A Three-Dimensional Approach in Evaluating ERP Software Within the Acquisition Process

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ABSTRACT

This paper is based on an extensive study of the evaluation process of the acquisition of an ERP software of four organizations. Three distinct process types and activities were found: vendor's evaluation, functional evaluation, and technical evaluation. This paper provides another perspective on evaluation and sets it apart as modality for action, whose intent is to investigate and uncover by means of specific defined evaluative activities all issues pertinent to ERP software that an organization can use in its decision to acquire a solution that will meet its needs (i.e., the assessment of the vendor, technology, and fit of a specific ERP software to a given organization).

Keywords: ERP; evaluation; functionality; implementation; technical; vendor

INTRODUCTION

Enterprise Resource Planning (ERP) packaged solutions are sophisticated, complex, and comprehensive, as well as diverse. They are viewed as an alternative to in-house development and as a means of decreasing internal development costs (Eckhouse, 1999; McNurlin & Sprague, 1998; Verville & Halingten, 2001). The acquisition of such software, however, is a high expenditure activity that consumes a significant portion of an organization’s budget. It is also an activity that is fraught with risk and uncertainty. As such, evaluation activities play an important role in the acquisition of ERP software (Verville, 2000, 2002; Verville & Halingten, 2001).

In the past several years, a number of papers have been published addressing ERP issues (Estaves & Pastor, 2001; Stefanou, 2001; Verville & Halingten, 2002); however, there has been limited research pertaining to ERP evaluation (Stefanou, 2001). A review of the literature conducted in the area of ERPs has shown that research in this area has concentrated on implementation and post-implementation issues (Esteves & Pastor, 2001; Stefanou, 2001; Verville, 2000). The types of problems and issues that arise from the implementation of ERP software range from specific issues and problems that can come up during the installation of an ERP to behavioral, procedural, political, and organizational changes that manifest subsequent to...
installation. While much attention has been and continues to be directed to implementation, post-implementation, and other organizational issues, the issue of evaluation in the acquisition process for ERP software is, for the most part, being ignored (Stefanou, 2001; Verville, 2000). This issue is important, however, because as the stage preceding the implementation process, it presents the opportunity for both researchers and practitioners to examine all of the dimensions and implications (i.e., benefits, risks, challenges, costs, etc.) of buying and implementing ERP software prior to the commitment of formidable amounts of resources.

Though numerous activities make up the buying process for ERP software, the focus of this paper will be on those activities involved in its evaluation. Evaluation, as presented here, refers to a process that encompasses several sets of activities related to the assessment of the vendor, technology, and fit of a specific ERP software to a given organization. Three distinct sets of evaluation activities occur in ERP software acquisition decisions: vendor, functional, and technical.

The focus of this paper, therefore, is on ERP evaluation during the acquisition, which includes the assessment of the vendor, technology, and fit of a specific ERP software to a given organization.

This paper will begin by addressing the issue of why ERP evaluation is important, after which will be presented a brief review of the literature on evaluation of information systems, the research methodology for the study, a description of the different types of evaluations and activities for ERP software as derived from the study, and finally, the conclusion.

THE IMPORTANCE OF ERP SOFTWARE EVALUATION DURING THE ACQUISITION

Why is ERP Evaluation Important?

Organizations are concerned not only with the nature of ERP software, but also with the growing economic costs and investments required when the decision is made to acquire such software. Ongoing software expenditures are becoming a fact of life. In order for organizations to better manage these expenditures, it is important to understand how these expenditures are made and not only why a particular software is being purchased (its role within the organization being for strategic positioning, competitive advantage, or for effectiveness, change such as business processing re-engineering, etc.).

Why is it Important to Conduct Evaluation Activities During the Acquisition Process for ERP Software?

If organizations are acquiring ERP solutions by following the same process they use to acquire other products, the process may not be well adapted to the nature of ERP software. Hence, a better understanding of the acquisition process for ERP software could amount to substantial savings in terms of economics (actual cost), time, and improved administrative procedures, and could lessen the risk and uncertainty associated with the acquisition of ERP software (Verville, 2000; Verville & Halingten, 2001). This is why it is important; first and foremost, to understand how ERP software acquisitions are being conducted (within the scope of the acquisition life cycle), but in order to do so, the types of software evaluation activities must be identified and examined. An examination of these activities may reveal how the evaluation stage for selecting ERP software differs from established evaluation norms for the evaluation of information systems. This, in turn, could lead researchers to study other areas related to ERP software or provide a different way to look at problems associated with ERP acquisition or implementation (i.e., why most ERP projects fail).

The research upon which this paper is based shows that ERP software evaluation “is not a simple technical activity, aiming to define an ‘objectively good software product,’ but a decision process where subjectivity and uncertainty are present without any possibility of
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