Chapter 18

Requirements of IS Development Methodologies Towards the New Organizational Paradigm – A Brasilian Study Using Delphi Technique

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The purpose of this study was to identify through the Delphi Technique, important requirements of an information system development methodology. These requirements should satisfy the needs of actual organizations, regarding the strategic use of information technology. An initial listing of requirements was developed through a review of the related literature. The Delphi panel consisted of 31 brazilian specialists in information systems. Two rounds were employed to collect from this panel the most important requirements. The requirements were distributed in five basic areas: technical process, interaction between the end user and analysts, organizational structure, business strategies and quality of the information system. It is expected that methodologies will continue to be of great importance in the development of information systems and they will increase their focus on the social-technical approach.

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INTRODUCTION

In the actual dynamics of the business world, the organizations have to adjust itself to a rapidly changing environment. If the organizations want to survive and yet be competitive, they have to be flexible, to focus on their strategies, to be process structured, and to make decisions based on an integrated vision of their function’s units and environment, in order to cope with this changing world and to improve their knowledge about their businesses.

Making decision involves more than information: it’s necessary to get high quality and value information that contribute to get the organizations goals (Jobim, 1979). High quality and value information ask for an information system (IS) or a set of appropriate information systems to support the organizations’ strategic needs.

Markus and Keil (1994) have written about the information system’s goals: to help the organizations to solve their problems. Davenport (1994) talks about the importance of human’s aspects in all process of planning, development and implement an information system.

In that sense, the planning, development and implementation’ methodologies of information systems should make possible a kind of flexibility required by the actual business environment, supporting the organization in adapting easily to it. (Crockett, 1992). The information systems should also get to the needs, goals and expectatives of the user. However, although the IS personnel is faced with new demands, their tools and methodologies reflect the old paradigm of functional organizations and data processing.

Accordingly to Avison and Fitzgerald (1997), the information system development methodologies (ISDM) have been used, basically, for three reasons:

a) Search for a better final product;
b) Search for a better development process of information system and;
c) Definition of a standard process of development.

There is no concern about the social and organizational aspects in the reasons stated above and the lack of such emphasis could be the reason for the distance between IS requirements and organizational needs.

Jayaratna (1994) estimates that there are 1,000 kinds of ISDM. Each one of them implies in a different way of development information systems. However, the choice of any methodology by an organization regarding the aim of developing information systems which support their business actions is not an easy process. Therefore, the purpose of this chapter is to present a list of requirements to help comparing and choosing an ISDM more adequate to the needs and demands of the actual organization. This list is a result of Delphi study, apply to a group of brazilian experts and reflect their perception of the requirements an ISDM should have to allow IS personnel to reach the new demands of their jobs.
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