

## Chapter 5

# Advanced Technologies and Architecture for Collaborative Business

*Nothing in life is to be feared. It is only to be understood.*

Marie Curie (1867-1934)

### CHAPTER KEY POINTS

- Discusses the technologies and information architectures that facilitate the collaborative business environment.
- Focuses on the concept of Service Oriented Architecture (SOA) and Web 2.0 technologies; and their role in bringing about a collaborative business environment.
- Evaluates the organizational restructures resulting from the use of SOA as a part of the Collaborate Business Process Engineering (CBPE) model.
- Reviews the impact of The Open Group Architecture Framework or TOGAF as a reference architecture in the context of **CBPE**.
- Discusses the influence of Enterprise Service Bus on the **CBPE** model.
- Extends the discussion on Mobile and Web 2.0 technologies from an architectural viewpoint on **CBPE**.

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## INTRODUCTION

This chapter discusses the role of information system architectures in *Collaborate Business Process Engineering (CBPE)*. Thus, in this chapter, there is an extension of the discussion on Service-oriented Architecture (SOA) from chapters 2 and 4, and its importance and relevance to *CBPE*. The SOA based architecture is extended and applied in a collaborative business environment. The technical platform of Service Oriented Architecture (SOA) provides an ideal mechanism to start building collaborative business processes, as it facilitates technical collaboration of different environments - as discussed in this chapter.

## TECHNOLOGIES FOR COLLABORATION

Web Services (WS) is discussed in the previous chapter as a core technology that enables collaboration amongst multiple business applications. Service Oriented Architecture (SOA) utilizes Web Services (WS) to provide the basis for information systems architecture that assimilates software components that belong to different organizations, governmental bodies and technical environments. As a result, information system architectures that incorporate WS-based applications facilitate global collaboration that can be dynamically created, consumed and dispersed. Technical communication through Web Services includes exchange of core data types, message formats and communication protocols – regardless of the specific platform or vendor specifications. This enhanced ability of information systems to connect and communicate with each other has lead to an important business question: “why restrict it within the organization?” The answer to this question opens up the doors for creation of collaborative software entities through application service-providers that open entirely new revenue generation streams for global industries and provide potentially unlimited global growth for organizations. These technologies also form the basis for a comprehensive architecture for the enterprise that includes the software systems, business processes, communications and people: the Enterprise Architecture (EA). The technologies discussed here are thus the fundamental technologies creating undertaking business transformations

## SERVICE ORIENTED ARCHITECTURE AND CBPE

Services are self-contained (and usually object-oriented) software components that have well defined interfaces. Information systems based on the concept of offering and consuming of services are considered service-oriented in nature. Therefore,

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