The Future of Architecture Collaborative Information Sharing

DoDAF Version 2.03 Updates Information Sharing

for

DoD Enterprise Architecture Conference

30 April 2012

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Report Documentation Page

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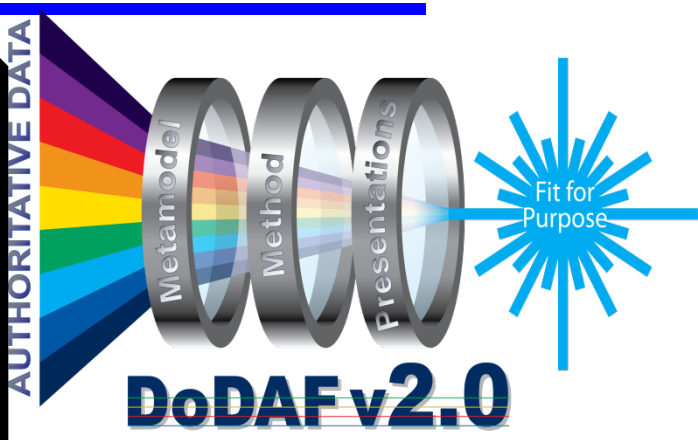
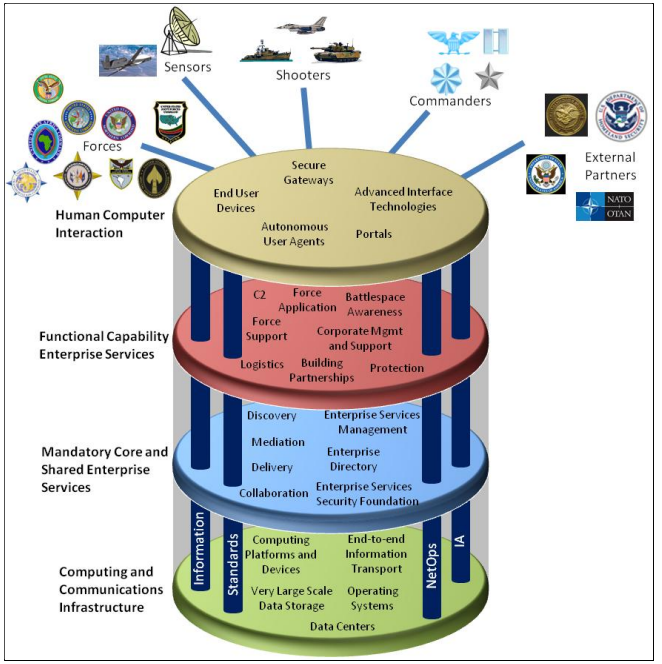
Elements of Quality Architecture

- *Single Architecture Framework*
- *Policy, Direction, Guidance*
- *Exchange - Standards*
- *Architecture Tools*
- *Certified Architects*

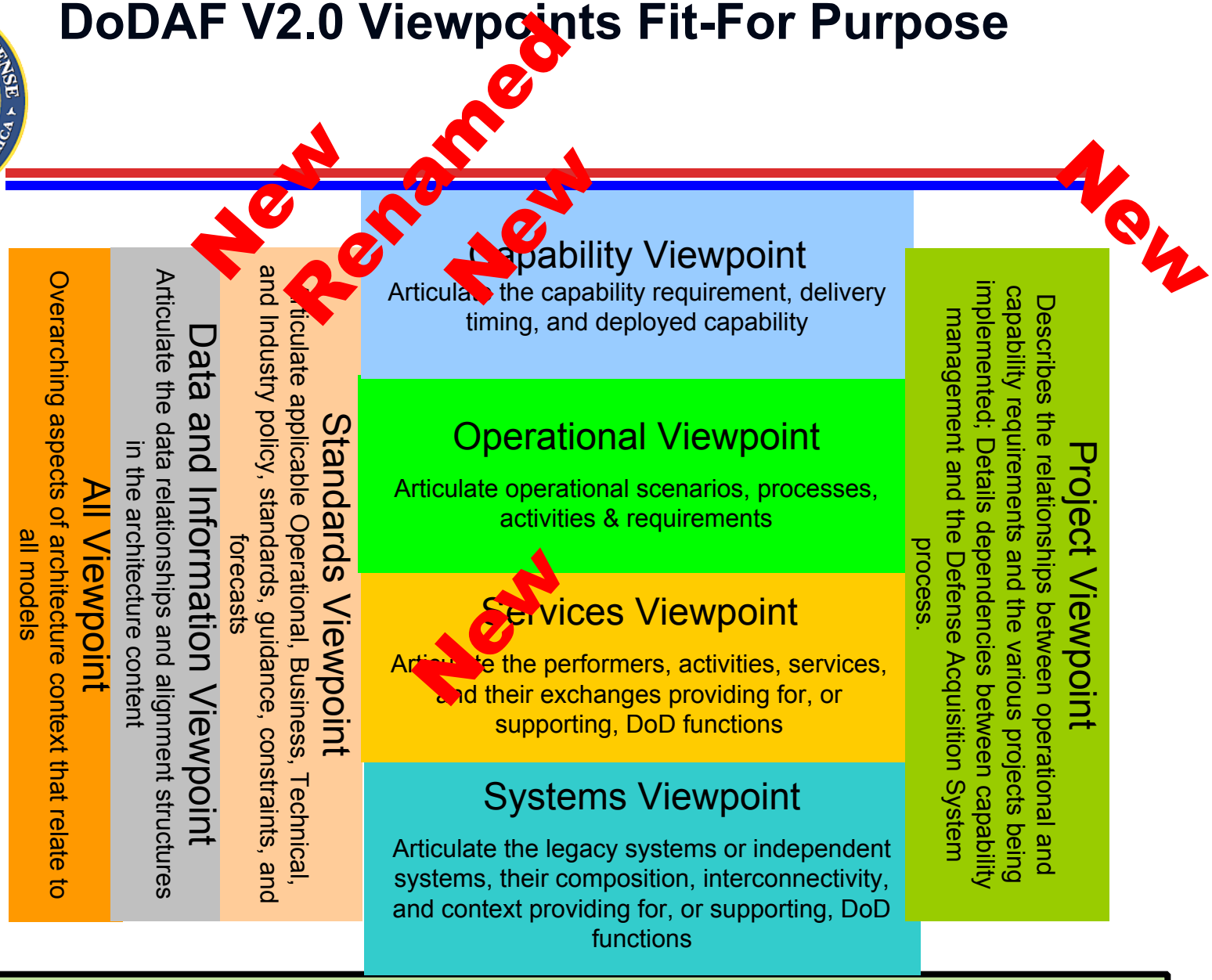
Enabling efficient and effective acquisition of hardware, software and services used by DoD and Partners in mission performance.





