

INFORMATION SYSTEM - A COMPONENT OF THE MANAGEMENT SYSTEM

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Abstract: *In the market economy, when the relationship of the product-market - competition becomes more and more complex, the task of the deciders is increasingly difficult. A modern organization must have a management style based on the flexibility, dynamism and foresight. In conditions of diversifying of the current economic-social environment, adopting the decision involves not only the call to inspiration, talent or luck, but also to use the scientific methods to approach and resolve the leading process dilemmas of the economic systems. The problem of the decision-making is the activities difficulty of the collecting, processing and selection of the organization information, in general. The relevant integrated information into the decision-making is an important resource for an organization, when there is quality and obtained and used it in a right time. The decisions-making, therefore, is based on the complex, operational and quality information.*

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JEL Classification: C63, M11, M15.

Performing some criteria for value, accuracy, depth, length and usefulness of the information is absolutely necessary because it can help to improve the products, the human skills, the management methods, the strategic position of an organization, referral to the development opportunities and improve the profitability of the organization. Checking the degree to which information serves to the organization's management in the analysis and control of the activities, removing the factors that could alter the cause and effect relationship in the economic phenomena, ensuring the

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providing rigor, are the requirements that information must satisfy them for an efficient capitalization in the decision making of the organization.

In the speciality literature there is not a consensus on the definition of the information system. Thus (Ali, E., Ionescu, B., Cosăcescu, L. & Feleagă, I., 1997), the content of an information system can be seen as:

- A formal content, automated;
- An informal content, alive and dynamic;
- An oriented content towards the project of a decider.

For the first approach, J. Le Moigne¹ believes that the information system is a system of organization that processes and conveys the information between two systems: guiding (decision) (one who sets goals and establishes their practical transposition) and operating (one who achieves the basic activities) (Figure no. 1).

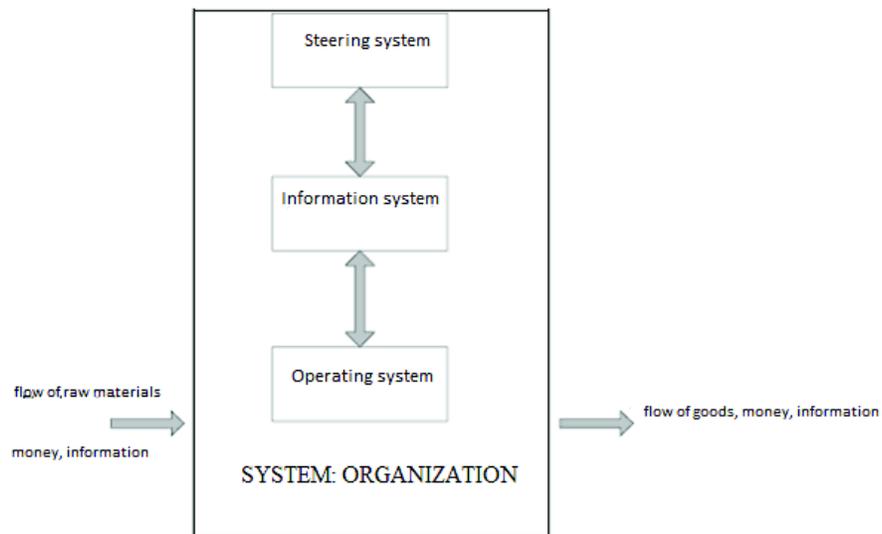


Figure no. 1. Information system

Although this definition is clear and based on the operations and tangible events, it is limited because it does not capture much of the circulated information from the enterprise.

¹ Jean-Louis Le Moigne (born 22 March 1931 in Casablanca) is a French specialist in systemic and constructivist epistemology.

The second approach belongs to J. Melese¹ that presents the information system as “an interconnected ensemble of all that leading to informed the members of an organization”.

As a result:

- It is a global vision (an interconnected ensemble);
- Information is addressed to the staff and the partners of an enterprise; the information system is viewed as a complex network by the dynamic information.

