Architecture: Controlling Chaos by Defining Complex Interdependencies

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Architecture concerns at organizational levels
(System-of-System Architecture)

Standards, Templates, Institutional Process

Inform how – Tools, Process, Review
Criteria, Standardized Taxonomy...

Business Architecture - needs, drivers, vision

Technical constraints

Technical Architecture – standards, interoperability concerns...

Provide mission drivers, ops concepts, requirements

Mission Operations

Defines

Ground Data System (Technical) System of Systems

Defines

Level 4 Design of systems

Defines

System 1 Architecture

System 2 Architecture

Provide requirements, design principles, constraints, Technical Standards

Tech needs, drivers, design agenda, AsIs constraints

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Architecture – Alignment on process
(Process and cultural differences impact a cohesive architecture)

Standards, Templates, Institutional Process

Inform how – Tools, Process, Review Criteria, Standardized Taxonomy...

Business Architecture – Organization 1

Technical Architecture – Organization 2

System Architecture – Organization 2

System Architecture – Organization 3

Alignment:

Partial

None

Complete
Architecture – Control of the money
(Conflicting goals, schedules impact a cohesive architecture)

Business Architecture – Account 1

Technical Architecture – Account 2

System Architecture – Account 3

System Architecture – Account 4

Milestone # | Delivered By | Requires

GSAW - Architecture-Centric Evolution (ACE) Working Group Session
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Obstacles to Architecture

- Organizational Structure
  - Organizational boundaries can create silos with different agenda’s, processes, cultures and direction

- Management Support
  - Requires strong buy-in and support from management

- Control of the money
  - He who has the dollar makes the rules

- Poorly defined roles
  - People need to agree how they will work together