Unified Defense Architecture Framework

DoDAF V2.0 Viewpoints Fit-For Purpose



Architecture viewpoints are composed of data that has been organized to facilitate understanding.

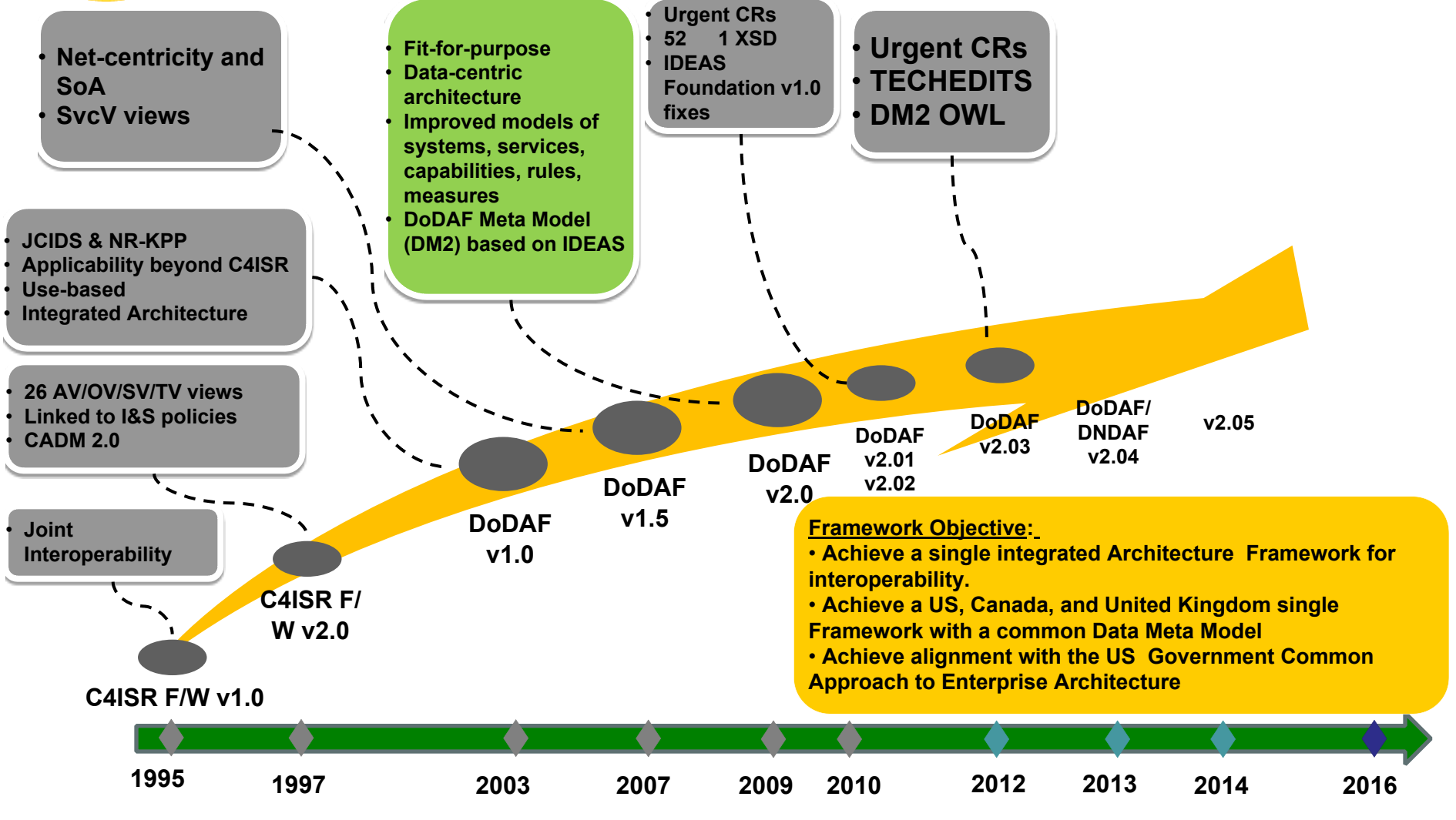
Data-Centric Paradigm

- Prior versions of DoDAF emphasized ‘products’ (i.e., graphical representations or documents).
- DoDAF V2.0 is the capture and analysis of data with its relationships:
  - 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.

