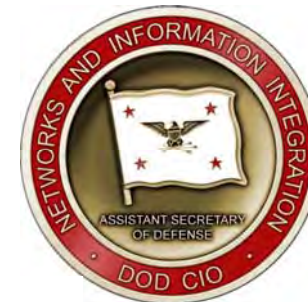




DoDAF V2.0 Overview

28 April 2010

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Architecture, Standards, and Interoperability Directorate

Office of the DoD Deputy Chief Information Officer

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Introduction



- DoDAF is prescribed for the **use and development of Architectural Descriptions** in the Department
- DoDAF V2.0 provides an overarching set of architecture **concepts, guidance, best practices, and methods** to enable and facilitate architecture development
- Explicit Roles & Responsibilities
 - **Managers** guidance for use and management of architecture
 - **Architects** guidance for development of architecture, meta-model and data exchange requirements
 - **Developers** guidance defines the DM2 Physical Exchange Specification



Goal: Support Core Processes



1. Capabilities Integration and Development (JCIDS)
2. Planning, Programming, Budgeting, and Execution (PPBE)
3. Acquisition System (DAS)
4. Systems Engineering (SE)
5. Operations Planning
6. Capabilities Portfolio Management (CPM)



Promulgation Memo



- Version 2.0 is the prescribed framework for all Department architectures and represents a substantial shift in approach.
 - *Don't redo current architecture*
- Architectures shall comply with DoDAF V2.0 in their next major release.
 - *Update only in the next release*
 - *Does not prevent early adoption of DoDAF V2.0*



DoDAF V2.0 Conformance



- The data in an architectural description is defined according to the DoDAF meta-model (DM2) **concepts, associations, and attributes**.
 - The information captured in an architecture tool is consistent with the DM2 concepts, associations, and attributes.
 - Architectural data should be stored in a recognized commercial architecture tool that conforms to industry standards.
 - Tools, preferably **data-driven**, can be used for the **presentation** of architectural data, but must be based on DATA.
- The architecture data is capable of transfer in accordance with the **Physical Exchange Specification (PES)**.
 - Architectures that will exchange information need to comply with DM2 PES (for the appropriate architectural data).



Key Concepts





DoDAF V2.0 Key Concepts



- Data-centric v. Product Centric
- DoDAF V2.0 Meta-Model (DM2)
- DoDAF V2.0 Method
- DoDAF Described Models vs. Presentation Views
- “Fit-for-Purpose”



Authoritative Data





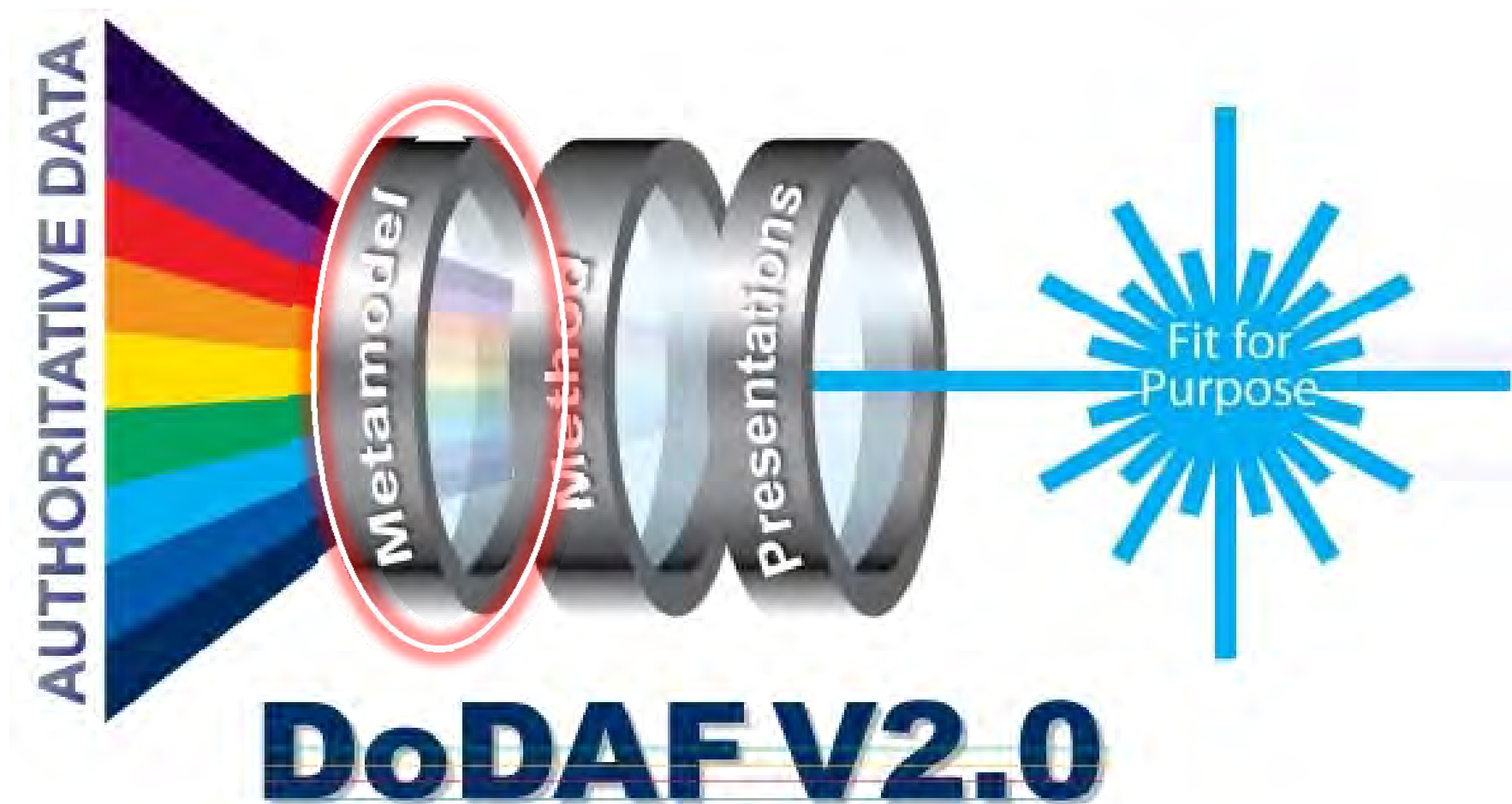
Data-Centric Paradigm



- **Prior** versions of DoDAF emphasized '**products**' (i.e., graphical representations or documents).
- DoDAF V2.0 emphasizes the **capture and analysis of data** and its relationships, rather than the creation of products.
 - **Emphasizes** on utilizing architectural data to support **analysis** and **decision-making**.
 - Greatly expands the types of graphical representations that can be used to **support decision-making activities**.
 - Supports **innovative and flexible presentation** of the architectural data in a meaningful, useful, and understandable manner.



Metamodel





DM2 Introduction



- Constrained vocabulary for DoDAF
 - For the description and discourse of models
- Federated EA data exchange specification
 - For interoperability of EA data between tools, DBs
- Supports the Net Centric Data Strategy
 - Discovery and understandability of EA data
- Precision semantics for EA analysis
 - Provides mathematical rigor to the data



