

# ERP II: The involvement, benefits and impediments of collaborative information sharing

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## Abstract

(ERP) II is a way of managing information and designing work processes to facilitate all of this. In sounding as profound as the concept does, it also raises a number of questions. This research seeks to establish a set of clear business benefits and impediments, hindrances to success. It initially builds this set through an extension of pertinent literature on ERP (as ERP is retained at the heart of ERP II) and through logical deduction (cause and effect) of the current (anecdotal) literature on ERP II. It then tests these sets, through an online survey, with select industry experts on ERP who are anticipated to be amongst the first to move to ERP II. The survey also gives these respondents an opportunity to add their 'free' thoughts to construct the ERP II involvement further. Part of this research also deals in formalising the collaborative structures suitable for ERP II. The research finds that most existing benefits/impediments of ERP can still be carried forward besides 'new' ones built through logical deduction. The research further finds a number of future research objectives that spawn from the respondents' concerns. Finally, it identifies three collaborative structures suitable to aid information exchange in a real-time collaborative scenario, namely joint ventures, networks and Japanese-style 'purchasing partnership'.

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## 1. Introduction

Microsoft and IBM, two of the world's best-known software companies, run most of their business on software neither of them makes, the SAP (AG) R/3 ERP package (O'Leary, 2000). Amongst the most complete current definitions of

enterprise resource planning (ERP) (of the many floating around) is as stated by Wallace and Kremzar (2001):

An enterprise-wide set of management tools that balances demand and supply, containing the ability to link customers and suppliers into a complete supply chain, employing proven business processes for decision making, and providing high degrees of cross-functional integration among sales, marketing, manufacturing, operations, logistics, purchasing, finance, new product development, and human resources, thereby

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enabling people to run their business with high levels of customer service and productivity, and simultaneously lower costs and inventories; and providing the foundation for effective e-commerce. (p. 5)

This proposition could be further summarised as—ERP is a set of internal (‘enterprise-wide’) tools that facilitate better management and integration of production and other back office operations within the enterprise. These tools further provide means for effective interfacing of the aforesaid ‘better managed internal activities’ with front office jobs such as customer/supplier relationship management. This interfacing in turn assists the enterprise to open its doors for online commerce.

Amongst the earliest and most widely followed definitions of ERP was stated by the American Production and Inventory Control Society (Cox and Blackstone, 2004); an ERP system is

1. An accounting-oriented information system for identifying and planning enterprise-wide resources needed to take, make, ship, and account for customer orders. An ERP system differs from the typical MRP II system in technical requirements such as graphical user interface, relational database, use of fourth generation language, and computer-assisted software engineering tools in development, client server architecture, and open-system portability.
2. More generally, a method for the effective planning and control of all resources needed to make, take, ship, and account for customer orders in a manufacturing, distribution, or service company.

ERP then evolved into a much practised but loosely named iteration called extended ERP. Extended ERP reflected the fact that many non-manufacturing industries turned to ERP systems for ‘backbone’ financial transaction processing capabilities (GRG, 2000). The next iteration was called the enterprise application suite (EAS). The same authors postulate that as enterprises looked to applications that would provide supply-chain management (SCM), customer relationship management (CRM) and e-business functionality to enable them to jump ahead of their competitions, ERP vendors responded by pursuing the vision of the EAS, through partnerships, acquisitions or native product

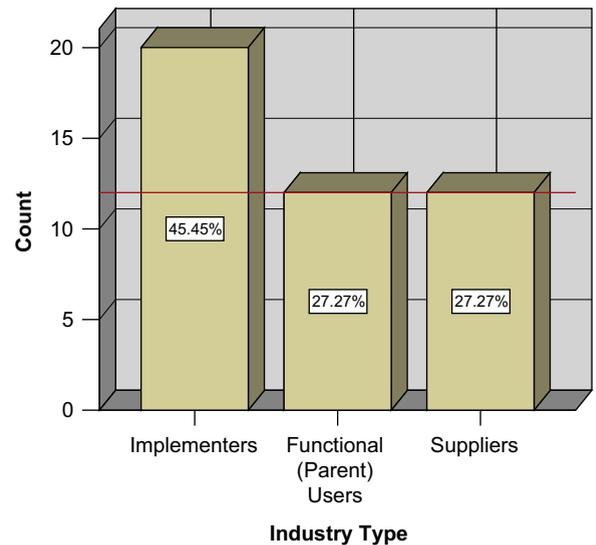


Fig. 1. Respondent classification.

developments. Fig. 1 displays this evolution graphically.

The earlier stated definition of ERP by Wallace and Kremzar (2001) was highlighted as being ‘current’. It can now be seen that they were in effect describing the most current ‘avatar’ of ERP that the GRG terms as EAS.

There are a number of issues that implementers might face before, during and after ERP II adoption. As no significant research or detailed publications are available (as of this writing), virtually all (regulated) research in the ERP II arena will contribute to a fresh body of knowledge, albeit the direction initial and subsequent research should take is open for deliberation. A simple way to go about this is to first list the possible issues that might emanate in the process of adoption, and then to solve the necessary operational constructs needed to mitigate these issues. Care should be taken that these are not carried out in isolation and studies draw from other findings to build a ‘common’ body of knowledge.

The present study is structured in a similar vein. It first ‘constructs’ a list of issues—*the perceived benefits of, and impediments to, ERP II adoption* and then seeks to mitigate one of the required operational concern that of *formalising structure types required for inter-firm collaboration (IFC) (collaboration is necessitated by, and is vital for ERP II)*.

Although the issues of perceived impediments and benefits of ERP II, and collaborative structure

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