DoDAF Meta Model (DM2) Purposes

1. Precise unambiguous *definition of DoDAF terms* and their inter-relationships
   - Architecture views (e.g., OV-2) are specified in DM2 terms in addition to their usual narrative text descriptions
2. Views are rendered from DM2 data
   - Views can be *exchanged* as DM2 XML or OWL data
3. Defines precision semantics for architecture *integration and analysis*

Direction for Unified Defense Architecture Framework



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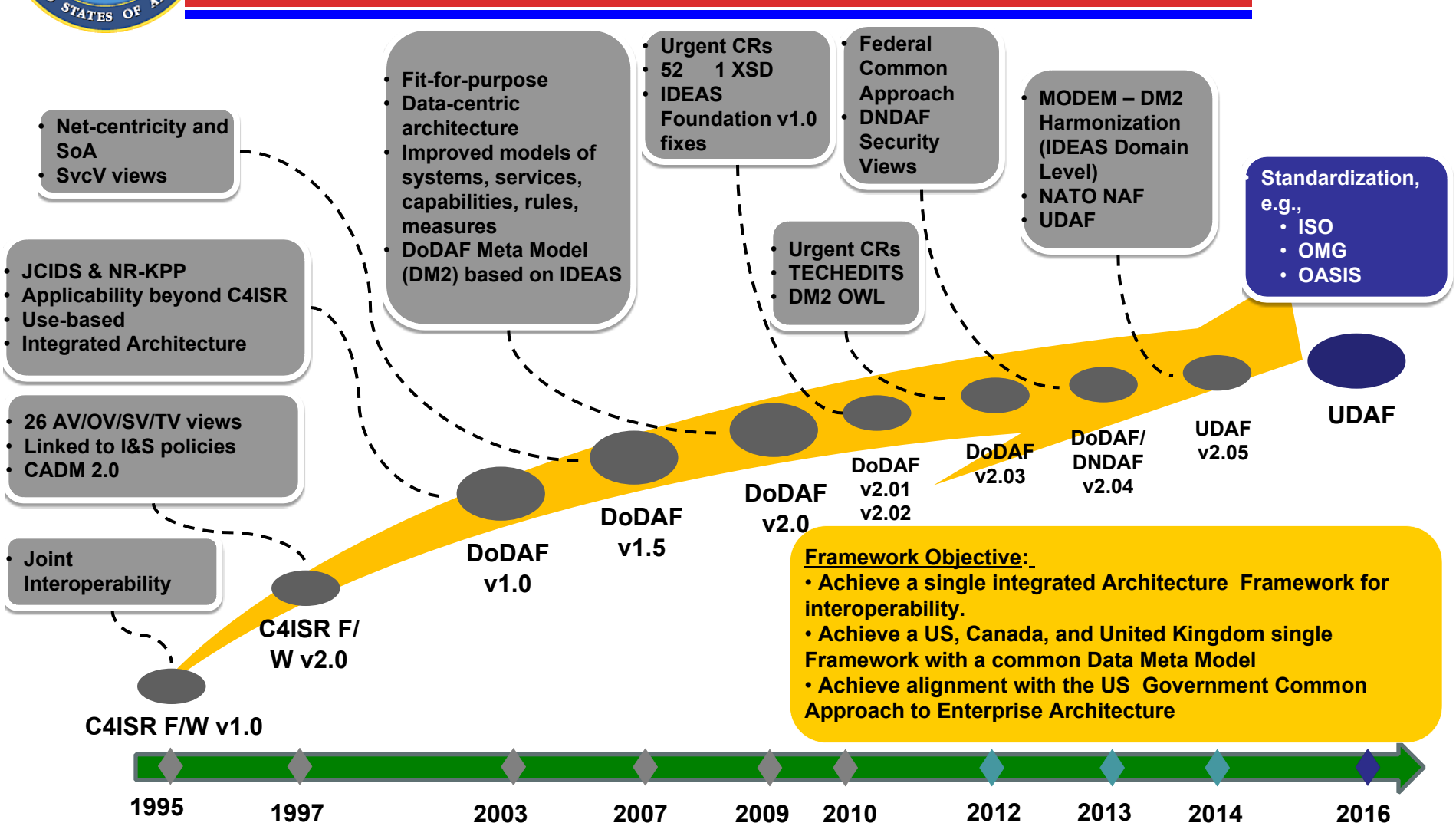
Recent Development

- UPDM V 2.0 published by OMG
- DoD Mandated UPDM V 2.0
- OMB Common Approach – DoDAF
- DoDAF Methodology = Common Approach
- DoD – Canada – UK Framework
- DoD Information Enterprise Architecture (DoD IEA)

DoDAF Future Development
Unified Defense Architecture Framework

- DoDAF V 2.02 developing to V2.03
- DoDAF V 2.04 add DNDAF Security
- DoDAF V 2.05 MODAF integration
- DoDAF becomes a DoD/IC Standard
- DoDAF becomes OMG Standard
- DoDAF becomes Unified Defense Architecture Framework (UDAF)
- UDAF becomes OMG Standard
- UDAF becomes required in contracts

Direction for Unified Defense Architecture Framework



Framework Objective:

- Achieve a single integrated Architecture Framework for interoperability.
- Achieve a US, Canada, and United Kingdom single Framework with a common Data Meta Model
- Achieve alignment with the US Government Common Approach to Enterprise Architecture

