

# Chapter I

## Characterization of Service Orientation and the Adaptive Complex Enterprise

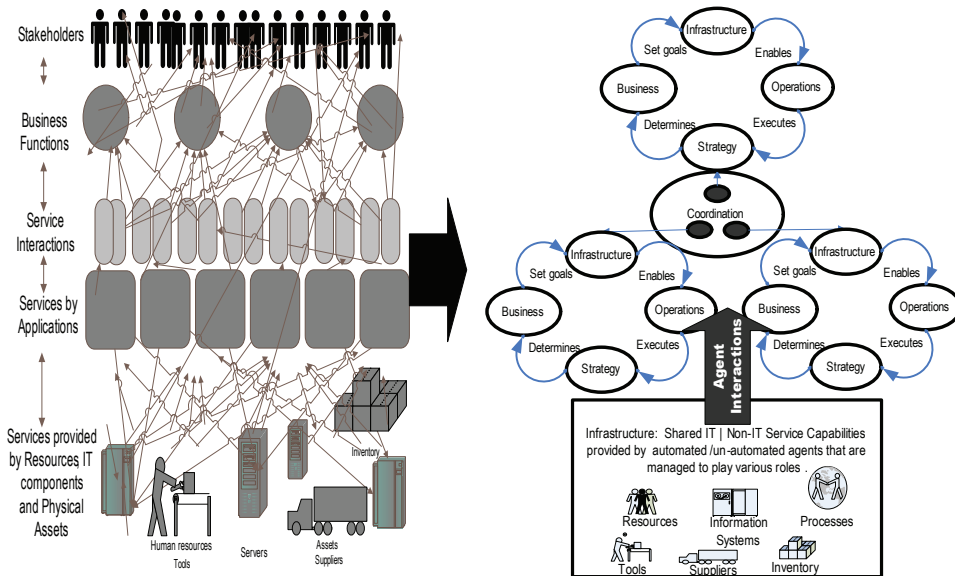
### ABSTRACT

We begin with a characterization of service challenges and a conceptualization of a complex service enterprise as a collection of organizations and sub-organizations. Each organization is in turn in an internal cycle of adaptation characterized by **BioS - Business value achieved through an Information infrastructure enabled Operations to deliver on Service Strategy**. The overview of this conceptualization is illustrated in the Figure 1 and Figure 2. The questions addressed are as follows:

- How can we characterize service enterprises and their challenges?
- What are the challenges of externally-driven services organizations?
- How can we characterize and address the differences from more traditional industrial-age organizations?
- How can we conceptualize a more adaptive performance-driven service enterprise?
- What are the parts of the underlying framework for improvement?

The *car manufacturing enterprise* is used to quickly introduce and illustrate important concepts such as agility, innovation, resilience, effectiveness, sense and

*Figure 1 (left): Challenges of the many-to-many interactions across the service layers of the externally-driven enterprise. Figure 2 (right): Adaptive Complex Enterprise conceptualization and the underlying infrastructure of Interacting Agents.*



respond, vertical and horizontal alignment. In addition we characterize influences on a complex Business-IT system:

- Service delivery challenges due to Routine and non-Routine services
- Multiple stakeholders
- Chaos due to change, variation, and service layers
- Vertical BioS alignment as well as horizontal customer-provider alignment
- Trends and the Strategic role of IT
- Changing the business versus running the business
- Underlying Enterprise Architectures (EA) and Related Methods

We conclude with the Scope and parts of the Adaptive Complex Enterprise (ACE) framework.

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