If the first two definitions can enter in the descriptive category being preferred by the European authors; the latter approach is a functional one.

J.C. Emery (1987) believes that “information system includes components that perform the well-defined functions: recognition, transmission, storage, comparison and sharing of the information” and H.C. Lucas (1990): “information system refers to the all organized procedures so as to allow the providing the information necessary to the decisions making and/or control the organization”.

So, the American concept relates to the methods (procedures and functions) and to the final goal (decisions).

As a result, the information system (*Dicționar de informatică*, 1999) is a set of the information flows and circuits organized in a unitary conception. It uses models, procedures, human and material resources for collecting, recording, processing, storage and/or transmission of the data and information, which assure the information interconnections between the management system and the led system, between the components of these systems, the socio-economic organism that serves it and the external socio-economic environment.

The information system task is to give the information in a directly usable form at the appropriate moment “achievement of the own objectives of the social - economic organism, according to the general objectives of the society with the maximum efficiency”(Ali, E., Ionescu, B., Cosăcescu, L. & Feleagă, I., 1997).

Information system has two main features (Ali, E., Ionescu, B., Cosăcescu, L. & Feleagă, I., 1997) (Figure no. 2):

- *Efficacy* (ability to provide the results according to the objectives of the enterprise);

¹Mélèse Jacques is a French engineer and consultant in modular systems analysis, died Nov. 25, 1994.

– *Efficiency* (ability to optimize the resources using), allowing the information to satisfy the “consumers”.

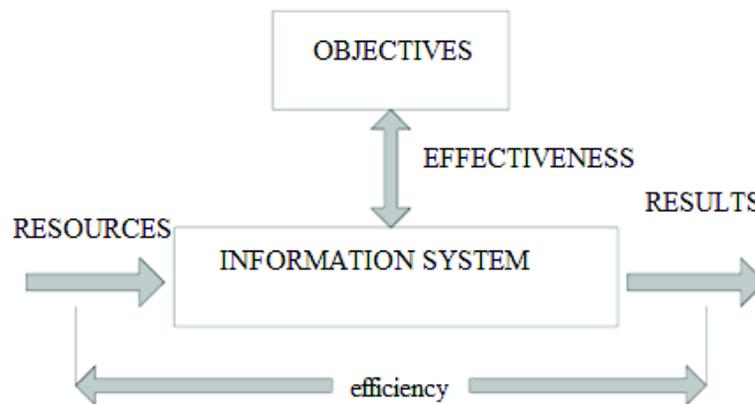


Figure no. 2. Characteristics of the information system

Enterprise's information system consists of the several components closely interrelated, namely: data and information, information circuits and flows, information procedures and the treating means of the information (Nicolescu, O., 2001).

Relations between the information system and organizational system of the enterprise are both functional and structural-constructive.

The entire information system is supported by the organizational structure of the company. Processing the data and information, operating the information flows and procedures, using the means of the information treatment, are the results of the task performance, competencies and responsibilities of the managers and performers within the organizational structure of the company. It can be said, without reservation, that the more reasonable and more functional the organizational structure of the company is built; the more favourable foundation to the information system is provided.

Complementary, the information system, with all its components, determines the functionality of the organizing system. We note, in this context, the data and information have a decisive role in performing the tasks for each post holder in the company.

