

# Chapter 89

## Situational Enterprise Services

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### ABSTRACT

*The ability to rapidly find potential business partners as well as rapidly set up a collaborative business process is desirable in the face of market turbulence. Collaborative business processes are increasingly dependent on the integration of business information systems. Traditional linking of business processes has a large ad hoc character. Implementing situational enterprise services in an appropriate way will deliver the business more flexibility, adaptability and agility. Service-oriented architectures (SOA) are rapidly becoming the dominant computing paradigm. SOA is now being embraced by organizations everywhere as the key to business agility. Web 2.0 technologies such as AJAX on the other hand provide good user interactions for successful service discovery, selection, adaptation, invocation and service construction. They also balance automatic integration of services and human interactions, disconnecting content from presentation in the delivery of the service. Another Web technology, such as semantic Web, makes automatic service discovery, mediation and composition possible. Integrating SOA, Web 2.0 Technologies and Semantic Web into a service-oriented virtual enterprise connects business processes in a much more horizontal fashion. To be able run these services consistently across the enterprise, an enterprise infrastructure that provides enterprise architecture and security foundation is necessary. The world is constantly changing. So does the business environment. An agile enterprise needs to be able to quickly and cost-effectively change how it does business and who it does business with. Knowing, adapting to different situations is an important aspect of today's business environment. The changes in an operating environment can happen implicitly and explicitly. The changes can be caused by different factors in the application domain. Changes can also happen for the purpose of organizing information in a better way. Changes can be further made according to the users' needs such as incorporating additional functionalities. Handling and managing different situations of service-oriented enterprises are important aspects of business environment. In the chapter, we will investigate how to apply new Web technologies to develop, deploy and executing enterprise services.*

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## **INTRODUCTION**

The Service-oriented computing paradigm is transforming traditional enterprise systems from a close, centrally controlled system into a dynamic information exchange and flexible business process system. Traditional enterprise applications are defined as software designed to integrate all aspects of a company's operations and processes such as accounting, finance, human resources, inventory control, manufacturing, marketing, sales, and distribution, and resource planning. Advanced enterprise applications provide linkages with customers, business partners, and suppliers (Markus & Tanis, 2000). Normally enterprise applications are complex. There are mission critical applications which are developed and deployed by central IT with long development deployment cycle and dedicated IT budget.

Currently, there is increased pressure to build enterprise applications quickly in order to respond to situational needs of the business. Many of these applications for reflecting situational business needs never get delivered because they are too difficult to write, too costly to implement, and too brittle to customize and maintain once deployed. As a result, many of the needs are addressed by business people who have some knowledge on IT techniques creating often inadequate solutions using tools like Excel, Access and Visual Basic.

With a growing number of services on the Web, these needs can now be satisfied more easily and effectively. These development and deployment services, combined with a "situational" mindset and methodology, can offer significant advantages. Unlike traditional enterprise applications, situational enterprise applications are relatively simple. There are not mission critical for organizations. Lots of them developed at the point of need short development cycle under central IT control with little or no recognized budget.

The situational enterprise applications being addressed will not replace core business applications, such as ERP (Enterprise Resource Plan-

ning), SCM (Supply Chain Management), CRM (Customer Relationship Management) etc. They address different needs which are built for just a handful of users, situational enterprise applications that are used for only a few weeks or months, or situational applications address a small piece of functionality. For example, within the perimeter ERP applications, departmental operation solutions, such as vacation scheduling, seminar and presentation management, purchase procedure management within a work unit, etc, normally are not included in a organization ERP system. However, they can be desired by department staffs. These are typical situational applications for the department staffs who manage those matters on a daily basis.

Types of situational enterprise applications can be divided into data-oriented applications and process-oriented applications. Enterprise widgets, gadgets, pipes and mash-ups belong to data-oriented applications. Lightweight process-oriented applications are currently under research, the EU project SOA4All (<http://www.soa4all.eu/>) aims to provide a platform to build process-oriented applications for end users (non-technical users).

The target audience for situational enterprise applications/services is an educated professional (e.g., accountant, HR personnel) with modest computer literacy (and interest) that mostly includes the Web and MS Office. They have basic computer experience like using a wizard to generate something new; interacting with spreadsheets, documents, and forms; and using drag and drop to rearrange items on the screen.

These solutions on demand will help businesses slash expenses and reduce cycle times by more effectively supporting how people work, address challenges and make business decisions. Situational enterprise applications/services will allow also the business to be more innovative and competitive by supporting new processes more effectively, increasing overall productivity, and facilitating new ways for sharing information.

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