

DoD Architectural Framework (DoDAF)

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DoD Architectural Framework (DoDAF)

- **Defines a common approach for DoD architecture description, development, presentation, and integration for both war fighting operations and business operations and processes**
 - DoD moves toward net-centric operations and warfare
- **Frame work is intended to ensure that architecture descriptions can be compared and related across organizational boundaries, including Joint and multi-national boundaries**
- **Three related views of architecture:**
 - **Operational view (OV)**
 - **Systems View (SV)**
 - **Technical Standards (TV)**

DoD Architectural Framework (DoDAF)

- **Operational view (OV)** – description of the tasks and activities, operational elements and information exchanges required to accomplish the mission
- **Systems View (SV)** – a set of graphical and textual products that describes systems and interconnections providing for, or supporting DoD functions
- **Technical Standards (TV)** – set of rules governing the arrangement, interactions and interdependence of system parts or elements

Different perspectives of the same architecture

DoD Architectural Framework (DoDAF)

- **Architecture is a representation of a defined domain (at a particular point in time)**
 - **Integrated architecture refers to an architecture that has an integrated SV, OV, TV**
 - **Provide important tools to facilitate the coordination of**
 - **Doctrine**
 - **Organization**
 - **Training**
 - **Material**
 - **Leadership and education**
 - **Personnel and,**
 - **Facilities**
- **DoDAF – The structure of components their relationships, and the principles and guidelines governing their design and evolution over time**
 - **Both an Art and a Science**
 - **Conceptualize, design and build unprecedented complex systems**

DoD Architectural Framework (DoDAF)

- **Used throughout the Life Cycle of the project – deal with the complexity of change**
 - **Standardized approach – which is repeatable and independent of the personalities executing it and independent of their past mission experiences**
 - **Structured approach - which supports analysis – comparing and contrasting**
 - **Integrated approach which helps link **operational** concepts and needs to providing **systems** with their **technical** standards**

DoD Architectural Framework (DoDAF) Products

Operational View (OV) →

1. High Level Operational Graphic
2. Operational Node Connectivity Des.
3. Operational Information Exchange Matrix
4. Organizational Relationship Chart
5. Operational Activity Model
6. Operational Rules
7. Operational State Transition
8. Operational Event / Trace
9. Logical Data Model

Technical View (TV)

1. Technical standards profile
2. Technical Standards Forecast

Systems (SV)

1. Systems Interface Description
2. Systems Communications Description
3. Systems – Systems Matrix
4. Systems Functionality
5. Operational Activity to System Traceability Matrix
6. System data Exchange Matrix
7. Systems Performance Parameters
8. System Evolution Description
9. Systems Technology Forecast
10. Systems Rules Model
11. Systems State Transition Description
12. Systems Event Trace
13. Physical Data Model

ALL (AV)

1. Overview and Summary
2. Integrated Dictionary

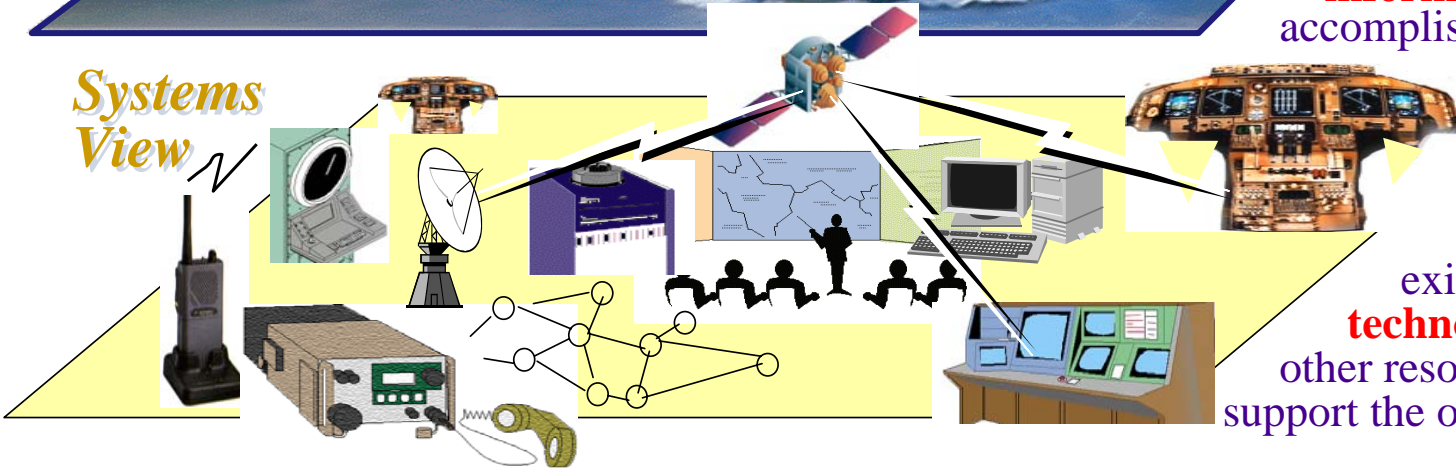
Spreadsheets, Text, Dynamic Models

One Architecture – Three Views



The *Operational View* describes and interrelates the **operational elements, tasks and activities**, and **information flows** required to accomplish mission operations.

Systems View



The *Systems View* describes and interrelates the existing or postulated **technologies, systems**, and other resources intended to support the operational requirements.

