Conceptual Model for Enterprise Governance

Walter L Wilson
Enterprise Governance Agenda

- Define the Enterprise and Architecture
- Define a Ground Station as an Enterprise Business Process
- Define Enterprise Governance
- Define Levels and Types of Enterprise Governance
- Introduce Governance Model
- Define effects of Enterprise Engineering
The Enterprise

- A *system* engineered to achieve organization goals such as defense, commerce, education, etc, in the most cost effective, efficient, and responsive manner

- Embodied in its enterprise architecture
  - Provides a strategic context for the management of the Enterprise lifecycle
## Levels of Abstraction

<table>
<thead>
<tr>
<th>Enterprise</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Domain</td>
</tr>
<tr>
<td>• Capability</td>
</tr>
<tr>
<td>• System</td>
</tr>
<tr>
<td>• <em>Family of Systems</em></td>
</tr>
<tr>
<td>• <em>System of Systems</em></td>
</tr>
<tr>
<td>• Resource</td>
</tr>
</tbody>
</table>

- Conceive
- Develop
- Deploy
- Sustain
- Design
- Test
- Operate
- Retire
Enterprise Architecture Methodology

Framework and Methodology

Vision

Enterprise Governance

Business Viewpoint

Capability Viewpoint

Systems Architect

Operations Architecture

Technology Architecture
Enterprise Architecture Transformation Tool

- Have initiatives made expected contributions?
- Has anything changed requiring realignment?
- How are assets being leveraged?

Align

- What is the vision?
- How best to attain the vision?
- Align to Customer Vision and goals

Govern

- What does the enterprise currently do?
- How should it do it in the future?

Know

- What architecture contributions will be made?
- What architecture requirements will be fulfilled?
- What architecture constraints will be imposed?

Deliver

- How to maximize opportunities?
- How to leverage investments?
- How to Employ Open Systems Management?
- What is the roadmap for transformation?

Plan

- What architecture contributions will be made?
- What architecture requirements will be fulfilled?
- What architecture constraints will be imposed?
Enterprise Engineering Benefits

- Key Enterprise Governance Attributes
  - Scalability
    - Ability to scale in magnitude rapidly in response to changing requirements
  - Adaptability
    - Ability to respond rapidly to changing requirements
  - Flexibility
    - Ability to adjust rapidly to changing requirements
  - Interoperable
    - Ability to interoperate seamlessly
  - Entrepreneurial
    - Ability to respond rapidly to opportunities
  - Traceability
    - The ability to chronologically interrelate uniquely identifiable entities
  - Optimization
    - The ability to continually improve the efficiency of processes
  - Responsive
    - The ability to perform any of the above effects within a compressed or stated timeline
The Business System

- Provide Command and Control
Enterprise Governance

- The assurance mechanism for the accomplishment of Enterprise Goals
Enterprise Governance Defined

- The structure and relationships which control, direct, or regulate performance of an enterprise, projects, portfolios, infrastructure, processes

![Diagram showing the relationship between Business Process, Govern Enterprise, Process Indicators, Adjust Process, and Adjust Governance]
Levels of Enterprise Governance

Increases due to derived governance at Tactical (Organization) and Operational (process) levels
Enterprise Governance Process Model

- Acquire Enterprise
- Operate Enterprise
- Sustain Enterprise
- Transform Enterprise
- Retire Enterprise
- Plan Enterprise Governance
- Implement Enterprise Governance
- Manage and sustain Enterprise Governance
Enterprise Governance Process Model

- Perform Conformance Management
- Monitor, Measure, Assess, Adjust Enterprise Governance
- Perform Configuration Control and Change Management
- Secure Enterprise
- Perform Policy Management
- Perform Effectiveness and Performance Management

Manage and Sustain Governance

Conduct enterprise Governance Review Boards

- Perform Communications Security
- Perform Information Security
- Perform Physical Security
- Perform Operations Security

- Perform Crypto Security
- Perform Facility Security
- Perform Personnel Security

- Perform Transmission Security
- Perform Emission Security
- Perform Traffic Flow Security
- Perform Information Security
- Perform Physical Security
- Perform Operational Security

Perform Conformance Management
Business Rules

Policy
- The implementation and execution of a business rule

- Regulations, Directives, Laws, Corporate Guidelines, Vertical/Horizontal Governance, Specifications, etc

Distilled

Implemented by

• Business Statements

Executed By

• Business Rules

Conformance

• Policy
Business Rule Planning Process

1. Collect Source Material
2. Extract Constraints into Business Statement
3. Generate Business Rules
4. Deploy Policy
5. Enforce Policy

