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METHODOLOGICAL PROPOSAL IN ORDER TO INCREASE THE ORGANIZATIONAL LEARNING BASED ON EXPERTS' KNOWLEDGE AND INFORMATION SYSTEMS IN THE FIELD OF ASSET MANAGEMENT AND MAINTENANCE

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Today, there is a broad consensus about the importance of knowledge in organizations as a differentiating source in the search for efficiency and effectiveness in the decision-making process and in the activities of the productive processes. Different concepts and methodologies have been proposed to enhance the potential advantages of knowledge [1], and also different information systems have been generated to face the challenge of obtaining valuable information from the large amount of data that is handled in companies [2,3].

Based on the above, a new perspective is presented for the achievement of the capture of the valuable knowledge for an organization, from both internal and external experts, as well as from the information systems. It is proposed to use a methodological proposal [4] that takes advantage of the synergies generated by working in a coordinated process with both sources of knowledge. Figure 1 shows the general scheme that passes through four phases advancing in a spiral.

Figure 1: Scheme of the development of Conceptual Model System [4]

With each turn of the spiral, it is performed an iteration of the process and generate results that are reflected in the so-called Conceptual Model. This model corresponds to the representation of the valuable knowledge detected, presented in a simple way for a quick understanding of the people who need to understand the system. In turn, it presents more complex elements such as direct debugged queries to information systems. It is also possible to find plans, global and individual analyzes, description of concepts defined as keys, among many others. It is sought that this repository of information presents the greatest source of knowledge for a given productive system. The detail of the proposed process to generate the Conceptual Model is detailed in [4].
The expected benefits of the Conceptual Model are multiple and affect different agents of the company. An example corresponds to the case that works with a productive system that is required to know how it will react to important changes in aspects such as change in the demand for service. In many cases, these productive systems have a large number of variables and aspects that influence the result, so it is very difficult to make a good prediction, and even when it is done, the error associated with the forecast is usually very high. Thus, it is considered that a very effective way to face this situation is to increase the level of understanding of the productive system, and having such information in an orderly and structured way so that it is more feasible to model the different scenarios in a proper manner. It is at this point that the methodological proposal is expected to make its contribution materialized in the Conceptual Model that presents the valuable knowledge of the productive system.

Another case, corresponds to when a company wants to make improvements in its processes, eliminating the causes that generate inefficiencies. In many cases, the agents involved have a clear vision of the problems they face, but the hypotheses of the causes raised by each agent are often very different and even contradictory. Considering the above, it is argued that increasing the understanding of a productive system, there is a great benefit by unifying the visions of the different agents. In addition, by making each of them aware of the impact of their decisions on the overall process, it is possible to aspire to global rather than optimal local optimizes that generate inefficiencies in the overall process.

It should be noted that most of the benefits and responsibilities of this type of proposal are intended for the General Management, aiming at the decision-making process to be based on the valuable knowledge presented in the Conceptual Model. In turn, the General Management is responsible for promoting organizational learning within the company, defining the level of access to the different members and urging them to apply that knowledge. This corresponds to a source of efficiency and effectiveness in every productive system.

Finally, the authors suggest that this type of initiative be carried out under the project plan, specifying the objectives, scope, expected results, deadlines, responsibilities and resources. For more information on this point, review [4].

REFERENCES


