



IDEA GROUP PUBLISHING

701 E. Chocolate Avenue, Suite 200, Hershey PA 17033-1240, USA
Tel: 717/533-8845; Fax 717/533-8661; URL-<http://www.idea-group.com>

ITB10222

Chapter II

An Overview of SAP Technology

Linda K. Lau
Longwood University, USA

Abstract

This chapter commences with a brief description of Enterprise Resource Planning (ERP), follows by a description of SAP, the largest enterprise software provider in the world. The timeline of activities since its inception in 1972 are summarized in a table. SAP's flagship software program, the R/3 system, is portrayed in more detail. The capabilities of the R/3 system, the three-tier client/server technology it employs, its hardware and software, and several problems associated with its implementation and use are discussed. The two R/3 implementation tools – namely, the Accelerated SAP and the Ready to Run systems – are also described.

Introduction

Since first envisioned in the 1960s, integrated information systems have expanded tremendously in scope, evolving from inventory tracking systems, to

Materials Requirements Planning (MRP), and finally to Enterprise Resource Planning (ERP) (Brady, Monk & Wagner, 2001). Today, almost every organization integrates part or all of its business functions to achieve higher efficiency and productivity. Since its conception in 1972, SAP has become the largest developer of enterprise software applications in the world.

The purpose of this chapter is to provide readers with a general understanding of ERP and a more detailed description of SAP and its flagship product, the R/3 system. After describing the major activities undertaken by SAP over the past 30 years, the bulk of the chapter is devoted to describing SAP R/3's capabilities, its three-tier client/server technology, the hardware and software needed, and some problems with the R/3 system. Two implementation tools – namely, the Accelerated SAP and the Ready to Run systems – have been developed by SAP to expedite the lengthy system implementation process, and both are described in the next section.

Enterprise Resource Planning (ERP)

Enterprise Resource Planning (ERP) is the process of integrating all the business functions and processes in an organization. It achieves numerous benefits. First, a single point of data entry helps to reduce data redundancy while saving employees time in entering data, thereby reducing labor and overhead costs as well (Jacobs & Whybark, 2000). Second, the centralization of information, decision-making, and control leads to increases in efficiencies of operations and productivity, as well as coordination between departments, divisions, regions, and even overseas operations. This is especially true for multinational corporations, for which global integration could result in better communications and coordination around the world and the global sourcing and distribution of parts and services could provide appropriate benchmarks for worldwide operations. Third, the sharing of a centralized database provides business managers with accurate and up-to-date information with which to make well-informed business decisions. Further, it reduces data redundancy while improving data integrity. Fourth, functional integration consolidates all sorts of data, such as financial, manufacturing, and sales, to take advantage of bulk discounts. ERP is especially important for companies that are “intimately connected” to their vendors and customers, and that use electronic data interchange to process sales transactions electronically. Therefore, the imple-

9 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/overview-sap-technology/25716

Related Content

A New Hybrid Inexact Logarithmic-Quadratic Proximal Method for Nonlinear Complementarity Problems

Ying Zhou and Lizhi Wang (2010). *International Journal of Operations Research and Information Systems* (pp. 1-13).

www.irma-international.org/article/new-hybrid-inexact-logarithmic-quadratic/45760

On Solving Multiobjective Transportation Problems with Fuzzy Random Supply and Demand Using Fuzzy Goal Programming

Animesh Biswas and Nilkanta Modak (2017). *International Journal of Operations Research and Information Systems* (pp. 54-81).

www.irma-international.org/article/on-solving-multiobjective-transportation-problems-with-fuzzy-random-supply-and-demand-using-fuzzy-goal-programming/183691

What is the Role of Third Party Logistics (3PL) Partners in an Omni-Channel Strategy?

Alea M. Fairchild (2016). *International Journal of Operations Research and Information Systems* (pp. 22-32).

www.irma-international.org/article/what-is-the-role-of-third-party-logistics-3pl-partners-in-an-omni-channel-strategy/142852

Strategic Framework for Developing a Process Model for Maximising the Potential of Radio Frequency Identification (RFID) Technology Integration in Hospitals

Chandana Unnithan and Bardo Fraunholz (2011). *E-Strategies for Resource Management Systems: Planning and Implementation* (pp. 118-136).

www.irma-international.org/chapter/strategic-framework-developing-process-model/45101

Firms' Connections and Open Innovation: The Case of Innovative Spanish Firms

María-Isabel Encinar, Ainhoa Herrarte and Félix-Fernando Muñoz (2012). *Open Innovation in Firms and Public Administrations: Technologies for Value Creation* (pp. 155-174).

www.irma-international.org/chapter/firms-connections-open-innovation/60229