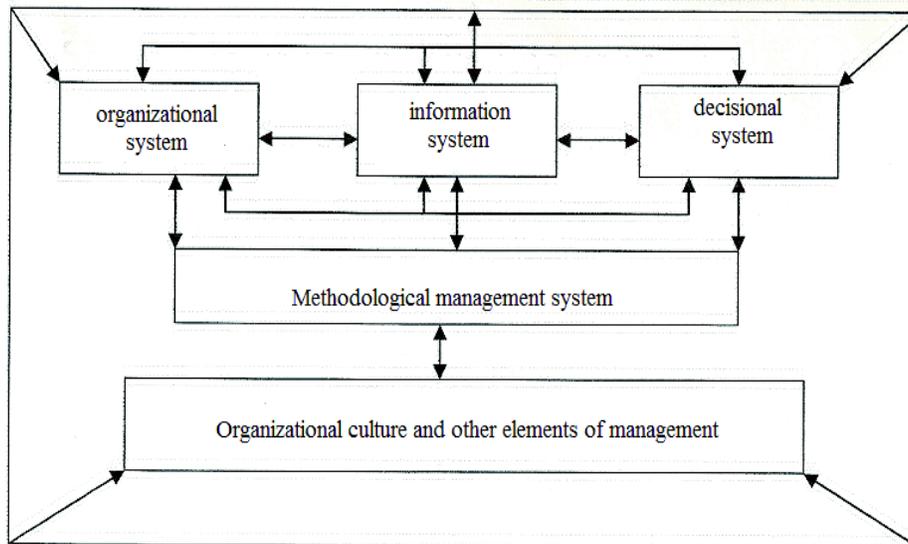
Without the corresponding qualitative and quantitative information to reach for each post holder in the real time, they cannot perform adequately the work.

The procedures and methods of treating and processing have a major impact on the efficacy of the whole company and the organizational system links.

The company's management system has the following components:

- Organizational system;
- Information system;
- Decisional system;
- Methodological-managerial system.

Also, we emphasize that all the components of the enterprise management system are decisively influenced by the organizational culture and other management, as shown in Figure no. 3:



*Figure no. 3. Components of the enterprise management system
(Cornescu, V., Mihailescu I. & Stanciu, S., 2003)*

Increasing the size, complexity and importance of the information system in the last two decades was reflected in the information management. The information management (Nicolescu, O., 2001) means

using the management principles relating to the foresight, organization and staffing, coordination and control in the information field.

This type of management includes three major components, respectively:

- Data resource management;
- Information processes management;
- Information technology management.

For the performance of any enterprise, it is essential the information system not to be approached itself, but in conjunction with other subsystems that form the management system.

The principles for achieving and rationality of an information system must have the following objectives:

- Subordination of the information system designing and operation to the requirements of the business management;
- Information system linking with the society structural organization;
- The information treatment in a methodological unit;
- Focus on the essential deviations;
- Maximizing of the relevant information;
- Flexibility;
- Efficiency

Functions of an enterprise information system can be summarized in the following three areas:

- Decision-making function;
- Operational or managerial function;
- Documentary function.

The *decision-making function* expresses the information system mission to provide the information elements necessary to make the decisions.

The *operational function* provides the operational decisions and managerial methods, ensuring the achieving the objectives contained in the organization strategy.

The *documentary function* expresses its knowledge mission, according to which there is a series of information used in the decision-making or conducting the activity.

Conclusion

In conclusion, the information system is a basic subsystem of the enterprise management, which achieving the multiple functions and presents an accentuated dynamics.

Efficiency of the decision making is directly proportionate to the nature, quality, quantity, frequency and the volume of information that decider has them at his disposal.

A quality process on the decision-making has influence over the profit, cost and the efficiency of using the product factors. A decision making involves a great consumption of time, while there are collecting and analyzing the information, there are consulted people in order to shape the decision-making situation. The decision-making process and its quality are influenced by skills, preparation and implication of the decider. As a result, to have a well-founded decision, any decision-making process must purchase, process and interpret a more and more volume of information, in a shorter time.

References

- Ali, E., Ionescu, B., Cosăcescu, L. & Feleagă, I., (1997). *Informatică generală*. Bucharest: Sofitech Publishing House.
- Cornescu, V., Mihailescu, I. & Stanciu, S., (2003). *Managementul organizației*. Bucuresti: All Beck.
- Emery, J.C., (1987). *Management Information Systems*. Oxford: Oxford University Press.
- Lucas, H.C. Jr., (1990). *Information systems concepts for management*. New York: McGraw-Hill.
- Nicolescu, O. et al., (2001). *Sistemul informațional managerial al organizației*. Bucharest: Economică Publishing House.
- *** *Dicționar de informatică*, (1999). Bucharest: Editura Științifică și Enciclopedică.