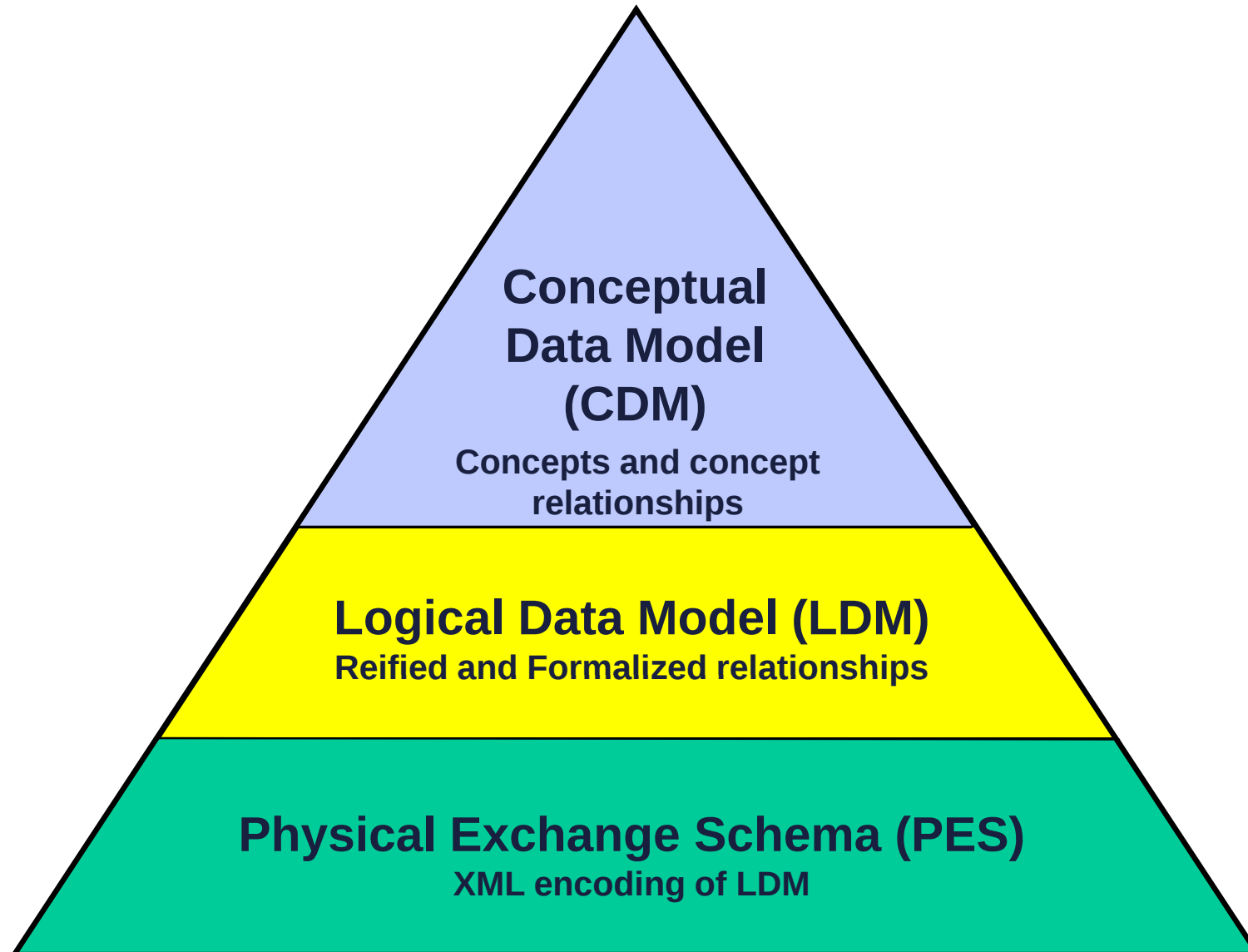
What is the DM2



- The DM2 is made up of three parts:
 - **Conceptual** Data Model
 - Key Concepts and Relationships in Non-Technical Terms
 - **Logical** Data Model
 - UML Class models that adds technical context to the CDM
 - **Physical** Exchange Specification (PES)
 - Implementation model and XSD Schemas
- Built upon the **IDEAS** Foundation
 - International Defense Enterprise Architecture Specification
 - Foundational objects (“Thing”, “Individual”, “Type”, etc.)
 - Relationship types (aka “Tuple” types)
 - “Whole/Part”, “Before-After”, Temporal, etc.”



Three Levels of the DM2





The diagram illustrates a complex system architecture with the following entities and their relationships:

- Guidance** (Red box) contains **Rule** (Red box).
- MeasureType** (Purple box) and **Measure** (Purple box) are at the top right.
- Activity** (Brown box) is in the upper middle.
- Project** (Brown box) is below Activity.
- Vision** (Yellow box) is to the right of Project.
- DesiredEffect** (Dark grey box) is below Vision.
- Condition** (Green box) is to the left of Activity.
- Capability** (Dark blue box) is below Activity.
- Resource** (Light blue box) is below Capability.
- Performer** (Light blue box) is below Resource.
- Skill** (Brown box) is to the right of Performer.
- Person Type** (Light blue box) is below Performer.
- Service** (Light blue box) is below Performer.
- Organization** (Light blue box) is below Performer.
- System** (Light blue box) is below Performer.
- Materiel** (Light blue box) is below Resource.
- Information** (Light blue box) is below Resource.
- Data** (Light blue box) is below Information.
- ArchitectureDescription** (Light blue box) is below Information.
- Location** (Dark green box) is to the right of Resource.

Relationships are indicated by numbered arrows (1-37):

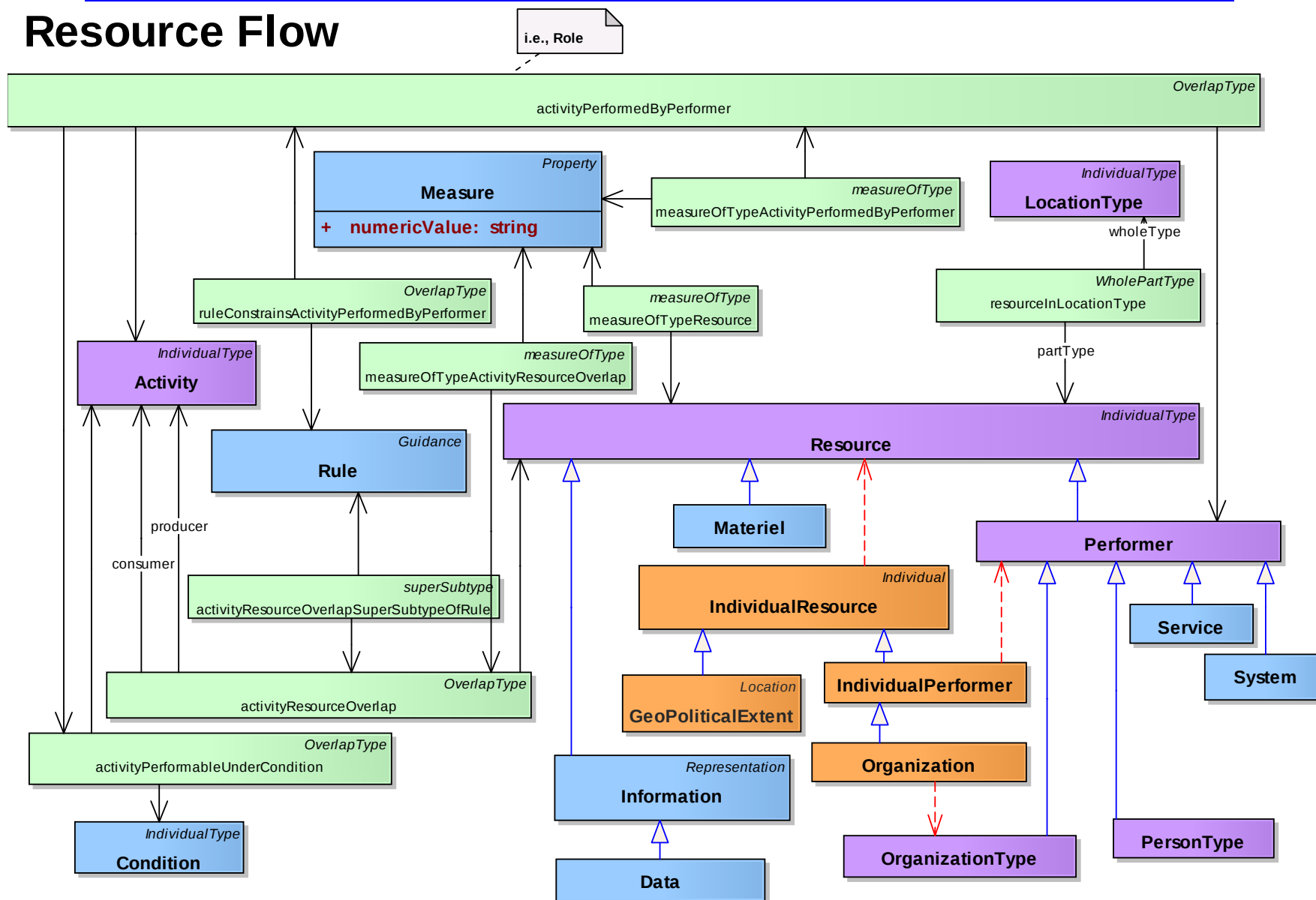
- 1**: Rule to MeasureType
- 2**: MeasureType to Activity
- 3**: Activity to Project
- 4**: Measure to MeasureType
- 5**: Project to Vision
- 6**: Activity to Rule
- 7**: Project to DesiredEffect
- 8**: Activity to DesiredEffect
- 9**: Vision to DesiredEffect
- 10**: Measure to DesiredEffect
- 11**: Rule to Condition
- 12**: Activity to Condition
- 13**: Condition to Activity
- 14**: Measure to Capability
- 15**: Capability to Resource
- 16**: Condition to Capability
- 17**: Capability to Condition
- 18**: Measure to Capability
- 19**: Condition to Resource
- 20**: Activity to Resource
- 21**: Condition to Resource
- 22**: Capability to Resource
- 23**: Resource to Performer
- 24**: Resource to Performer
- 25**: Resource to Performer
- 26**: Capability to Performer
- 27**: Capability to Performer
- 28**: Condition to Performer
- 29**: Measure to Resource
- 30**: Performer to Skill
- 31**: Performer to Materiel
- 32**: Performer to Person Type
- 33**: Information to Materiel
- 34**: Information to Information
- 35**: System to Person Type
- 36**: Service to Performer
- 37**: System to Materiel

Additional elements include **Standard**, **Agreement**, and **Constraint** (all in red boxes) pointing to Rule, and **Thing** (grey box) pointing to Information.