Enterprise Governance Planning Process
# Business Rule Capture Artifact

## DoDAF OV-6a example

<table>
<thead>
<tr>
<th>GUID</th>
<th>Unique ID of Rule (should employ namespace methodology)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of the business rule</td>
</tr>
<tr>
<td>Description</td>
<td>Short description of business rule</td>
</tr>
<tr>
<td>Source</td>
<td>Source of business rule</td>
</tr>
<tr>
<td>Rule Type</td>
<td>01 = RULE OF ENGAGEMENT, classified as RULE OF ENGAGEMENT</td>
</tr>
<tr>
<td></td>
<td>02 = DATABASE RULE, classified as DATABASE RULE</td>
</tr>
<tr>
<td></td>
<td>03 = ARCHITECTURE RULE, classified as ARCHITECTURE RULE</td>
</tr>
<tr>
<td></td>
<td>04 = CRITERION, classified as CRITERION</td>
</tr>
<tr>
<td></td>
<td>05 = STRUCTURAL ASSERTION RULE, classified as STRUCTURAL ASSERTION RULE</td>
</tr>
<tr>
<td></td>
<td>06 = ACTION ASSERTION RULE, classified as ACTION ASSERTION RULE</td>
</tr>
<tr>
<td></td>
<td>07 = INTEGRITY RULE, classified as INTEGRITY RULE</td>
</tr>
<tr>
<td></td>
<td>08 = AUTHORIZATION, classified as AUTHORIZATION</td>
</tr>
<tr>
<td></td>
<td>09 = DERIVATION, classified as DERIVATION</td>
</tr>
<tr>
<td></td>
<td>98 = NOT SPECIFIED, classified as OPERATIONAL RULE CATEGORY NOT SPECIFIED</td>
</tr>
<tr>
<td></td>
<td>99 = NOT KNOWN, classified as OPERATIONAL RULE CATEGORY-NOT KNOWN</td>
</tr>
<tr>
<td>Assertion Rule</td>
<td>Representation of the business rule as an ACTION-ASSERTION-RULE</td>
</tr>
<tr>
<td>Action Assertion Rule Condition</td>
<td>The condition with child element description, and a related condition assignment</td>
</tr>
<tr>
<td>Structural Assertion Rule</td>
<td>Representation of the business rule as a structural assertion</td>
</tr>
<tr>
<td>Where Applied</td>
<td>Processes where policy is to be applied</td>
</tr>
<tr>
<td>Measurement</td>
<td>How conformance will be measured</td>
</tr>
</tbody>
</table>
Summary

☐ Key Enterprise Governance Benefits

- **Responsiveness** – leading and lagging indicators allow for predictive and non-predictive analysis (supports Performance Based Logistics)

- **Adaptability** – indicators allow actions to be taken to adjust responsively to changing requirements

- **Traceability** – indicators and value allow determinations to be made on conformance, performance and effectiveness

- **Optimization** – indicators allow constant monitoring and adjustment for process efficiency
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References

☐ UML, The Object Management Group, 2009
☐ Architecture Governance, The Open Group, 2009
☐ Enterprise Architecture Tools, Institute for Enterprise Architecture Developments, 2009
☐ Department of Defense Architecture Framework, version 1.5, April 2007
BACKUP SLIDES
Enterprise Governance Process Model

Provide C2

Manage C2 Enterprise
- Acquire Enterprise
- Operate Enterprise
- Sustain Enterprise
- Transform Enterprise
- Retire Enterprise
- Plan Enterprise Governance
- Implement Enterprise Governance
- Manage and sustain Enterprise Governance

Govern C2 Enterprise
- Monitor, Measure, Assess, Adjust Enterprise Governance
- Secure Enterprise
- Perform Enterprise Configuration Control
- Perform Enterprise Change Management
- Perform Enterprise Conformance Management
- Perform Enterprise Value Engineering
- Perform Policy Management
- Perform Enterprise Effectiveness Management
- Perform Enterprise Performance Management

Perform C2
- Perform Enterprise Communications Security
- Perform Enterprise Information Security
- Perform Enterprise Physical Security
- Perform Enterprise Operations Security
- Conduct enterprise Governance Review Boards
- Perform Enterprise Crypto Security
- Perform Enterprise Transmission Security
- Perform Enterprise Emission Security
- Perform Enterprise Traffic Flow Security
- Perform Enterprise Facility Security
- Perform Enterprise Personnel Security

Enterprise