Chapter II
Adaptive Complex Enterprise Framework:
Ontology, Modeling, Co–Engineering Principles, Work Products

ABSTRACT

The ACE structure for coordination across various services using policies to meet overall goals is presented here. The more detailed depiction of the ACE structure in Figure 1 represents further details than in Figure 2, Chapter I. The structure includes the 1) BioS Stakeholders and Dimension, 2) the goal states of their interest, and 3) Agent Interactions that achieve those goal states. The Goal achievements are aggregated for continual improvement and used in decision-making to fine-tune Interactions. These underlying details are developed based on framework parts presented here. They include 1) Interaction ontology, 2) Modeling notation, 3) Principles for analysis, and 4) Work Products and their use in the continuous improvement. The result is goal-oriented ACE management by objectives at all BioS dimensions as we shall see.

How can we conceptualize the performance of value-producing Interactions within dynamic and changing organizations?

- How do we conceptualize the goals of BioS stakeholders and take actions to ensure value is delivered?

Figure 1. Prototypical ACE structure with vertical dimensions each with stakeholders, actions and goals towards continual improvement of services.
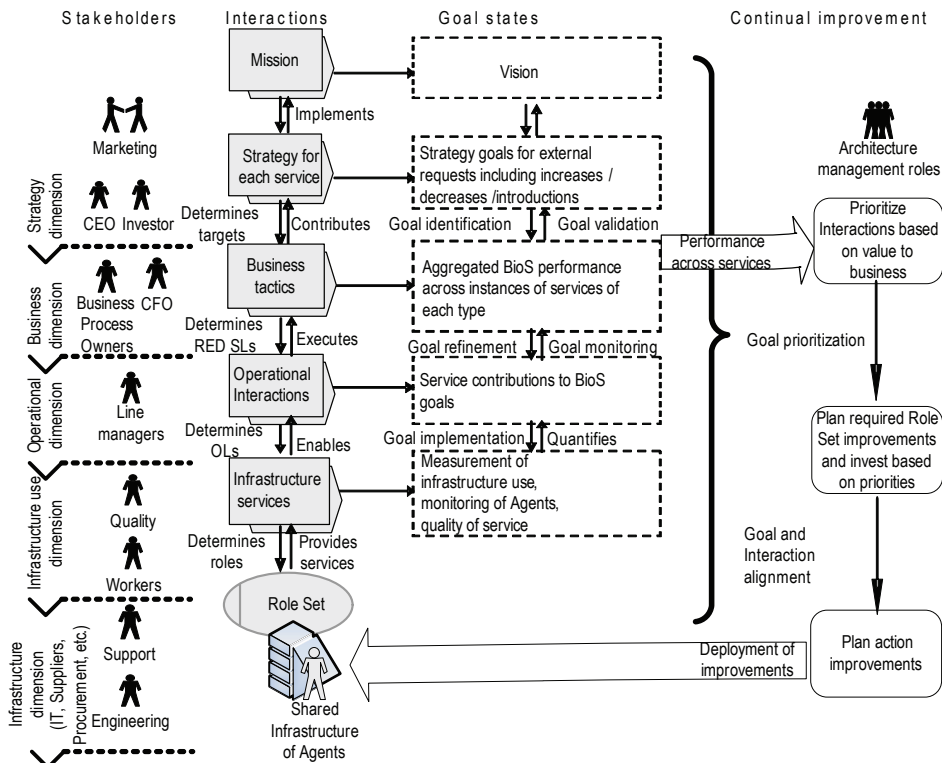
- What is the basic Interaction ontology that defines the points of measurement and service value-add to BioS stakeholders?
- How do we treat shared resources and identify related efficiencies?
- How does it allow us to achieve service planning-to-execution performance traceability?

What modeling notation represents the complex enterprise so that teams can define and visualize important Agent Interactions and their contribution to the organization?

- What is the notation for creating the structure that allows us to view any organization uniformly as Interactions executed by Agents that contribute value to BioS stakeholders (refer to Figure 2, Chapter 1)?
- How does it help us align and improve our achievement of BioS goals?

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