

## ▼ Introduction to the Service Oriented Enterprise Minitrack

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The complexities, costs and brittleness of current information architectures, infrastructures and distributed software have provided impetus to emerging conceptualizations of the Service Oriented Enterprise (SOE)<sup>1</sup> and its orientation towards on-demand, proactive computing. Some scholars have even predicted the demise of enterprise computing as we know it today given anticipated SOE capabilities<sup>2</sup>. The foundations for Service Oriented Enterprise (SOE) are rooted in current applications of service oriented architecture (SOA), service oriented infrastructure (SOI), business process and workflow, computing resource virtualization, business semantics, service level agreements, increasing standardization, end-to-end enterprise integration and other areas of applied and theoretical research.

To reduce these costs and complexities, companies must break stovepipes into modular services that can be reused dynamically in multiple business processes. This significant paradigm shift is often described as a new discipline called “services science.” The emerging trans-disciplinary field of service science is substantively grounded in the cross-functional issues of business, and its theoretical roots lie in the business disciplines, engineering, technology and the social sciences: e.g. theory of service eco-system adaptive complexity theory (expressed as a function of the number and variety of people, technologies, and organizations linked in the value creation networks); transformation (stated in terms of value deficiencies, work processes, decision making, and social net-works); socio technical systems theory (stated as self-regulation for interactions of physical & institutional structures); and consumer behavior theories (stated in terms of

customer decision-making, experience, satisfaction & perceived quality).

The purpose of this mini-track is to investigate this paradigm, review the impact of SOE on enterprises, organizational structures and individuals; investigate its tenets and evaluate relevant management and technical approaches to architecture, infrastructure, business processes, workflows and strategy. Some of the important IT related research areas are:

- The commoditization of hardware (e.g., on-demand, utility computing), software (the software-as-service model), and business processes as services has become a major phenomenon in today’s economy. Unfortunately, there is limited research on modeling commoditization decision processes, assessing the risks (e.g. disaster, security) and examining the service quality associated with outsourcing options.
- Complexity of service systems IT-based service delivery systems spans business functions, enterprises and geographies. They are becoming ever more complex and are consequently difficult to plan, govern and adapt. Sharing, reuse and composition of inter- and intra-organizational architectural models are needed to facilitate the globalization. How can service paradigm facilitate this need?
- The complexity of composite applications requires a systematic way of implementing a service oriented architecture rather than a patchwork of tools and applications.
- Service level agreements play a very important role in service delivery mechanisms. Design, implementation and maintenance of SLAs are always a challenge to provide high quality of service. And there are limited works on effective IT service management processes.
- Technology-delivered service(s), in particular in the case of knowledge-intensive services, economies of scale are lacking and do not fully exploit the potential of automation. Novel, IT-based service system architectures that standardize inputs and production potentials and use platform planning and modularization to customize service offerings are therefore needed.

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<sup>1</sup> Demirkan, H. and M. Goul, “Towards the Service Oriented Enterprise Vision: Bridging Industry and Academics,” *The Communications of the Association for Information Systems*, Vol. 18, No. 26, Nov. 2006, 546-556.

<sup>2</sup> Carr, Nicholas G. “The End of Corporate Computing” *MIT Sloan Management Review*, 46:3, 2005, 67-73.