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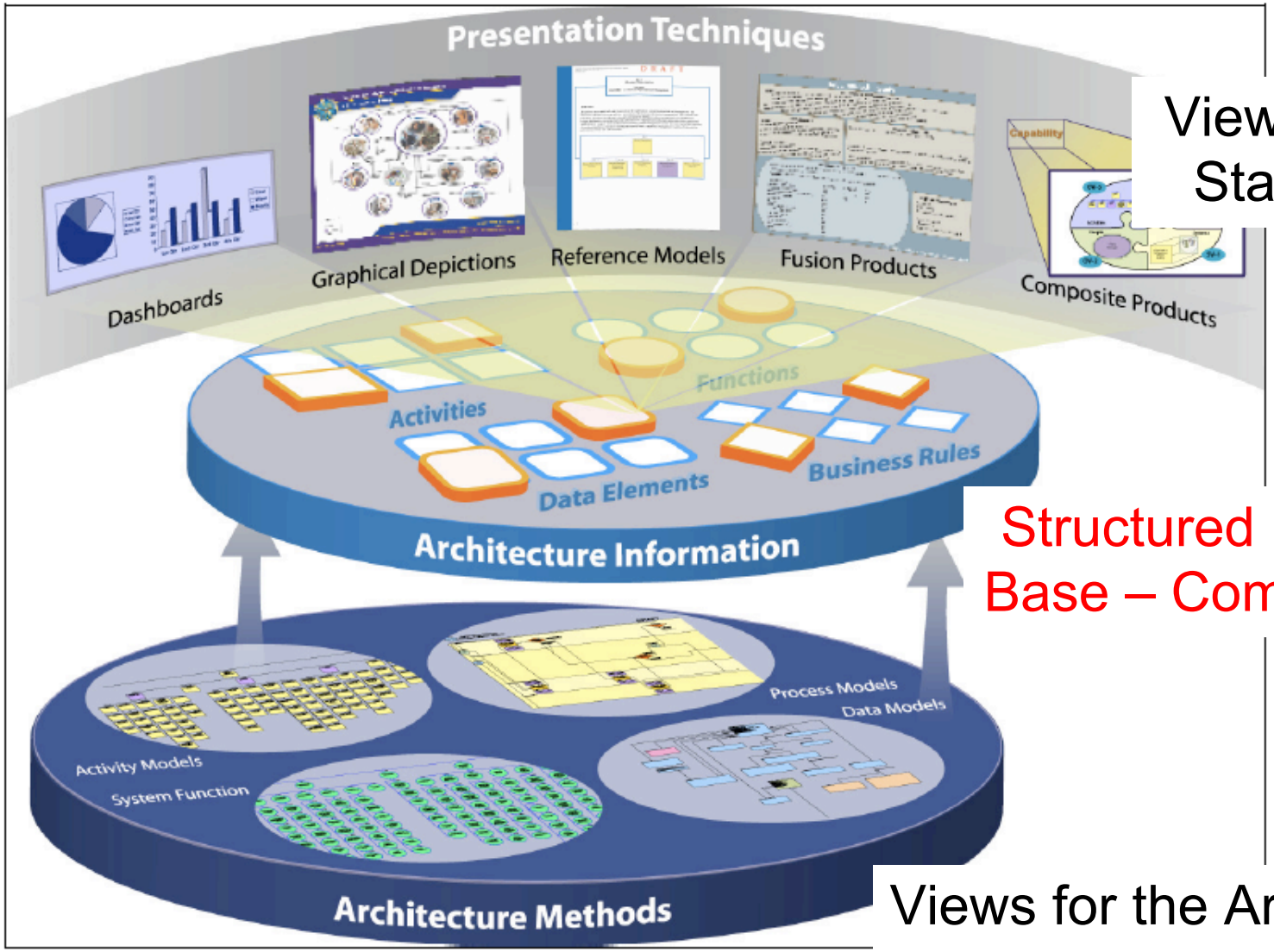
DoDAF V2.0 Vision



Views for Other Stakeholders

Structured Knowledge Base – Common Model

Views for the Architect

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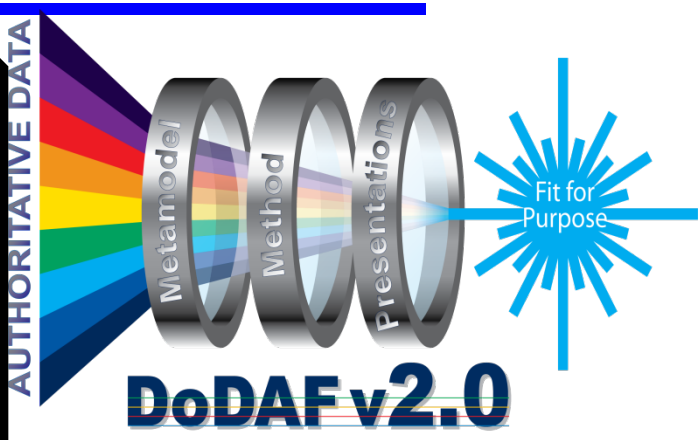
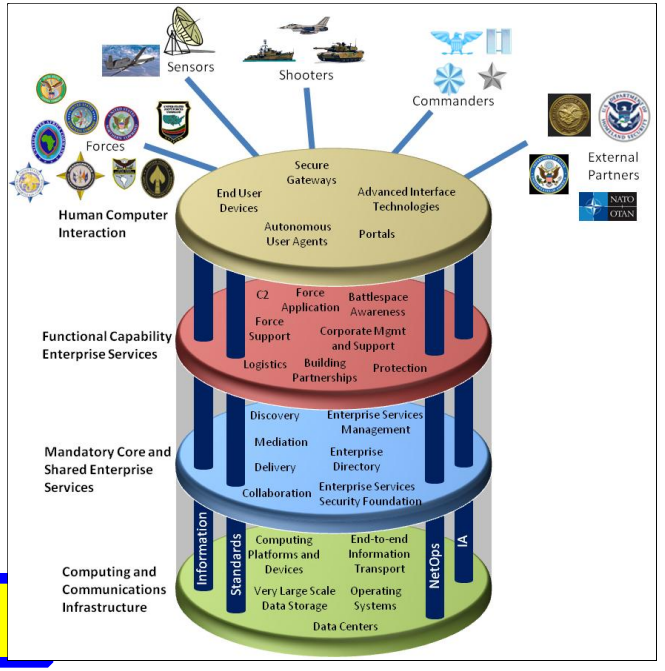




Unified Defense Architecture Framework

http://www.defenselink.mil/cio-nii/sites/diea/

Defense Information Enterprise Architecture

April 11, 2008 | DIEA Mission | DIEA Priorites | Contact Us

DIEA 1.0 Products

- **DIEA Architecture Description (OV-1)**
- Project Charter (AV-1)
- Hierarchical Activity Model (OV-5)
- Principles and Rules (OV-6a)
- Glossary (AV-2)
- ----------
- FAQs

