Chapter 4.5
Enterprise Architecture within the Service–Oriented Enterprise

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ABSTRACT

In his best selling book *The World is Flat*, Thomas Friedman proclaims "We are entering a phase where we are going to see the digitization, virtualization, and automation of almost everything … the real information revolution is about to begin" (Friedman, 2005). Certainly, the prevalence of high-speed connectivity has eliminated the barriers of doing business around the world. Lower cost and talented workforce in India and China are now easily if not transparently accessible and online. To thrive in the global economy, CEOs are using outsource, in-source, and offshore models to create strong partner-networks throughout the value chain. Technology leader Intel Corporation states in a recent whitepaper, "businesses are enjoying increased agility that allows them to rapidly respond to changing market needs and opportunities" (Intel Corporation, 2005). Enter a new paradigm called the "service-oriented enterprise" (SOE). In the SOE model, an organization views itself as a set of "business services" supported by adaptable, scalable, and reliable technology. Early-adopters of this model are benefiting through global collaboration, real-time business responsiveness, and productive mobile work forces. By grasping this paradigm shift, enterprise architects can guide organizations in building agility model and compete in the global economy.

INTRODUCTION

Something has changed in our world. In an interesting twist to "who moved my cheese," the era of a single, integrated "enterprise architecture" is disappearing. The demand to increase efficiency, decrease costs, reduce time to market, and expand revenue streams are causing business leaders to evaluate and re-think their execution models. Collaboration is becoming increasingly important. Martin Brodbeck, Director, Global Application Architecture at Pfizer, Inc. states "… it's about connecting business processes in a much more horizontal fashion … having a federated infrastructure that provides an architecture

and security foundation to be able to run these components consistently across your enterprise." Both public and private sector organizations are moving to a model where the "enterprise" crosses partner boundaries to deliver services within the value chain. In financial markets, investors refer to this business model as a "platform company," that is, one where knowledge capital is the differentiator and execution is through a set of service providers—each specializing in a particular segment of the value chain. Those that refine their role in the value chain and establish the right complimentary partner-networks deliver faster, cheaper, and better—trumping those who use standalone models. To better understand this paradigm shift, let us review the trends occurring in public and private sector organizations as well as how technology vendors are addressing the emerging model.

In the public sector, organizations within U.S. Federal Government are creating internal partner networks by embracing "line of business" (LOB) with supporting centers of excellence (COE). This shift began in 2001 when the Hon. Mark Forman, former administrator of information technology and e-government at the Office of Management and Budget instituted the shared services model to support the Presidents Management Agenda and the eGovernment act. This model allows the Federal Government, a traditionally bureaucratic institution, to act as a private sector organization. Enterprise architecture is the key enabler as agencies strive to eliminate redundant, disparate solutions and create COEs that provide common, commodity services within an LOB. To become a COE, an agency establishes a best practice that can be selected, controlled, and evaluated for efficiency, cost effectiveness, and quality. When an agency is selected to become a COE, it can then "supply" services for a fee to fellow "demanding" organizations. Much like private sector organizations, control and trust are addressed using Service Level Agreements (SLAs) as a form of binding contract. Today, LOBs include case management,

human resources, financial management, grants management, geospatial, and IT infrastructure. Using this model, agencies can focus on delivering core competencies of the Federal Government value chain such as land management, housing, tax collection, or border security while relegating common, commodity services to the appropriate COE partner. Savings from this approach in terms of eliminating redundancy, increasing efficiency, and improving quality are estimated to be in the billions of dollars.

Private sector organizations such as Toshiba, UPS, Pfizer, and FedEx are using in-source, outsource, and offshore models to address costs, efficiency, and quality in what they deliver to customers. Thirty percent of the world's largest 1000 firms are sending work offshore. This percentage is expected to increase in accordance with the expected growth rate (20-30%) for offshore industries in India and China. Outsource and offshore models are prevalent, but let's look at how organizations use in-sourcing to exploit the partner-network model within a value chain. An example cited by Friedman (2005) in the *World is Flat* is a good one. Consider the Toshiba/UPS partnership where UPS has established a computer and printer repair hub in Louisville, Kentucky. Toshiba customers are told that if their laptop needs repair to send it in via UPS. When picked up, the laptop travels to the UPS hub, where UPS employees fix it, and ship it back to the customer. No longer does the laptop need to take the extra trips to a Toshiba center, nor does Toshiba need to dedicate resources to a lower value-add service. By understanding laptop repair can be a commodity service, it can be relegated to a partner and the resulting Toshiba value chain streamlined. According to Friedman (2005), UPS has invested $1 billion dollars in creating supply chain management expertise and is an integrated service provider for such companies as HP, Nike, Jockey, and even Papa Johns Pizza. It is doing more than delivering packages, it is moving into the value-chain of its complementing network of

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