Design and Evolution of Flexible Enterprises: Operationalizing an Architecture Model using Case Studies in Combat Air Operations

Research Challenge

- Extending and synthesizing organization and technical systems architecture theories to the enterprise level
- Architecture design framework that applies to enterprises
- Understanding how to design architectures for stable yet flexible enterprise systems

Central Hypothesis:

- Enterprises with more lateral vs. vertical connections will perform better in complex, dynamic and uncertain environments

Practitioner Needs

- **Theory-based concepts and practical tools** for enterprise architecture design, management and transformation to be dynamically fit to the environment
- Enterprise architecture design knowledge to enhance probability of success

Cases:

1. Do we see increased laterality in enterprise architectures as flexibility increases?
2. How do performance demands combine with resource constraints to influence structure?

Observations:

1. Architecture design rules are observable in large-scale patterns of enterprise structure
2. Tight resource constraints coupled with high performance demands generate laterality
3. Lateral enterprise structures appear to enable increased flexibility

Research Goals and Products

- **Practical tools** for enterprise design and transformation efforts
- **Method and metrics** for managerial diagnosis and assessment of enterprise and technical system architecture performance attributes
- **Model** for assessing performance potential of enterprise architecture

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