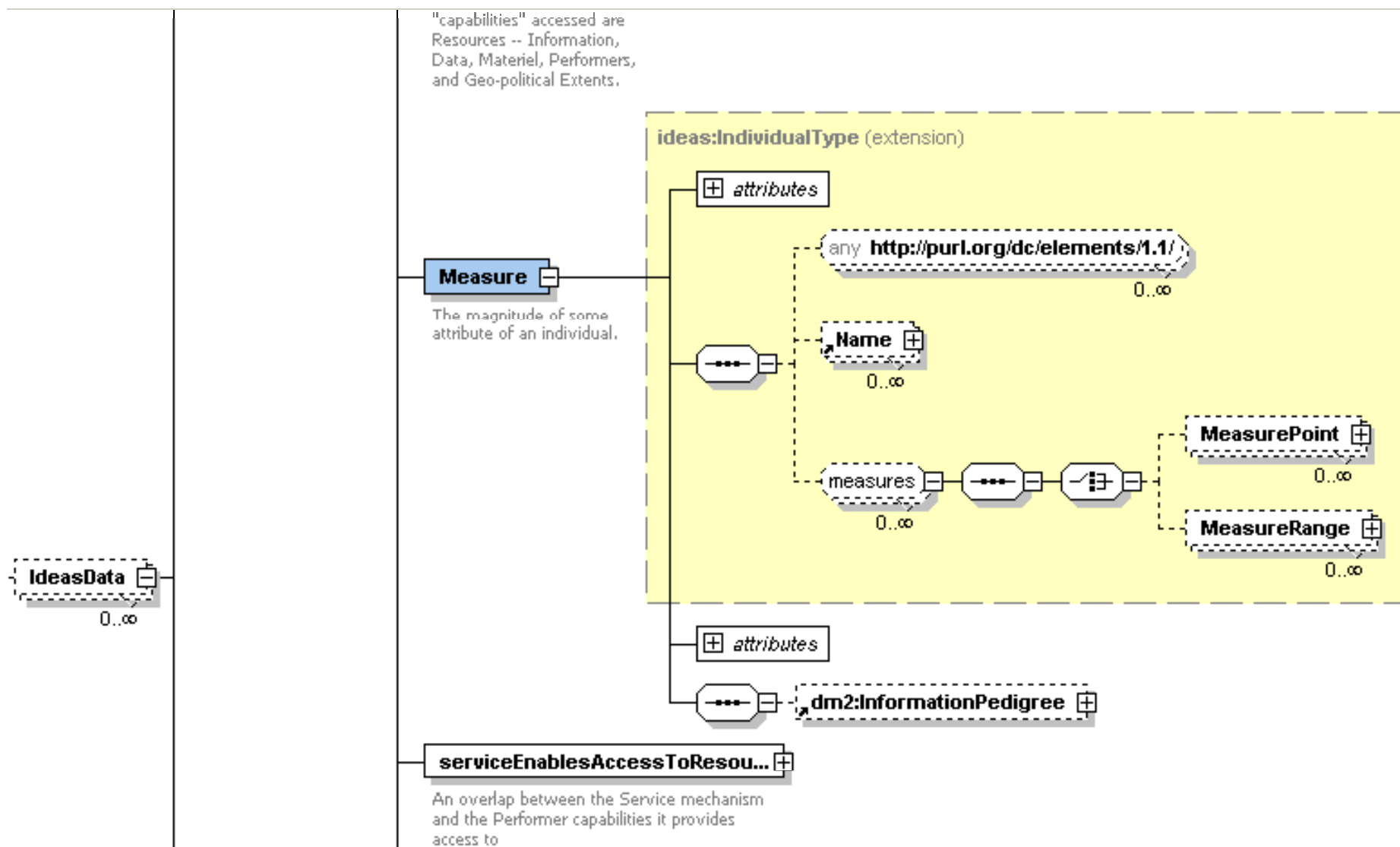
Logical Data Model (sample)

Resource Flow



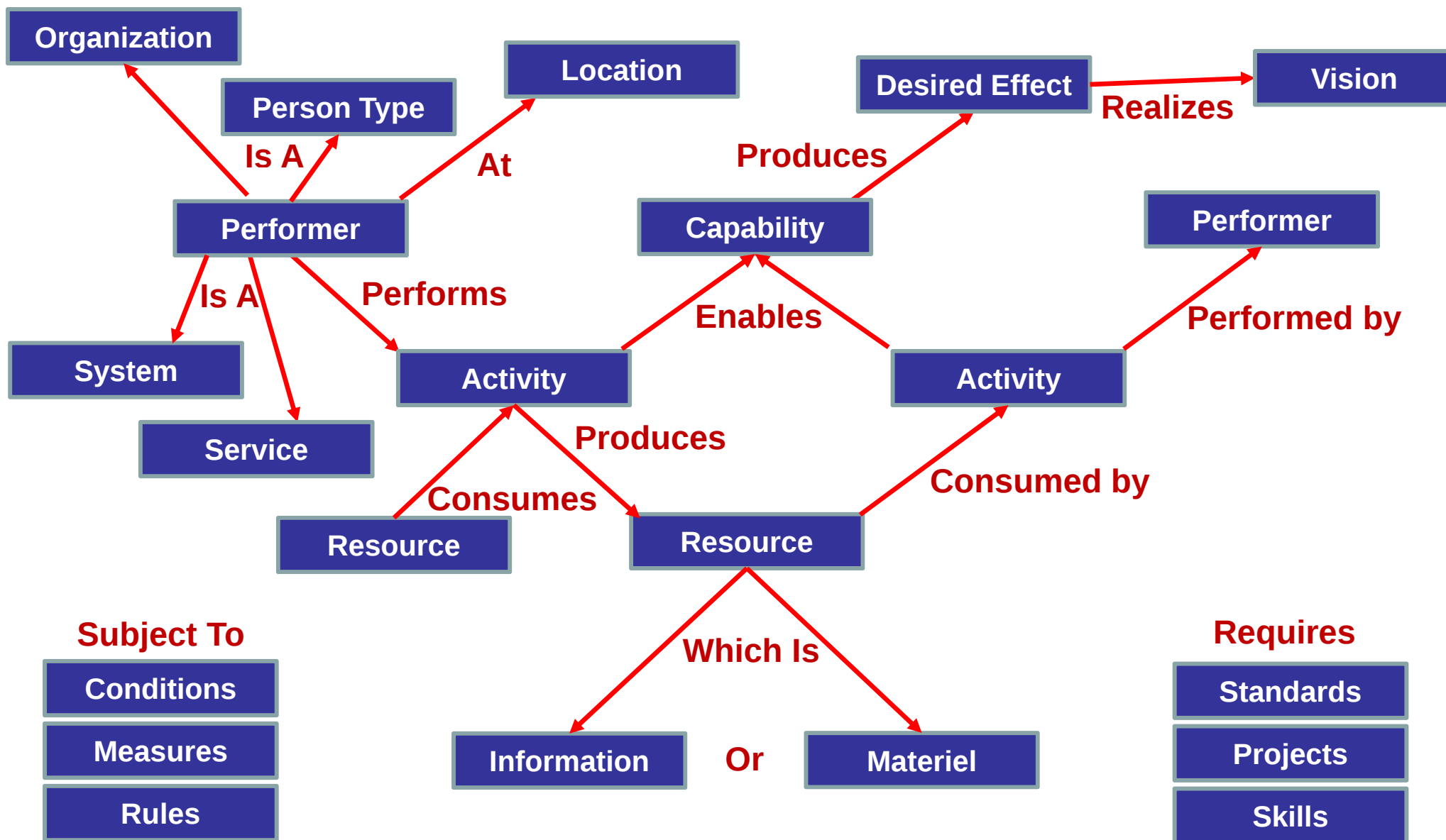
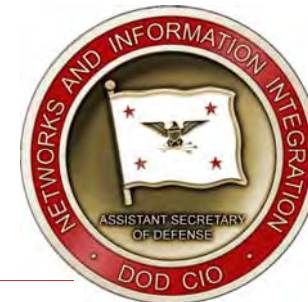


