

# ERP Problems and Application Integration Issues: An Empirical Survey

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## Abstract

*Enterprise Resource Planning (ERP) systems were introduced into companies to solve various organisational problems, and to provide an integrated infrastructure. Although ERP packages offer advantages to enterprises, they have not achieved many of their anticipated benefits. Autonomous and heterogeneous applications co-exist in companies with ERP systems and integration problem having not been addressed. This paper seeks to make contribution to this area by studying and analysing ERP problems through an Internet based survey. Responses are analysed in detail and a new approach to integration problem; the Enterprise Application Integration (EAI) is examined. EAI is a new class of integration software that leads to the development of strategic business solutions by securely incorporate functionality from disparate applications. EAI could be the solution to ERP’s integration problems.*

## 1. Introduction

During the last decades, enterprises have focused on Information Technology (IT) and implemented various applications to automate their business processes. These applications were not developed in a co-ordinated way but have evolved as a result of the latest technological innovation (Themistocleous and Irani, 2000). The IT infrastructure in several organisations consists of autonomous and in many cases heterogeneous solutions (Klasell and Dudgeon, 1998). This situation has caused various integration problems as applications could not co-operate and disparate IT solutions could not bind together.

During the 1990’s, Enterprise Resource Planning (ERP) systems were introduced as “*integrated suites*” that automate core corporate activities such as finance, human resources, manufacturing, supply and distribution (Gibson *et al.*, 1999). ERP systems let a company share common data and practices across the enterprise and allow the access of information in a real-time environment. According to Davenport (1998) ERP solutions are designed to solve the fragmentation of information in large business organisations, and integrate *all* the information flowing within a company.

ERP applications provide several benefits including

- solutions to the problems of legacy systems (Holland and Light, 1999),
- reduced development risk (Kelly *et al.*, 1999),
- increase global competitiveness (Holland *et al.*, 1999)
- and business efficiency (Markus and Tanis, 1999).

However, ERP packages have also many drawbacks such as:

- implementation complexity (Martin, 1998),
- integration problems (Linthicum, 1999)
- customisation problems (Glass and Vessey, 1999)
- over budget and late projects (Davenport, 1998),
- organisational change and resistance to change (Sumner, 1999)
- problems with business strategy and competitive advantage (Davenport, 1998) etc.

The need for integration still exists as ERP packages can not address effectively this problem and a number of autonomous applications co-exist into companies (Duke *et al.*, 1999). The incorporation of enterprise