Net-Centric Guidance

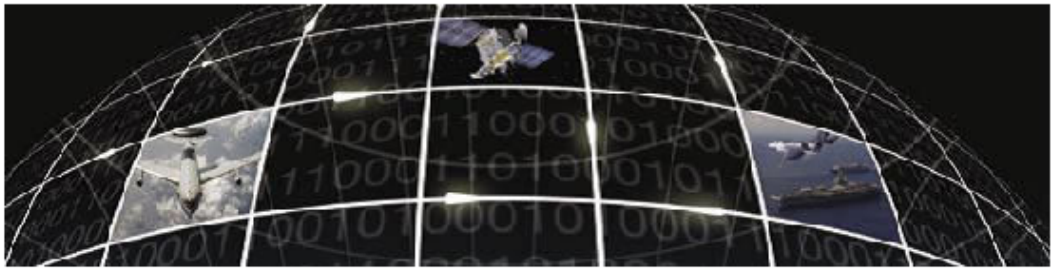
- DoD CIO Homepage
- DoD CIO Strategic Plan
- DoD Net-Centric Data Strategy
- DoD Net-Centric Services Strategy
- DoD Information Assurance Policy
- DoD Information Sharing Strategy
- DoD IT Portfolio Management Directive
- DoD Telecommunications Directive

Transition Partners

- Defense Business Transformation

Privacy and Web Policies

"Lead the DoD Enterprise to Achieve an Information Advantage for our People and Mission Partners"



Defense Information Enterprise Architecture Release

The Defense Information Enterprise Architecture version 1.0 (DIEA 1.0) provides a common Defense Information Enterprise foundation to support accelerated Department of Defense (DoD) transformation to net-centric operations. It presents the vision of net-centric operations and establishes near term priorities to address critical barriers that must be overcome in order to achieve the vision.

The Defense Information Enterprise Architecture consolidates underlying DoD Net-Centric policies to provide guidance for all DoD, across all portfolios, enabling informed discussions among decision-makers about key issues, and underpinning process improvements throughout the Department. Defense Information Enterprise Architecture 1.0 highlights the key principles, rules, constraints and best practices to which applicable DoD programs, regardless of Component or portfolio, must adhere in order to enable agile, collaborative net-centric operations.

Defense Information Enterprise Architecture Products

This website represents the main method for distributing Defense Information Enterprise Architecture 1.0. The full set of Defense Information Enterprise Architecture 1.0 products are available from the left side menu entitled "DIEA 1.0 Products" where users can access:

Office of Management and Budget (OMB) Current Activities

Common Approach Working Group

Collaborative Planning Methodology (CPM) Working Group

FEA Artifact Working Group

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OMB Rewrite of the FEA

- **Common Approach Finalizations**
- **FEAv2 Alignment**
  - CRM / RM Working Group Updates
  - FSAM / CPM Working Group Update
  - Artifact Working Group Kickoff – Chair – Walt Okon
    - Map the DoDAF to the Common Approach
- **Shared Services Update**
- **SPC Architecture Sub-Committee Kick-Off**
  - Co-Chairs: Brett Brunk and Chris Chilbert
  - Terms of Reference

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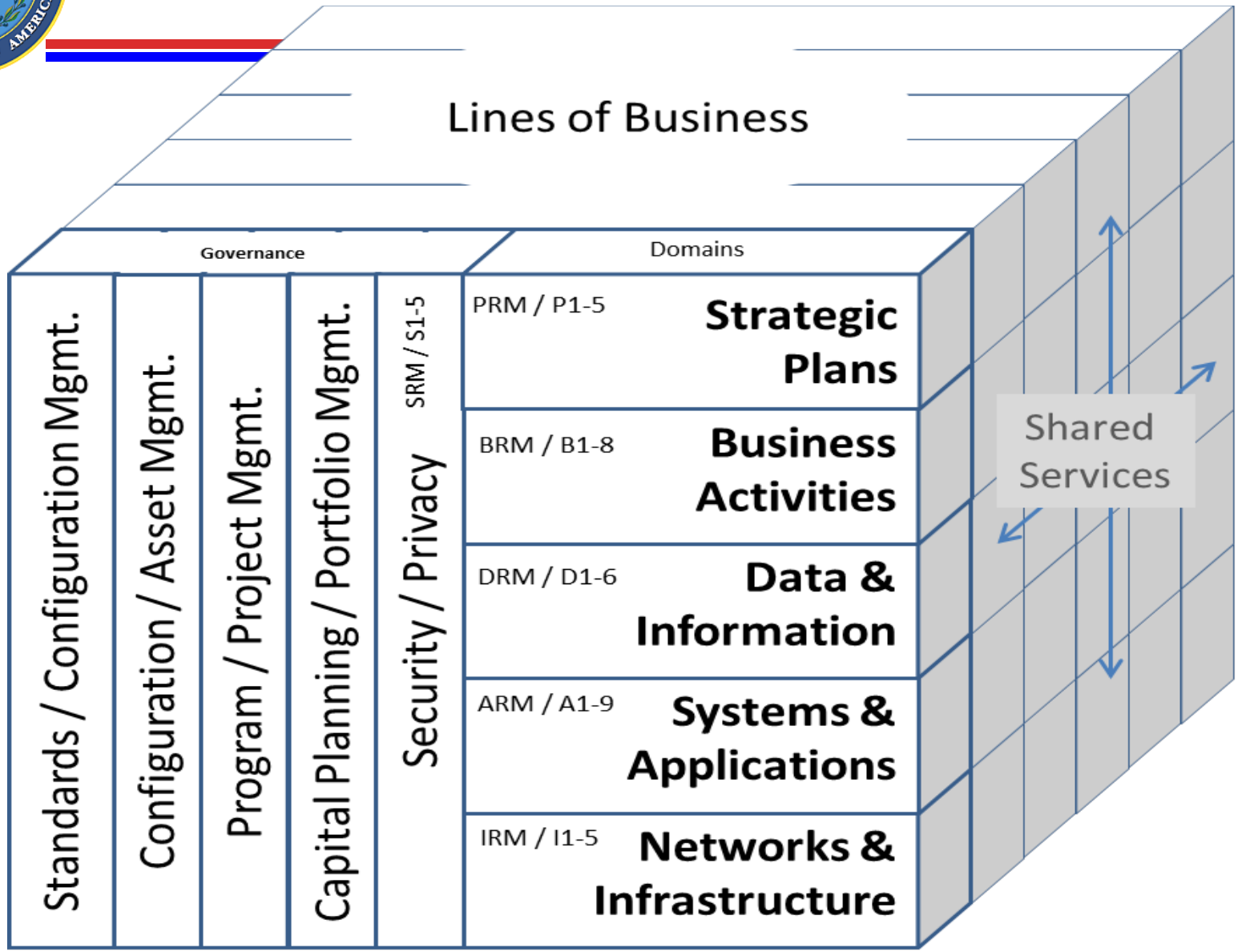
Office of Management and Budget (OMB)
FEA Artifact Working Group