Physical Exchange Specification



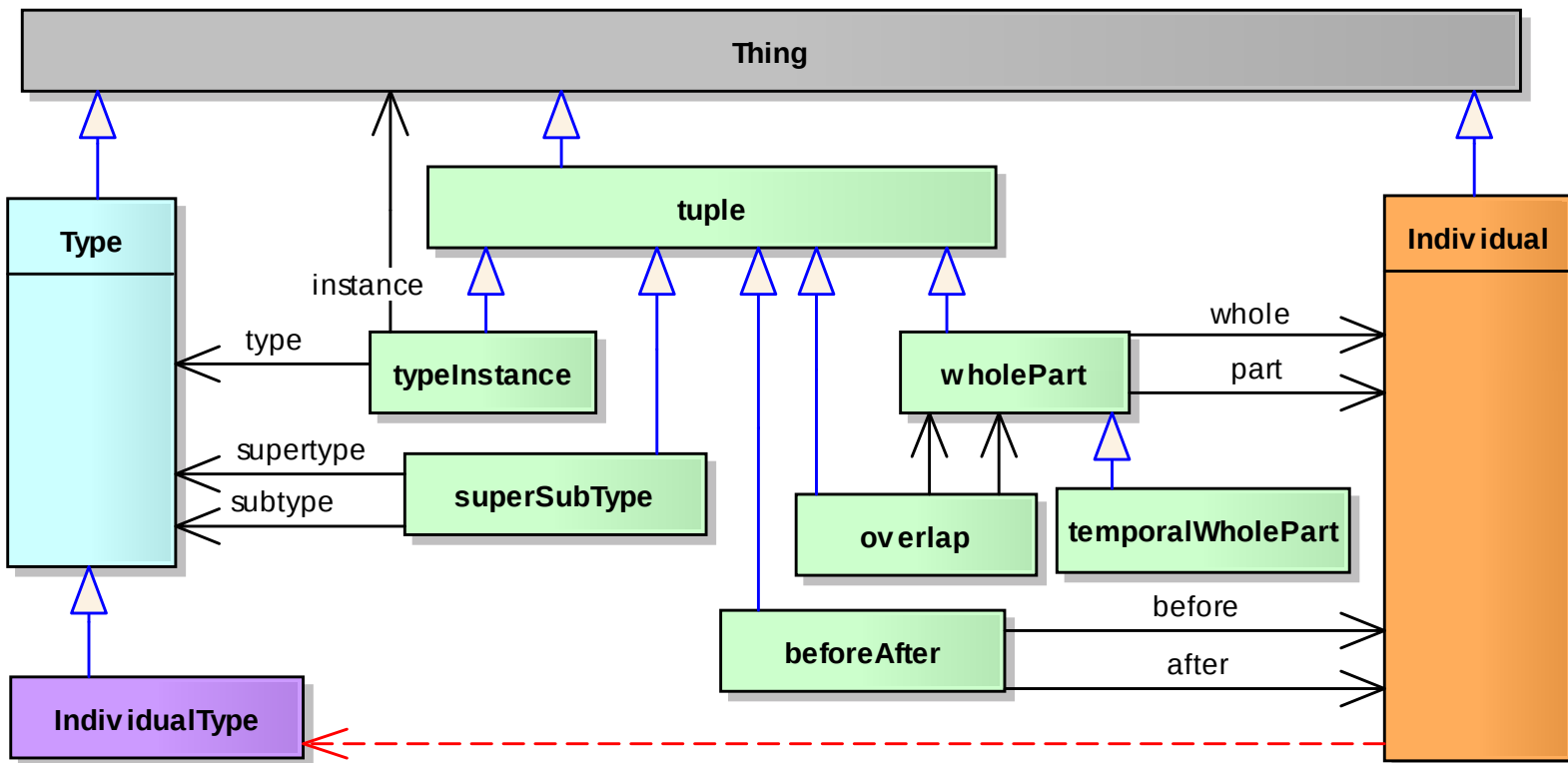


DM2 in Practice



IDEAS Foundation

- Developed by an international group of computer scientists, engineers, mathematicians, and philosophers under defense sponsorship.
- See <http://www.ideasgroup.org> or http://en.wikipedia.org/wiki/IDEAS_Group



