Chapter 2.7
Implementing Best of Breed ERP Systems

Joseph Bradley
University of Idaho, USA

ABSTRACT

ERP implementation projects normally involve a single vendor providing the packaged software for the entire system. Although most companies follow this practice, a significant number of firms employ an alternate strategy of "best of breed" ERP. This strategy involves selecting software that best matches the current or desired business practices of the company from a variety of vendors. This strategy reduces the need for the firm to customize the software or to significantly reengineer its business practices. Best of Breed offers firms the opportunity to maintain or create competitive advantage based on unique business processes. "Vanilla" ERP implementations may result in competitors all adopting the same business processes leaving no firm with an advantage.

INTRODUCTION

In an increasingly competitive global environment, firms are using information technology to increase their competitiveness and gain better information for decision making. Many firms have implemented enterprise resource planning (ERP) systems to further these goals. Enterprise resource planning systems are off-the-shelf software systems, which claim to meet the information needs of organizations. These systems are usually adopted to replace hard to maintain legacy systems developed by IS departments or older off-the-shelf packages that often provided only piecemeal solutions to the organization's information needs. ERP systems evolved in the 1990s from material requirements planning systems (MRP), which was developed in the 1970s, and manufacturing resources planning systems (MRPII), which was developed in the

1980s. ERP systems serve the entire organization, not just material or manufacturing planning. A major advantage of ERP is that it integrates all the information for the entire organization into a single database, thus reducing repetitive data entry and the number of errors.

ERP systems have proven expensive and time consuming to implement. Failed and abandoned projects have been well publicized in the business press. Muscatello and Parente (2006) cite ERP failure rates to be as high as 50%. ERP systems are "expensive and difficult to implement, often imposing their own logic on a company's strategy and existing culture (Pozzebon, 2000, p. 1015)." Hershey Foods, for example, was unable to fill Halloween candy orders after spending $112 million on an ERP project resulting in a drop in its stock price and lost market share (Severance & Passino, 2002). Davenport (1998) identifies other unsuccessful projects such as Fox-Meyer Drug that claimed an ERP systems led to its bankruptcy, Mobil Europe that spent hundreds of millions on ERP but abandoned the project when a merger partner objected and Applied Material that gave up on its ERP project when it became overwhelmed with organizational change issues. Nike's ERP implementation is included in a listing of "infamous failures in IT project management" (Nelson, 2007). Major ERP related inventory problems at Nike resulted in a profit drop of $100 million in the 3rd quarter of 2000.

Most firms utilize a single software vendor for the complete ERP system throughout their organizations. The integrated nature of ERP software favors this single vendor approach. An alternative strategy adopted by some firms is the best of breed approach, where the adopting organization picks and chooses ERP functional modules from the vendor whose software best supports their business processes. Organizations adopting a best of breed believe that this approach will create a better "fit" with existing or required business processes; reduce or eliminate the need to customize a single vendor solution; and reduce

user resistance. Jones and Young (2006) found that 18% of companies surveyed used a best of breed approach to select ERP software packages.

This article examines what ERP implementation projects involve, what the best of breed strategy is, when it is used, what advantage adopting companies seek, examples of best of breed implementations, differences in critical success factors in "vanilla" and best of breed projects, and future trends in the best of breed strategy.

BACKGROUND

ERP implementation projects can be distinguished from other IT projects by three characteristics (Somers, Ragowsky, Nelson, & Stern, 2001). First, ERP systems are "profoundly complex pieces of software, and installing them requires large investments in money, time and expertise (Davenport, 1998, p. 122)." Second, software packages may require the user to change business processes and procedures, may require customization, and leave the firm dependent on a vendor for support and updates (Lucas, Walton, & Ginsberg, 1988). Finally, adopting firms are usually required to reengineer their business processes. Implementation projects must be managed as broad programs of organizational change rather than a software implementation (Markus & Tanis, 2000; Somers et al, 2001)

ERP systems include functionality for basic business processes based on the vendor's interpretation of best practices. However, the selected functionalities do not generally match the existing business processes of all organizations.

Typical ERP functions from SAP R/3, a major ERP vendor, are shown in Table 1. SAP R/3 modules provide a wide range of functional solutions, however, with the wide range of potential ERP customers, some organizations may not be a good fit. With the best of breed strategy, organizations can pick and choose the ERP modules from which ever vendor provides the best fit with its busi-

Related Content

A Simulation Model for Application Development in Data Warehouses
Nayem Rahman (2018). *International Journal of Operations Research and Information Systems (pp. 66-80).*
www.irma-international.org/article/a-simulation-model-for-application-development-in-data-warehouses/193050

A Review and Comparison of Genetic Algorithms for the 0-1 Multidimensional Knapsack Problem
Bernhard Lienlandand Li Zeng (2015). *International Journal of Operations Research and Information Systems (pp. 21-31).*
www.irma-international.org/article/a-review-and-comparison-of-genetic-algorithms-for-the-0-1-multidimensional-knapsack-problem/125660

Information Technology Projects System Development Life Cycles: Comparative Study
Evon M. O. Abu-Taieh, Asim A. El Sheikh, Jeihan M. Abu-Tayehand Maha T. El-Mahied (2010). *Business Information Systems: Concepts, Methodologies, Tools and Applications (pp. 1812-1834).*
www.irma-international.org/chapter/information-technology-projects-system-development/44170

Design and Analysis of Decision Support Systems
John Wang, James Yao, Qiyang Chenand Ruben Xing (2010). *Business Information Systems: Concepts, Methodologies, Tools and Applications (pp. 483-494).*
www.irma-international.org/chapter/design-analysis-decision-support-systems/44089

SCOR Implementation in Oil and Gas Company from an Emerging Market
Jibran Hafeez, Rameez Khalidand Shahid Mir (2017). *International Journal of Operations Research and Information Systems (pp. 93-107).*
www.irma-international.org/article/scor-implementation-in-oil-and-gas-company-from-an-emerging-market/169785