficult business environment, the process of finding clients is very important, of satisfying their expectations and of obtaining profit from that. In order to achieve this, the firms need improved strategies, improved business proceedings as well as that necessary organizational agility to take advantage of emerging opportunities.

Change is inevitable and the rate of technology change is continuously increasing, business, the processes implicated in business and the business models must permanently adapt to the economical climate and the competition pressures.

Computerized decision support systems became practical with the development of minicomputers, timeshare operating systems and distributed computing. As technology evolved new computerized decision support applications were developed and studied. Today, many computer programs are converging to provide integrated support for managers working alone, in teams and in organization hierarchies to manage organizations and make more rational decisions.

Starting from this point, in time, within the organizations' management, a new area has appeared that of "information" management, which means the activity of collecting, organizing, depositing and using internal or external "information", which sum up interest aspects for the organizations.

The emergence of this new area of management has imposed the necessity of its reflection in the international technologies plan, which meant creating and developing Knowledge Management Systems (KMS), and as a following "step", the emergence of decision support systems (DSS).

Knowledge Management System (KMS) refers to a (generally [IT](#) based) system for [managing knowledge](#) in organizations, supporting creation, capture, storage and dissemination of information. It can comprise a part (neither necessary nor sufficient) of a [Knowledge Management](#) initiative. The idea of a KMS is to enable employees to have ready access to the organization's based documented of facts, sources of information, and solutions.

On the other hand, Decision Support Systems (DSS) are a specific class of computerized information system that supports business and organizational decision-making activities. A properly designed DSS is an interactive software-based system intended to help decision makers compile useful information from raw data, documents, personal knowledge, and/or business models to identify and solve problems and make decisions.

Consolidating the society based on knowledge has lead to evolutions in the plans of informational and informatics technologies with a role in planning the organization's resources. The result was developing under quality and quantity aspect of informatics systems which "offer" a support in planning the organization's resources and, from this, of a support regarding the whole decision process of the firm.

Projecting decision support systems is based on the idea that quality information (from the content's point of view as well the presentation's type) is essential for the decisional process and the decision quality.

Research in the area of tactic and especially strategic management has confirmed that decisional processes at these levels are generally unstructured. Today, the major concern of the specialists in the area of informatics systems is to satisfy the increasing demand of the managers for information which will allow them to evaluate more rapidly and correctly the performances of the organizations that they lead.

The support systems for decision can satisfy this quality information demand and can improve the efficiency of the decisional work of the managers.

The dynamics of economical life and the contemporary information explosions make a necessity out of using the different types of assisting systems for the managerial process. In spite of the imposed limitations by the impossibility of perfect reproduction of the human judgments by a computer, informatics systems for management represent today absolutely necessary instruments of modern management, most of the routine decisional activities, the amount of all information necessary for the decisional process together with techniques of research and finding of information being completely

overtaken by these systems. More, their perfection continues, doubled by improving computer performances, offering increased possibilities of taking over more and more comprising segments of the reasoning activity developed by humans.

The role of informatics systems for management consists of, first of all, reducing costs, increasing the potential of business growth and mechanization or assisting the decisional process. The advantages of introducing software systems in decision assisting consists of collecting and rapid processing of a huge amount of data, using economical and rough mathematical methods and models in the analysis and interpretation of the information, as well as achieving multiple correlations between elements and phenomena characteristic to the analyzed decisional situations, correlations which offer the possibility of some complex analysis and interpretations founded, and most of the time, presented in a most suggestive manner.

At the same time, we must also consider certain limits of a system like this one, limits deriving, first of all, from the impossibility of completely and perfectly substituting the human judgment, of the low level in which we take into account the uncertainty of the economical environment and the dependency between these software systems and the calculation systems upon which they are implemented. Even so, the influence of informatics systems for management upon increasing decisional activity efficiency cannot be doubted.

The support given by informatics systems for management differs according to the level of management and the type of decision it addresses. Some researches have showed that informatics systems for the executive are the most frequently used among all the types of systems for assisting the decisional process, at different levels of management.

The main advantage imposed by using informatics systems consists of time reduction of management decision founding, aspect which resides from the existence of a dynamic change of information between organization and partners (internal and external environment) provided by these – compulsory implementing and functioning of the systems in need of an adequate informational infrastructure, INTRANET technologies, VPN, etc.

Introducing information and computer technology, more exactly internal software programs of developing and improving the activity of a firm, within the processes of a firm, it is absolutely necessary for improving its availability and performance. Today, a firm's availability to do business is considered implicitly by potential customers to be 24/7.

Using information technology can thus offer an advantage of the firm in front of its competitors – the capacity to achieve something that the competitors cannot and something which is valuable to potential customers. Thus, the firm will be able to offer products to its customers more rapidly, cheaper and better than its competitors that do not use the information technology and software programs with the purpose to help the internal process of activity developing.

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