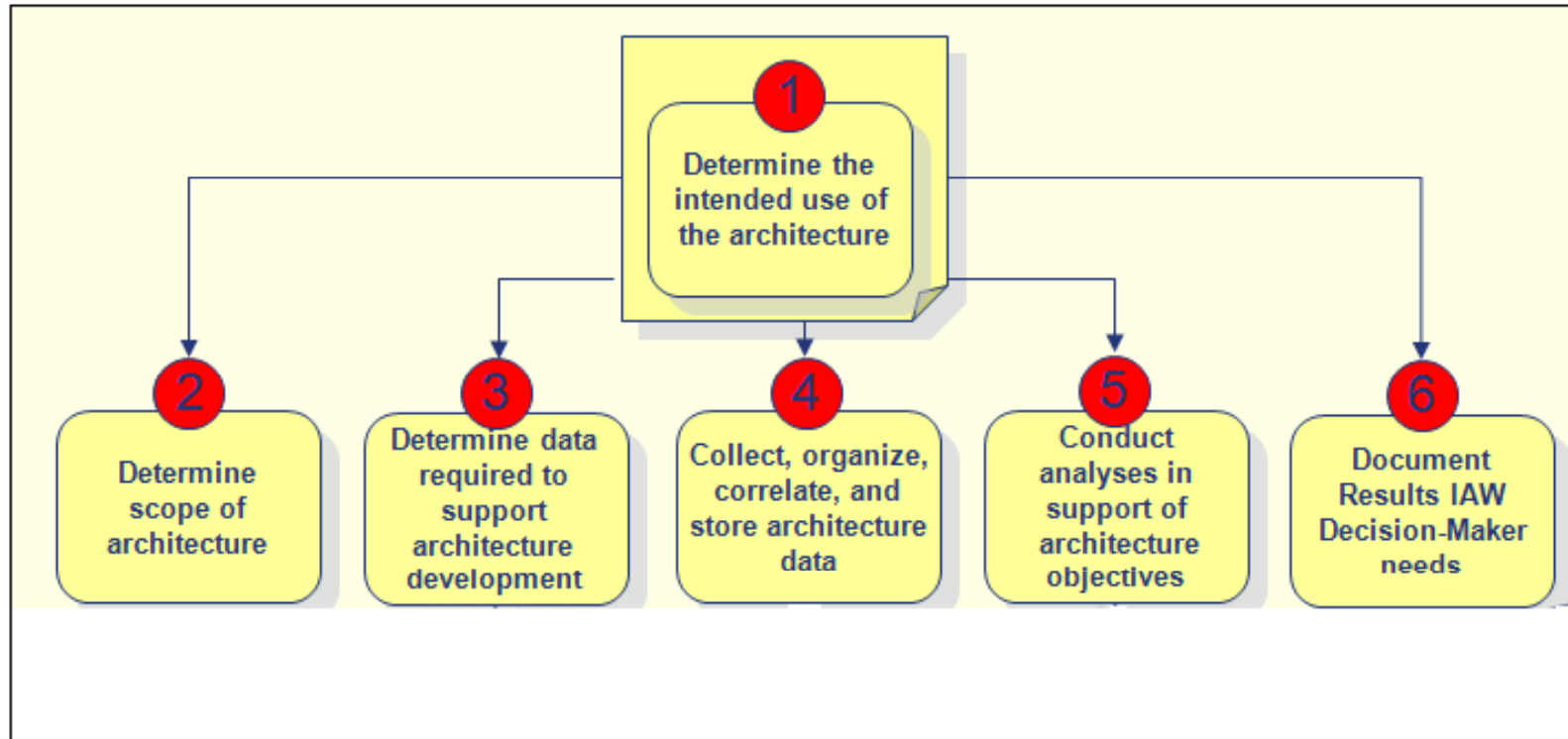


Method





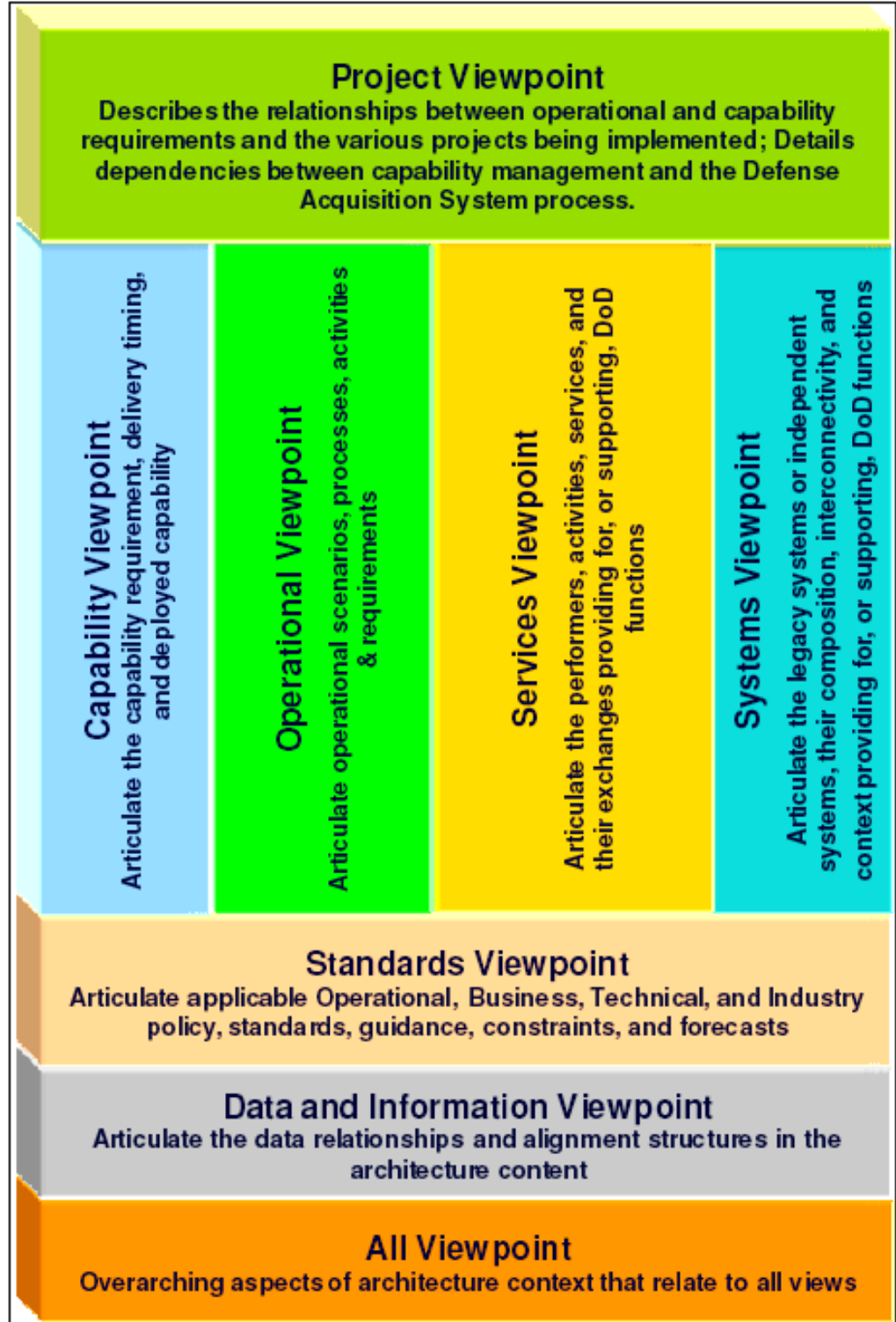
Methodology: DoDAF V2.0 Six-Step Architecture Development Process



- Determine **Use**, **Scope**, and **Data Requirements** of Architecture
- **Architect** (build models), **analyze**, and **present** (report)