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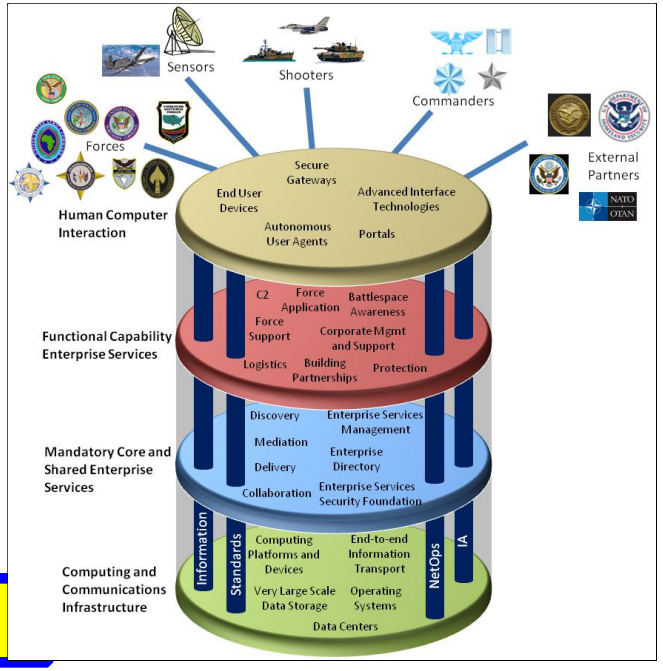

Unified Defense Architecture Framework

Exchange

Exchange + Standards = Interoperability

- Unified Profile for DoDAF and MODAF (UPDM)
- Universal Core (UCore)
- National Information Exchange Model (NIEM)

UPDM – Unified Profile for DoDAF/MODAF

Adaptive
Artisan Software
ASMG
BAE Systems
DoD
DND
embeddedPlus
Generic
IBM
Thales

Lockheed Martin Co
Mitre
L3 Comms
MOD
NoMagic
Raytheon
Rolls Royce
Sparx Systems
VisumPoint
Selex

UPDM RFC

Walt Okon
DoD Support

White House – PM-ISE

Program Manager for Information Sharing Environment
PM-ISE

Interagency Policy Committee

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Standards Working Group

- The Standards Working Group shall advise and support the Information Integration Subcommittee (IISC) and the Information Sharing and Access Interagency Policy Committee (ISA IPC) by addressing information sharing environments and the portfolio of issues related to information sharing enablers. The Standards Working Group shall support the IISC by addressing the challenges of coordinating, reviewing, influencing, approving and issuing government wide standards and profiles. This Standards Working Group (SWG) will focus on how these Standards and Profiles should be coordinated to ensure agreement, reduce duplication of effort and competing efforts, and influence existing standards efforts approved and issued across the “whole of government.”

- •The Standards Working Group (SWG) shall leverage the Federal, State, Local, and Tribal (SLT) processes and other fora to capture best practices and lessons learned from standards and profile efforts. The SWG will evaluate and select the best of International, Commercial and Government standards before developing any new specification, standards, and profiles.

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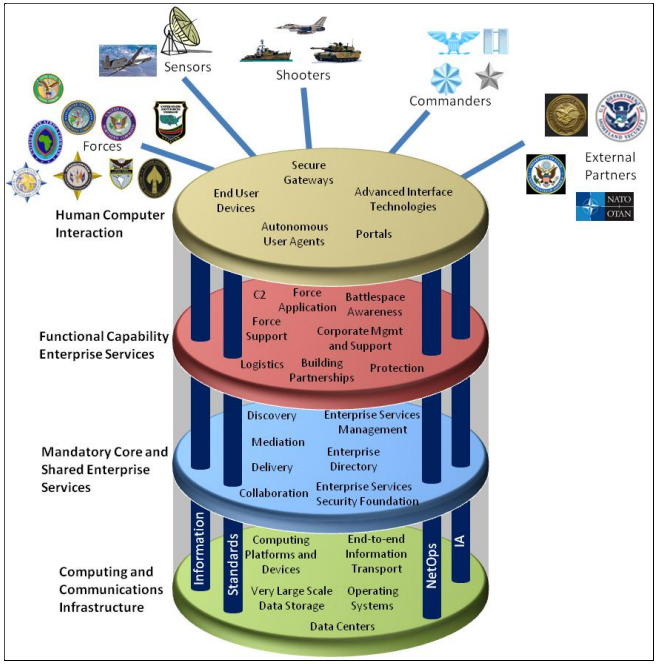


