Impact of Collaborative Delivery of Enterprise ICT Services

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INTRODUCTION

Most organizations today are looking for more cost effective approaches to delivering enterprise applications to their user base. Among the alternatives that are becoming increasingly popular are various forms of e-collaboration that involve the sharing of information between organizations, integration of interenterprise business processes among partner organizations, and the delivery of software services by external application service providers (ASPs). Such recent trends are likely to produce a situation where most enterprise applications will be implemented collaboratively or supplied as services, making the Software-as-a-Service model the dominant method of enterprise application delivery. The extensive use of externally supplied software and information services will change the shape of the ICT (Information and Communication Technologies) market and impact on management decisions about the deployment of enterprise ICT (Harber, 2004). These changes will affect both user organizations and organizations supplying ICT products and services. In this paper we analyze the above trends and discuss the impact of the Software-as-a-Service model on ICT user organizations and ICT suppliers. We first discuss the key enterprise computing trends and the strategic importance of ICT.

BACKGROUND: KEY ENTERPRISE COMPUTING TRENDS

This section is a discussion of key trends that we consider to have significant impact on future use of ICT in organizations, and, consequently, on the composition of the ICT market.

Strategic Importance of ICT

Nicolas Carr (2003) argues that ICT is today accessible to most organizations and therefore is losing its strategic significance. We dispute this claim, and argue that ICT cannot be considered in isolation from entrepreneurial activities, business processes, and company culture. It is the close alignment between ICT and business processes that can provide competitive advantage to organizations, and produce high quality products and services at lower cost, resulting in a strategic advantage (McCabe, 2003; Nevens, 2002)

In general, there are two types of enterprise applications: applications that support business processes (e.g., logistics, CRM, etc.) and applications that directly implement business processes (e.g., electronic banking, mobile telephony, airline e-tickets, etc.). For the first type of enterprise applications, it is possible to gain competitive advantage by combining ICT with unique company culture and knowledge. This unique combination enables the company to function effectively and utilize key assets such as organizational knowledge and culture. The second type of enterprise application provides a service or product to customers and its timely deployment and unique features can result in competitive advantage (Vo í ek, 2005). There are many recent examples of ICT providing competitive advantage to organizations. For example, the courier service eKurýr (www.ekuryr.cz) that operates in the Czech and Slovak Republics has been highly successful principally because of its unique electronic system, eKurýr. Similarly, while not every new technology is important, there are situations where missing out on a new technological development can be fatal. For example, today most suppliers of accommodation services must provide Web-based applications to allow worldwide access to booking and other services in order to avoid losing a significant market share.

Another factor that supports the argument for the strategic importance of ICT is the unremitting growth in the demand for timeliness and quality of information for decision making from all levels of management. According to Gartner (2004), the required response time to important events has decreased from 2 months in 2002 to 1 month in 2004, and will further decrease to 1 day in 2010. While this forecast may not be entirely accurate, the requirement to react faster to important external events is clearly evident.

Increasing Process Orientation of the Enterprise

Toward the end of the last century, it was becoming clear that managing enterprises based on business functions could lead to conflicts between the goals and interests of individual departments and organizational goals as a whole, resulting in numerous problems including unpredictable responses to important events. Many organizations have adopted the process management approach in order to address such problems. The importance of process-management is still growing. The principal aim of a process-managed enterprise is to achieve real-time response to important events. This requires that the organization has active sensors (usually using ICT) that indicate new events (e.g., arrival of an order, time to send Value Added Tax [VAT] returns, production line failure, etc.). As soon as the event occurs, the correct process is activated as a response.

This trend also affects enterprise ICT management, with many enterprises adopting process management of their ICT. ITIL and COBIT methods are de facto standards in this area.

The ICT marketplace has responded to the transition to process-management with a relatively wide choice of tools for business process modeling and for optimization, monitoring, and management of business processes in real time. The Organization for the Advancement of Structured Information Standards (OASIS) has defined a number of standards in this area (OASIS, 2005).

The success of process-management depends on a number of critical success factors. The most important of these are (Vo í ek &Dunn, 2001):

- Appropriately chosen detail of business process definition and its alignment with the knowledge of the employees undertaking the process. A detailed definition of a business process enables the use of less-qualified but well-trained employees. On the other hand, it prevents utilization of employees' creativity and reduces the flexibility of the process.
- Appropriately chosen process maturity. CMM (Compton et al., 2002) defines six levels or process maturity. The lowest level is for a nonexistent process, the highest describes an optimized process. However, it is not sensible to plan for the highest level for each process. This would be too expensive for processes that are not vital to the enterprise and occur infrequently.
- Appropriate utilization of process methods and standards. When implementing process-management it is essential to use appropriate methods and standards (e.g., ITIL or COBIT). Recent experience indicates that applying these methods and standards mechanically can lead to problems and that methodologies must be tailored to the specific conditions of the enterprise.

Management of the Relationship Between Business and ICT Using ICT Services

For over 50 years, computer professionals and end-users have been searching for an optimal way to communicate with one another, and for an optimum division of responsibility for the costs and benefits of ICT projects. A new approach for managing the relationship between business and ICT is emerging based on the concept of ICT service described using an SLA (service level agreement). Service is a basic element that defines the boundary between business and ICT activities. Methodologies such as SPSPR (Vo í ek & Dunn, 2001), which define the responsibilities of different types of managers and the content of the communication between business and ICT managers without excessive use of technological concepts, are required to define services and their interfaces to business.

The management of ICT services has a number of critical success factors. The most important of these are:

- The ability of the owners of business processes to define SLA for ICT requirements
- The focus of ICT services. ICT services should be derived from the requirements of business