DoDAF 2.0 Viewpoints

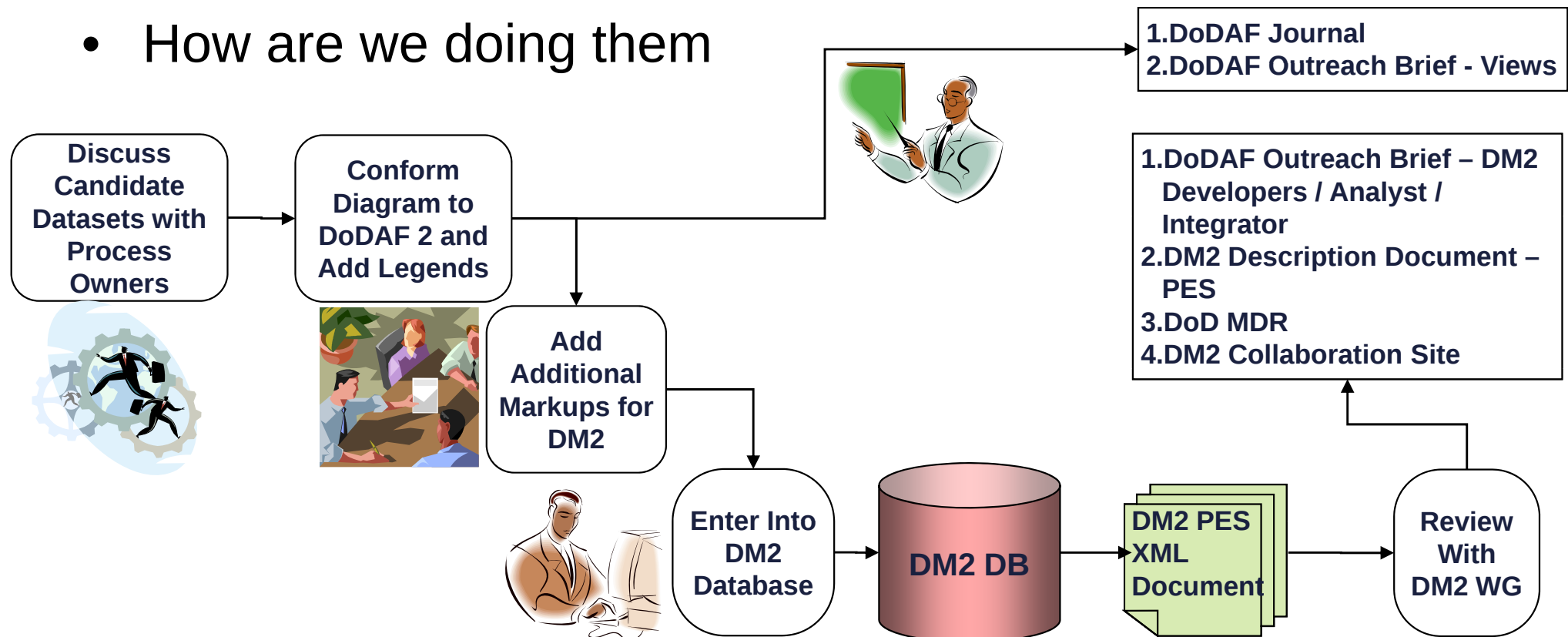




DoDAF V2.0 Exemplars

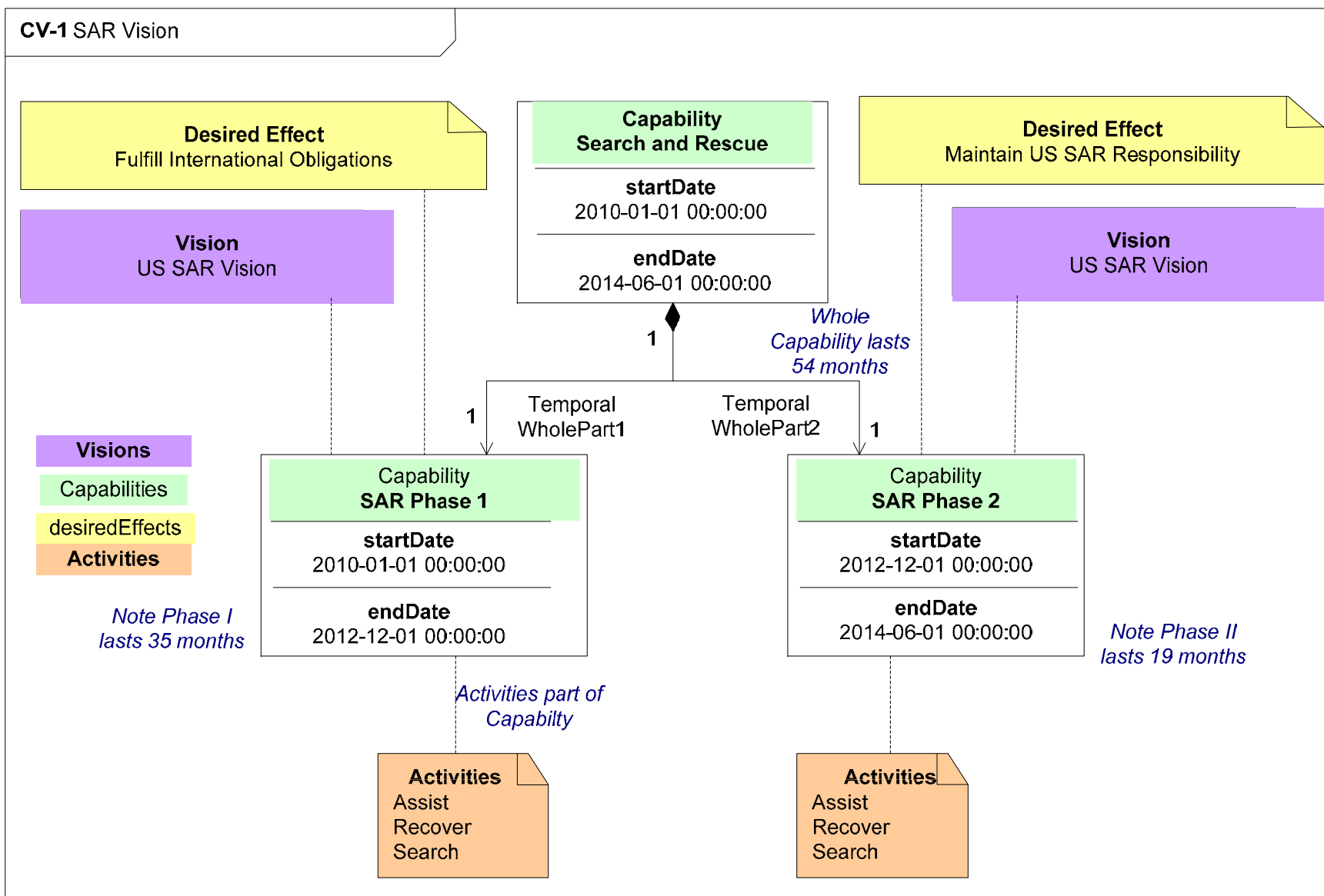


- What are they
 - Collections of architectural views and their corresponding DM2 PES XML document examples
 - From coherent datasets, e.g., UPDM S&R, NCES ISP
- How are we doing them





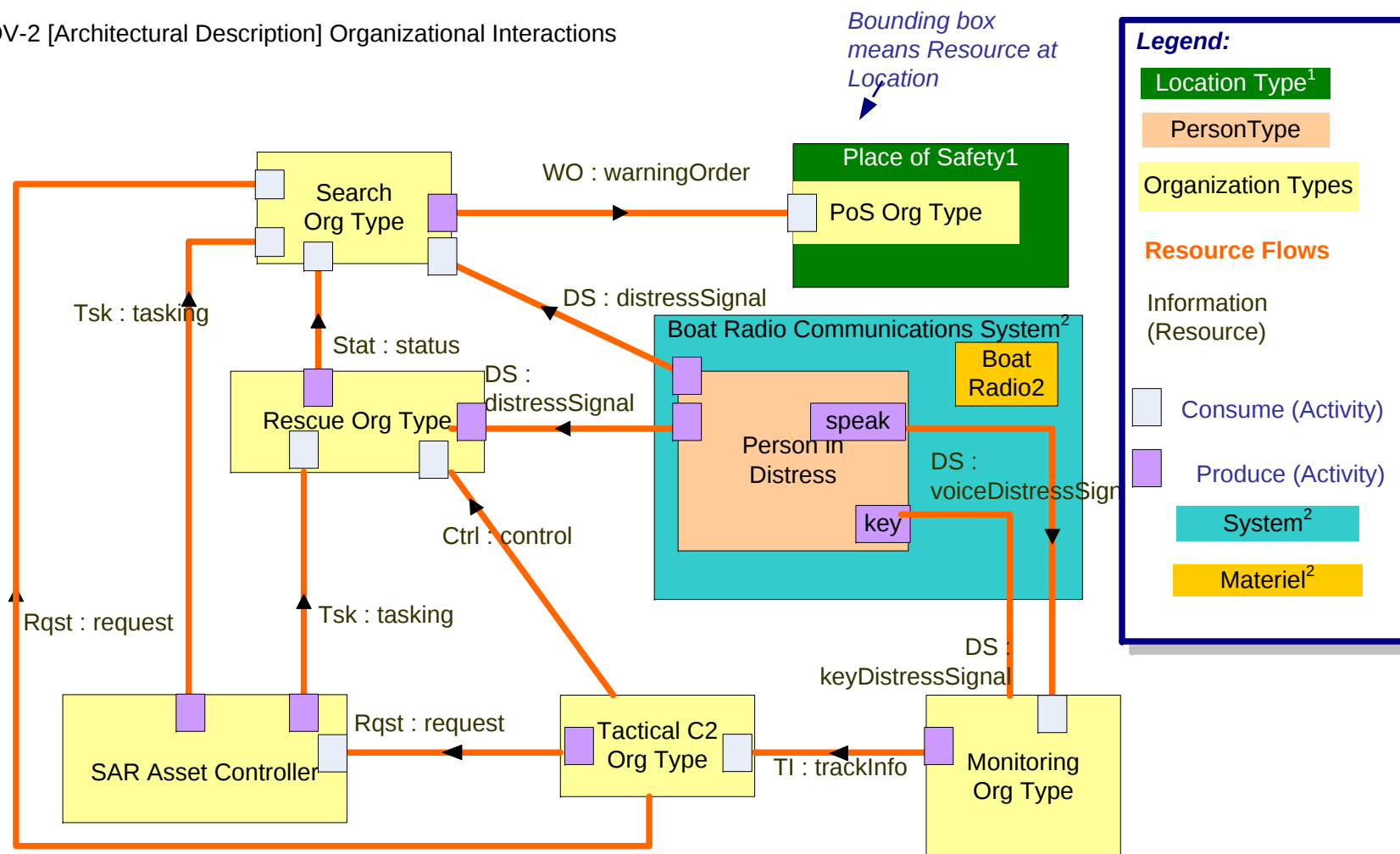
Model Examples





Model Examples

OV-2 [Architectural Description] Organizational Interactions



NOTE 1. Should generally not be shown in OV-2 unless an important constraint, i.e., not within the solution trade space.

NOTE 2: Should never be in OV-2 but included here for illustrative purposes to show SV-1 "bridge". Such a dataset could be defined as a "fit for purpose" dataset within a sub-COI.