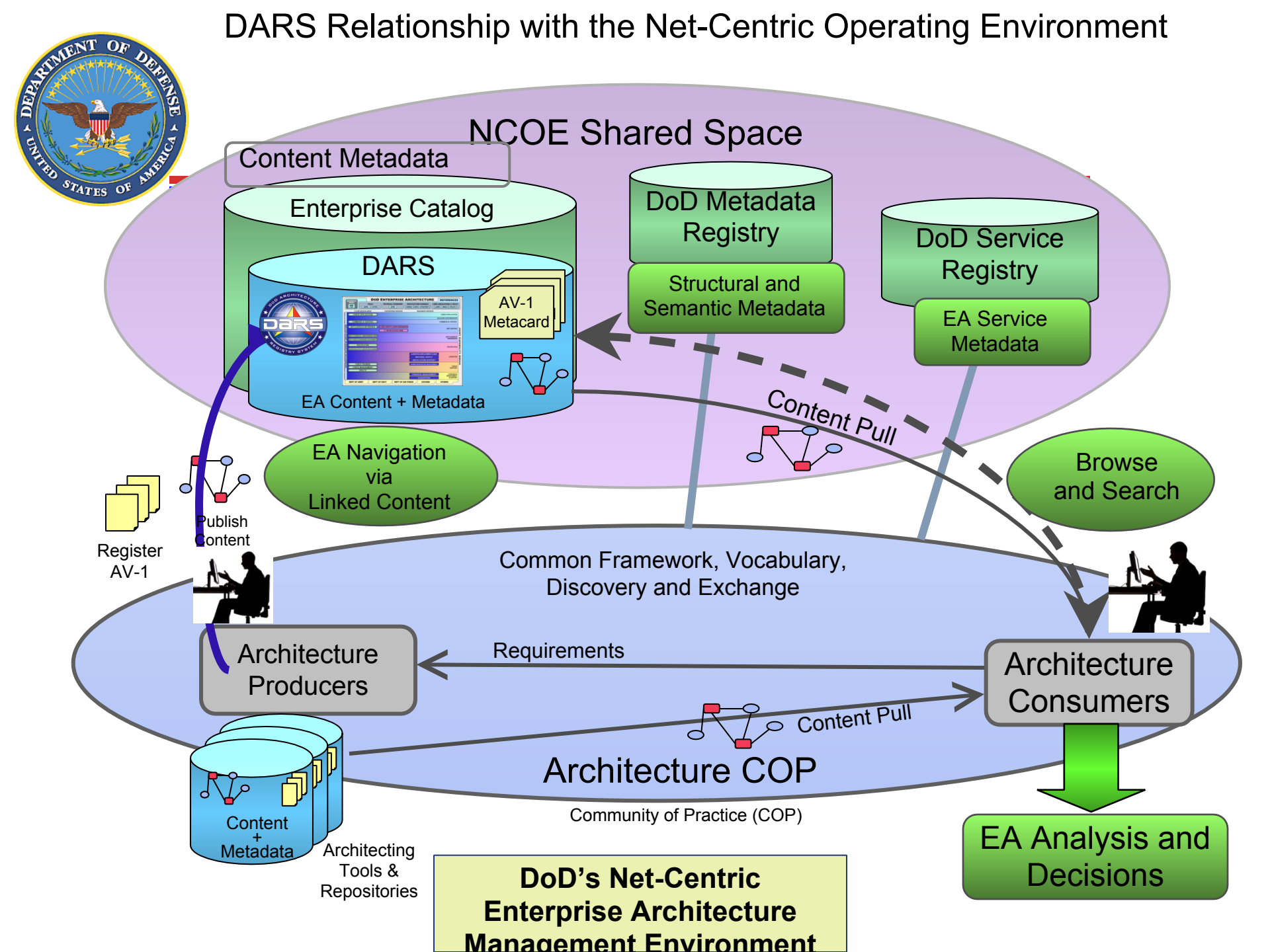
Unified Defense Architecture Framework

Architecture Tools

- **Guidance**
  - DoDAF v2.0
  - Federated Architecture Strategy
  - DoD IEA
- **DoD Tools**
  - DoD Architecture Registry System (DARS)
  - DoD IT Standards Registry (DISR)
  - GIG Technical Guidance (GTG) Tool
  - Meta Data Repository (MDR)

Vendor Tools are Necessary

DARS Relationship with the Net-Centric Operating Environment



COTS Tools

Tool Name	Vendor	Modeling Languages Supported	Primary Functionality		
			Model Development	Repository / Integration	Analysis / M&S
Enterprise Elements	Enterprise Elements	UML		x	
Envision VIP	Future Tech Systems				
EVA Netmodeler	Promis			x	x
InterChange	Trident Systems	many		x	
iServer	orbussoftware		x		x
IT Portfolio Manager	Adaptive			x	
Magic Draw	No Magic	UML	x		
MAP Suite	Intelligile Corporation		x		
MDWorkbench	Sodius		x		
MEGA Suite for DoDAF	Mega	UML	x		
Metastorm ProVision	Metastorm	BPMN	x		
Naval Simulation System - 4 Aces	METRON				x
NetViz	CA		x		
OPNET	OPNET				x

Tool Name	Vendor	Modeling Languages Supported	Primary Functionality		
			Model Development	Repository / Integration	Analysis / M&S
PBO180	Eagle Optimization				x
planningIT	alfabet			x	
PowerDesigner	Sybase			x	x
QEA (QualiWare Enterprise Architecture)	QualiWare		x	x	
R2EAsults	In2itive			x	
Rational System Architect	IBM		x		
Rhapsody	IBM	UML	x		
Risk and Decision Analysis	Palisade			x	
Salamander MOOD	Salamander		x		
Select Solution Factory	Select Business Solutions	BPMN, UML	x		
SimonTool	Simon Labs		x		
SimProcess	CACI	BPMN			x
System Architecture Management Utility (SAMU)	Atoll Technologies			x	x
Troux Standards	Troux Technologies	UML	x		
UDEF Explorer	Knotion Consulting		x		
Visible Advantage	Visible			x	