Technical View



The *Technical View* describes the profile of rules, **standards**, and **conventions** governing systems implementation and **forecasts** their future direction. 9

DoDAF (Products)

OPERATIONAL (OV)

1: High-Level Operational Concept Graphic

2: Operational Node Connectivity Description

3: Operational Information Exchange Matrix

4: Organizational Relationships Chart

5: Operational Activity Model

6a: Operational Rules Model

6b: Operational State Transition Description

6c: Operational Event/Trace Description

7: Logical Data Model

SYSTEMS (SV)

1: Systems Interface Description

2: Systems Communications Desc.

3: Systems-Systems Matrix

4: Systems Functionality Description

5: Operational Activity to System Function Traceability Matrix

6: Sys Data Exchange Matrix

7: Sys Performance Parameters Matrix

8: Systems Evolution Description

9: Systems Technology Forecast

10a: Systems Rules Model

10b: Systems State Transition Desc.

10c: Systems Event/Trace Desc.

11: Physical Data Model

TECHNICAL (TV)

1: Technical Standards Profile

2: Technical Standards Forecast

ALL (AV)

Overview & Summary

Integrated Dictionary

CADM: Core Architecture Data Model

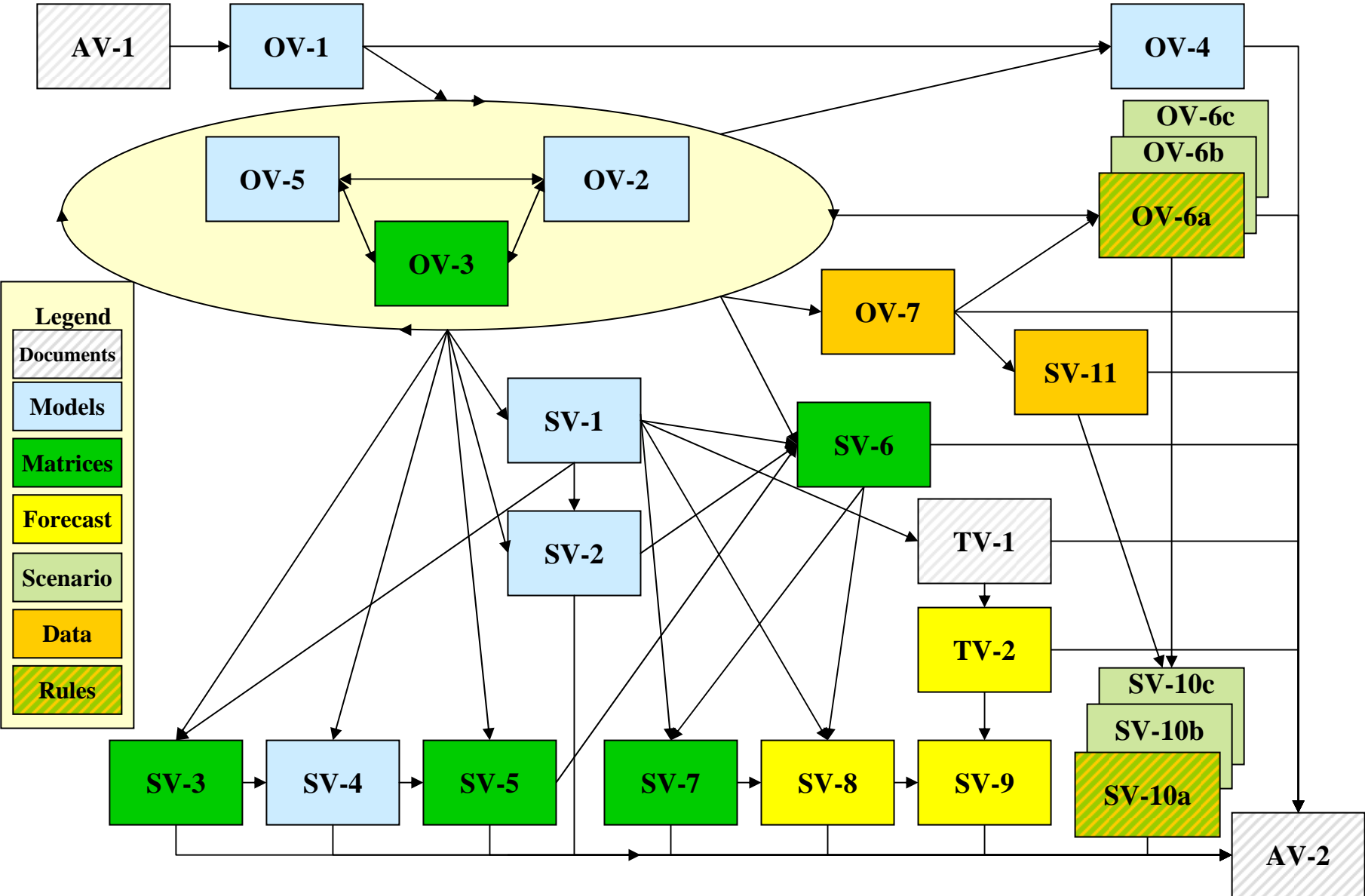
Spreadsheets

Static Models & Graphics

Text

Dynamic Models

DoD Framework Products



DoD Architectural Framework (DoDAF)

Steps for framework design

1. **Determine the intended use of the architecture**
2. **Determine the scope of the architecture**
3. **Determine the characteristics to be captures**
4. **Determine views and products to be built**
5. **Gather data a build the required products**
6. **Use architecture for intended purpose**