Presentations





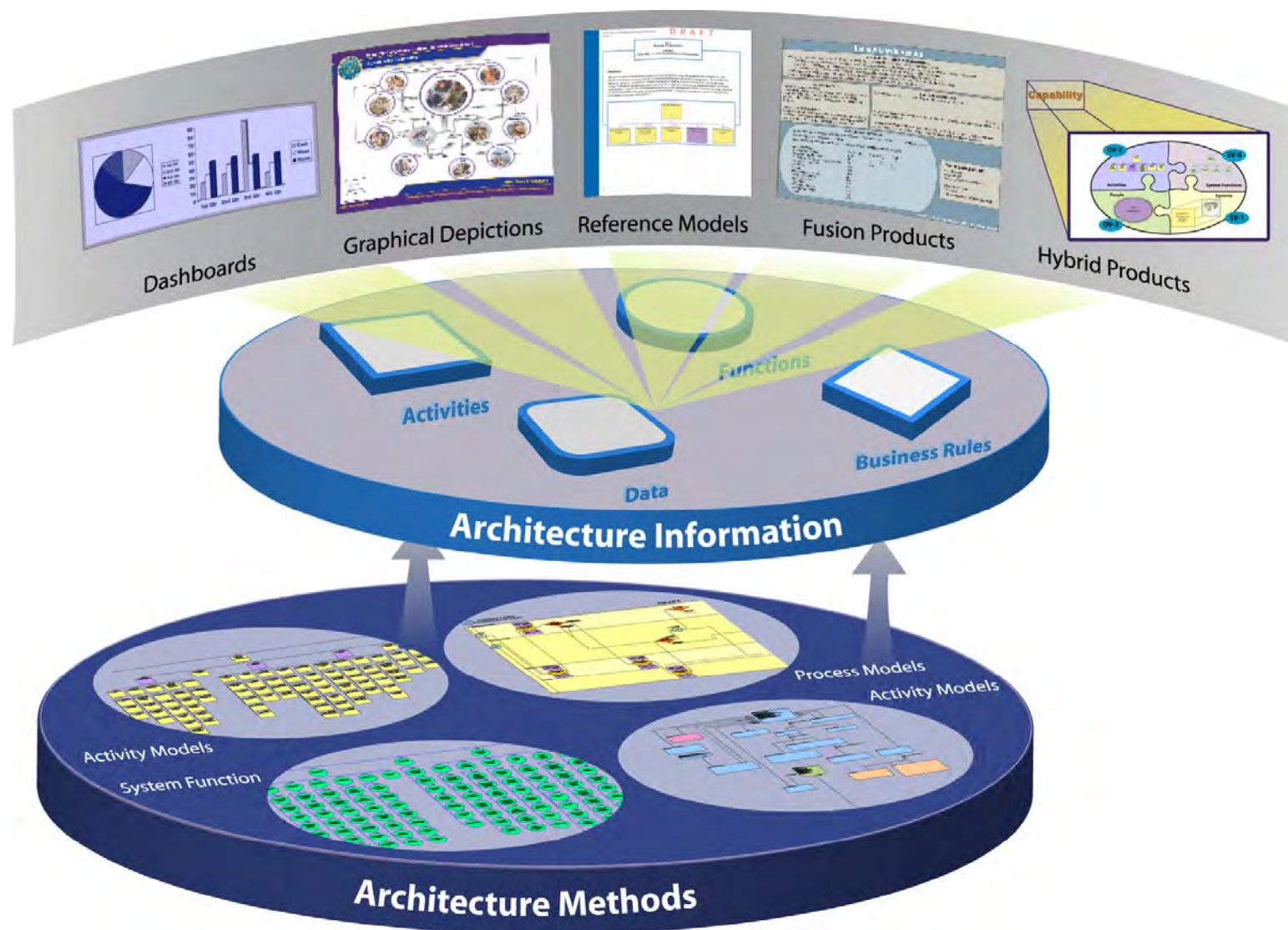
Presentation Views



- DoDAF V2.0 enables architects to provide visualizations of the collected architecture information through a combination of DoDAF-described Models and Fit-for-Purpose Views.
- ***DoDAF V2.0-described Models*** are **templates** for creating architecture views (i.e., OV-2, SysV-4) of the architecture data.
- ***Presentation Views*** allow the architect to **present** the **data** in **views commonly** used by **information consumers**.

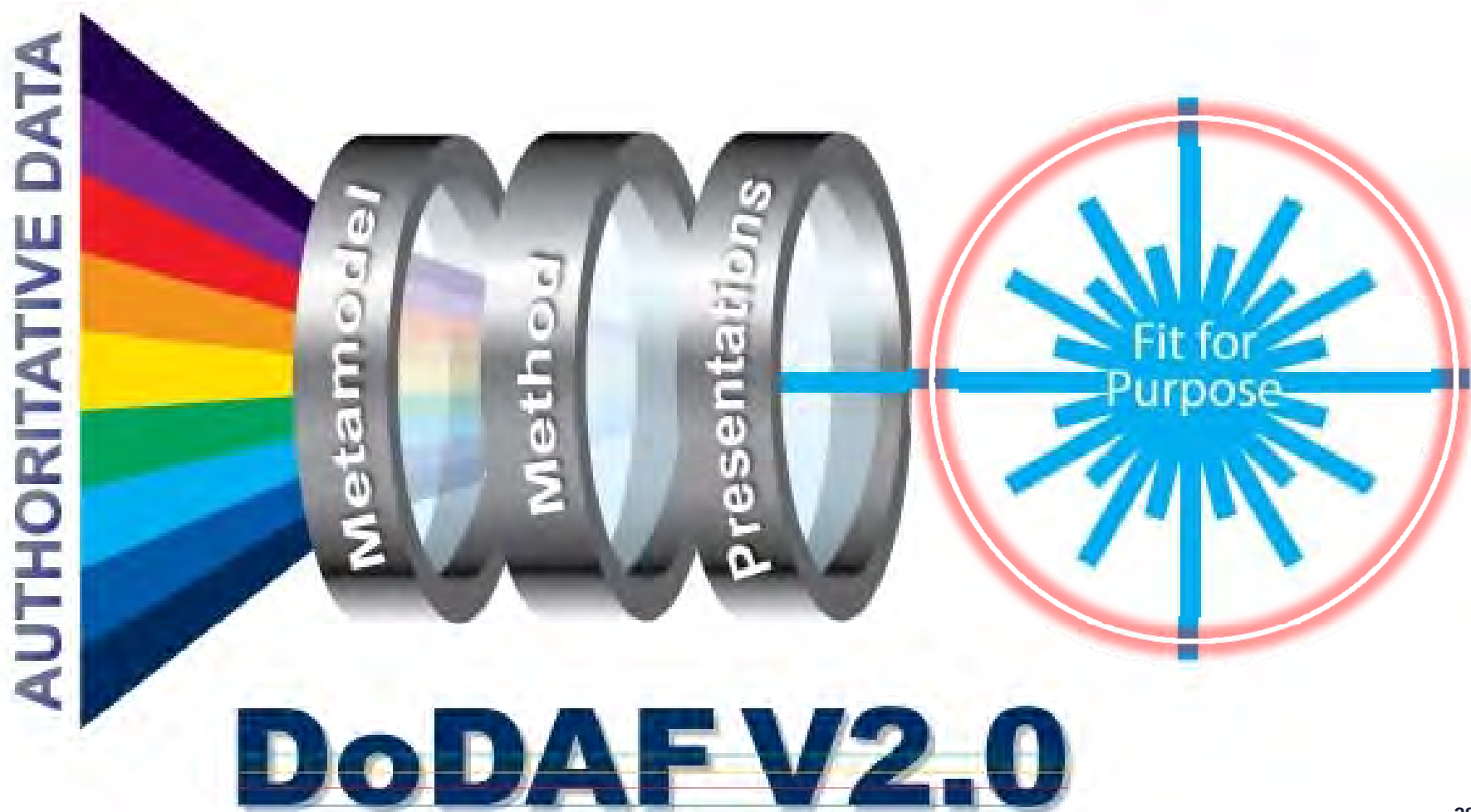


Presentation Views





"Fit-for-Purpose"





“Fit-for-Purpose”



- Is an architectural view that is appropriately **focused** on supporting the **stated goals** and **objectives**.
- Is **meaningful** and **useful** in the decision-making process.
- **Encourages** the architect to **focus** on collecting **data** and creating views that are **customized** to the **decision-maker's value chain**.
- Architectural data and views are **aligned** to the **information consumer's needs**.



Web Enabled





DoDAF V2.0 Moved to Web-Based Collaboration Environment



- DoDAF V2.0 will be promulgated via the DoD CIO/NII website and not published as document.
 - Promoting collaboration among the DoDAF community
 - Improved ability to locate information
 - Facilitate changes & updates to DoDAF guidance

The official and most current DoDAF V2.0 content is located on the government websites.



DoDAF V2.0 Website Overview



- Public DoDAF Website
 - Open to public
 - Hosted on the DoD CIO/NII website
 - <http://cio-nii.defense.gov/sites/dodaf20/>
- Private DoDAF Website
 - Need Government Sponsor
 - Need Account
 - Change Request Submission
 - Hosted on DKO Homepage
 - <https://www.us.army.mil/suite/page/454707>



Public Website

<http://cio-nii.defense.gov/sites/dodaf20>

The screenshot shows the DoDAF Architecture Framework Version 2.0 website as it appeared in a Windows Internet Explorer browser. The browser's address bar displays the URL <http://cio-nii.defense.gov/sites/dodaf20/index.html>. The website's header features the DoDAF logo and the text "DoD Architecture Framework Version 2.0" and "DoD Deputy Chief Information Officer". A search bar is located in the top right corner. The left sidebar contains a navigation menu with links such as "Introduction", "What is New in DoDAF V2.0", "Navigate by Content", "Vision for DoDAF V2.0", "Architecture Resources", "DoDAF V1.5 Support", "Relationships to other Frameworks", "Background", "Architecture Development", "Viewpoints", "Models", "DM2", "Navigate by Role", "Manager Role", "Architect Role", and "Developer Role". The main content area is titled "The DoDAF Architecture Framework Version 2.0" and contains a welcome message, a paragraph about the "Promulgation Memo" signed on 28 May 2009, and a diagram illustrating the framework's components: "AUTHORITATIVE DATA", "Metamodel", "Method", "Presentations", and "Fit for Purpose". The diagram shows a funnel of data entering a series of cylinders labeled "Metamodel", "Method", and "Presentations", which then output a starburst labeled "Fit for Purpose". Below the diagram, the text "DoDAF V2.0" is displayed. The footer of the website includes a "Version 2.0" link. The browser's taskbar at the bottom shows the Start button and several open applications: Microsoft Office Outlook, Internet Explorer, DoDAF 2 Plenary Out..., and Microsoft PowerPoint.