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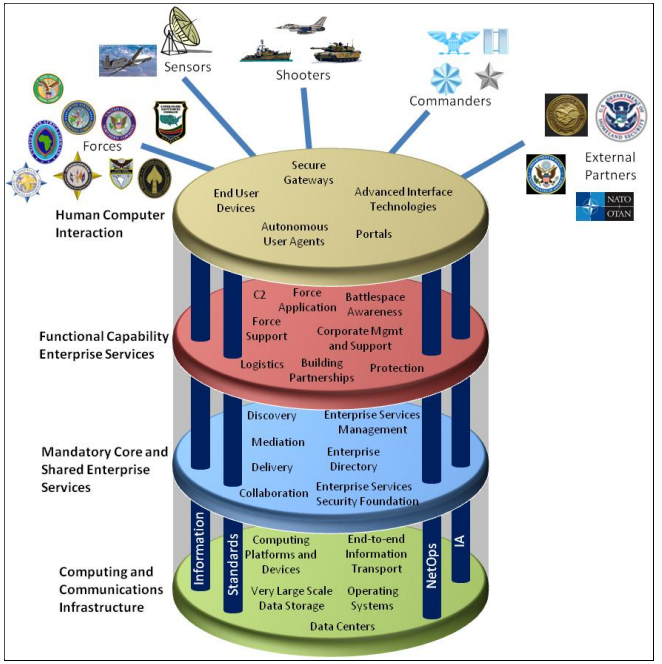
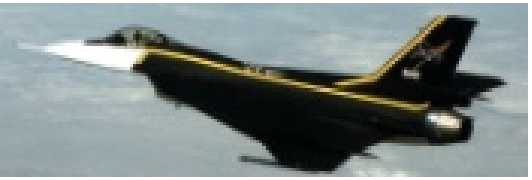
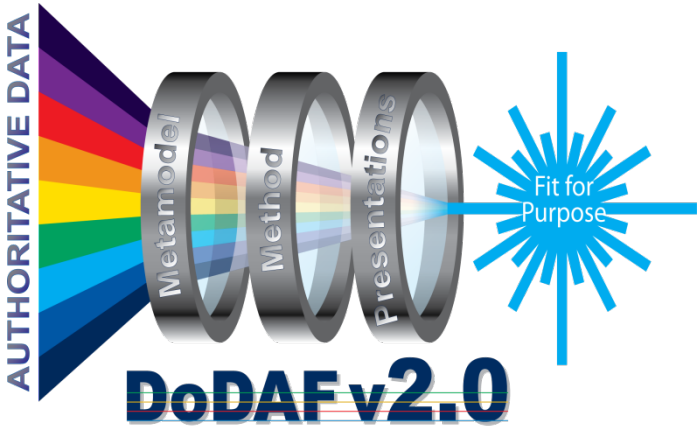


Unified Defense Architecture Framework

Architecture Education & Training



Certified Enterprise Architects design the information technology architecture structure enabling the efficient and effective acquisition of hardware, software and services utilized by the DoD in missions supporting the warfighters.



Common Architecture Framework

EA Fundamentals Course

Accepted nominees are required to participate in and successfully complete all of the following:

First Session

- **March 19 – April 1, 2012***
  Complete preparation session work
  Estimated Level of work: 20 hours
- **April 2 – April 6, 2012****
  Participate in classroom education
  Estimated level of work: 50 hours
- **April 7 – April 30, 2012***
  Complete post-course assessment
  Estimated level of work: 60 hours

Second Session

- **May 21 – June 3, 2012***
  Complete preparation session work
  Estimated Level of work: 20 hours
- **June 4 – June 8, 2012****
  Participate in classroom education
  Estimated level of work: 50 hours
- **June 9 – July 2, 2012***
  Complete post-course assessment
  Estimated level of work: 60 hours

Participants will be able to:

- Describe the nexus between enterprise architecture (EA) and successful enterprise planning and execution to advance mission performance
- Identify EA's role in facilitating other critical agency activities, e.g., capital planning and investment control (CPIC) and information assurance

College of Information Sciences and Technology at Penn State: ENTERPRISE ARCHITECTURE

- **The first course in the EA Professional Development series.**
- **Designed to be the first exposure to foundational enterprise architecture (EA) concepts and practices. Sets the "common language" for EA discussions for professionals new to the EA field as well as functional business people, customers, suppliers, and others who desire an overview of enterprise architecture and the benefits it can bring to an organization.**
- **This self-paced, online course is 40 hours in length and organized into three modules each consisting of five to six supporting topics.**
- **MODULE 1: Introduction To Enterprise Architectural Concepts:** This module introduces the foundational concepts behind enterprise architecture and discusses the business value that enterprise architecture brings to the organization. The module discusses the nature of complex organizations and provides an overview of the layers of the enterprise technology architecture.
- **MODULE 2: Initiating Enterprise Architecture** This module discusses fundamentals of planning for enterprise architecture initiatives, modeling the different layers of the enterprise, and building and maintaining an Enterprise Architecture. The importance of governance and change management for EA success is also explored.
- **MODULE 3: Enterprise Architecture Implementation and Maintenance**
- This module discusses topics related to successful EA implementation and maintenance. The importance of leadership and effective decision making to the success of EA is explored as well as the composition and management of the EA project team. Factors that influence the success of EA in an organization are discussed as well as concepts and issues surrounding the measurement of EA value and risk identification and analysis for EA initiatives. The module concludes with a comparison of popular EA frameworks and a discussion of "hybrid" EA frameworks. opportunity, and the diversity of its workforce.

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Tutorials

DoD Enterprise Architecture, Standards, Interoperability Requirements and Assessment Resources DoD Enterprise Architecture/Standards/Interoperability Requirements and Assessment Resources
Walt Okon
Dave Brown
Ed Zick

CADIE and Network Information Engagement UPDM
Ron Vandiver, Chief Architect, TRADOC

DoD Information Enterprise Architecture (IEA) & Reference Architecture
Al Mazyck
DoD ESI & The Joint Information Environment (JIE)
James Clausen
Jim Cecil

Selecting DoDAF 2.0 Views and Models for DoDAF Projects, Integration and Analysis, UPDM
Walt Okon
Beryl Bellman
Ann Reedy
Enterprise Architecture Directions: Professionalization, Competencies, Certification and Education
Con Kenney
Unified Profile for DoDAF and MODAF (UPDM) - Architecture Exchange
Dan Brookshier, No Magic
Graham Bleakley, IBM
Matt Hause, Chief Consulting Engineer, ATEGO

DoD Architecture Registry System (DARS) - Find and reuse architectures
Chamroeun Chhun, DARS Project Lead, US CERDEC, SED
Sanae Benchaaboun, DARS Developer, US CERDEC