Private DoDAF Website – DKO

<https://www.us.army.mil/suite/page/454707>



Army Knowledge Online - shelton.lee - Windows Internet Explorer

https://www.us.army.mil/suite/portal/index.jsp

File Edit View Favorites Tools Help

GoToMeeting : Web confere... Army Knowledge Online - ...

The United States Department of Defense
Assistant Secretary of Defense
(Networks & Information Integration)
DoD Chief Information Officer

Email Files Discuss Groups IM Forms Video People Help Logout

Home My Account Favorites Quick Links Self Service Search... AKO Content Search

DoDAF Homepage (Related Content) Options

AKO Home > DoD Organizations > OSD > ASD (NII) / DoD CIO > DCIO/DASD Information Management, Integration and Technology > Directorate - Enterprise
Architecture and Standards > DoDAF Homepage > DoDAF Homepage

Welcome to the DoDAF Homepage Options

The **DoDAF Homepage** contains:

- The formal **DoD Architecture Framework** documentation (V2.0, V1.5, and V1.0)
- The **DoDAF Journal**, an area for supporting files. It includes the files that support the DoDAF V2.0 Volumes, which will include examples, best practices, and community input.
- The DoDAF Configuration Management process
- Provides a channel to submit **Change Requests**. Change Requests and requests to add files to the DoDAF Journal will be processed in accordance with the Configuration Management process. Change Requests can be submitted for DoDAF and the DoDAF Journal below in the "DoDAF and DoDAF Journal Change Requests". Files can be uploaded by users in the "DoDAF Journal Knowledge Center Channel". This will initiate the CM process, however, the files will need to be approved before they will be visible.

DoDAF Announcements Options

15 Jan 2010 14:13 GMT

DoDAF V2.0 has been posted to DefenseLink and is available to the public. » DoDAF V2.0

Current « Previous | Next » Archived

DoDAF Documentation Options

DoD Architecture Framework (DoDAF) Personal and Teams

Show 10 20 [50] 100

Details View

Version 1-0 4 files Version 1-5 4 files Version 2-0 2 files

start Microsoft Office... 7 Internet Explorer DoDAF 2 Plenary ... Microsoft PowerPo... PowerPoint Slide S... 11:06 AM



Change Request Information



- DKO DoDAF V2.0 Homepage,
<https://www.us.army.mil/suite/page/454707>,
- Under the “DoDAF and DoDAF Journal Change Requests” channel
 - Select “Open a Topic” to initiate a Change Request
 - Initiated Change Requests will be reviewed and adjudicated monthly by DoDAF and DM2 Working Groups
 - Approved Change Requests will be updated in DoDAF 2.01



DKO DoDAF V2.0 Homepage

<https://www.us.army.mil/suite/page/454707>



Army Knowledge Online - shelton.lee - Windows Internet Explorer

https://www.us.army.mil/suite/portal/index.jsp Certificate Error Google

File Edit View Favorites Tools Help

Army Knowledge Online - shelton.lee

Details View

Additional Models 3 files

Architecture Evaluation 4 files

Architecture Process 3 files

DoDAF Configuration Management 0 files

DoDAF V2 Spiral 4 Comments 10 files

Other Information 16 files

Initiate Change Request Here

DoDAF and DoDAF Journal Change Requests Options

DoDAF Change Requests (Group: DoDAF)

1 - 5 of 12 [1] 2 3 Show 10 20 50 100

Create a Topic Remove from Favorites

Topic	Last Message
Videos of DoDAF V2.0 Sessions	16 Feb 2010 14:52 GMT By: charles.thornburg
Change management Pages	16 Feb 2010 12:52 GMT By: charles.thornburg
Training Resources	16 Feb 2010 12:50 GMT By: charles.thornburg
UJTLS in AV-2	12 Feb 2010 15:07 GMT By: charles.thornburg
Activities and Functions	12 Feb 2010 15:04 GMT By: charles.thornburg

1 - 5 of 12 [1] 2 3

DoDAF Links Options

No links

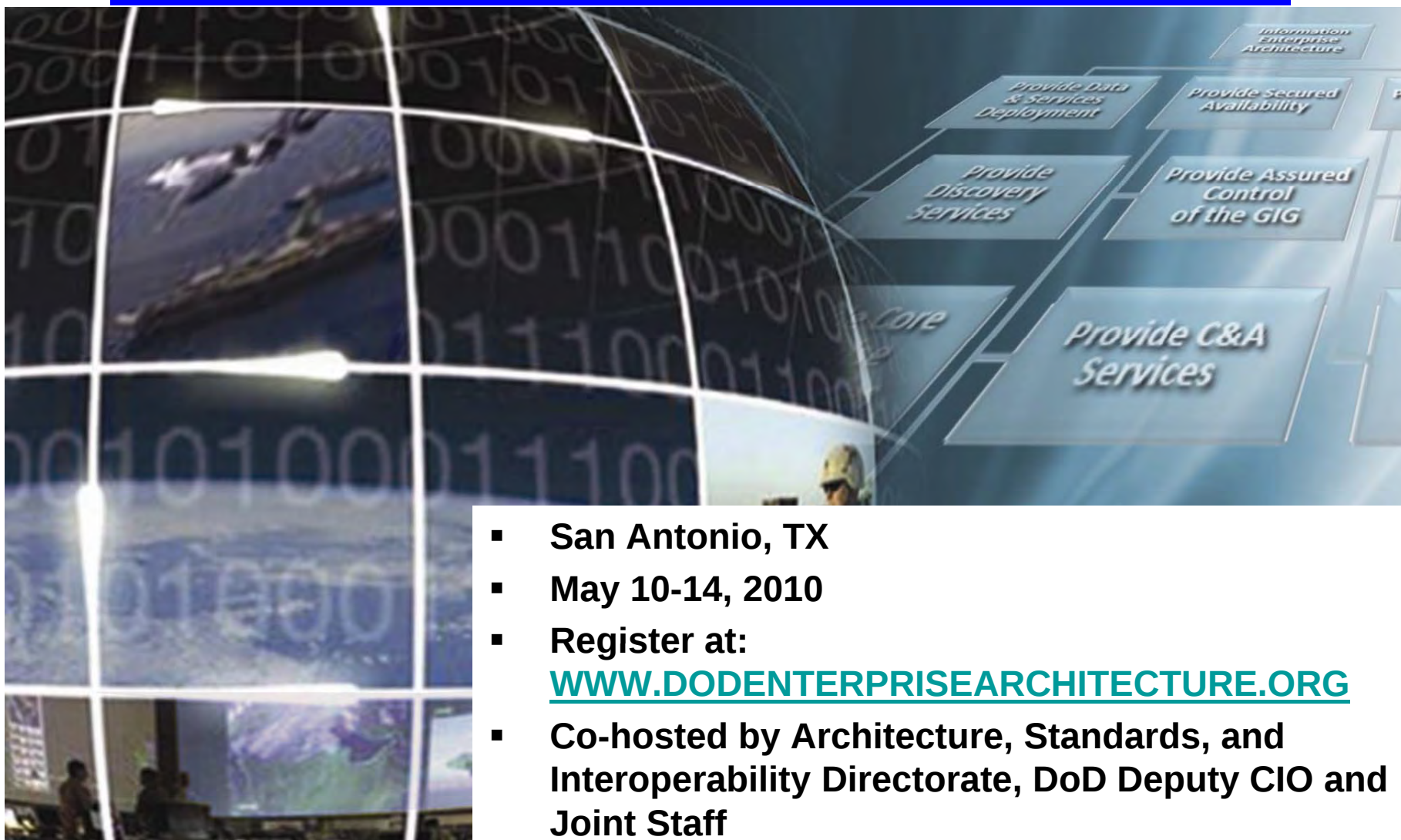
Inside AKO | Help | Terms of Use © 2001-2010 United States Army

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DoD Enterprise Architecture Conference



- San Antonio, TX
- May 10-14, 2010
- Register at:
WWW.DODENTERPRISEARCHITECTURE.ORG
- Co-hosted by Architecture, Standards, and Interoperability Directorate, DoD Deputy CIO and Joint Staff



Questions