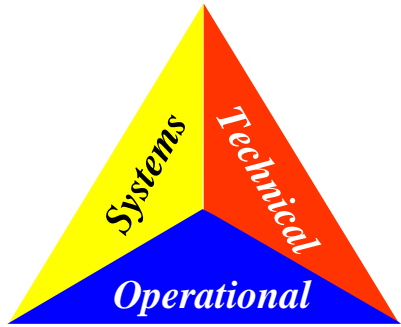


FEAC CEA Alumni Symposium



DoDAF 1.5 Updates

Ann Reedy

Agenda

- DoDAF 1.5 Background
- Major Changes from DoDAF 1.0
 - Advice on products for Net Centric Environment architectures
 - New Net Centric product descriptions/ guidance
 - Data Layer Specification: CADM 1.5

DoDAF 1.5 Background

- DoD Architecture Framework (DoDAF) is based on work going back over 10 years
 - Started with focus on more restricted C4ISR area
- Unique feature was specific guidance on architecture products/artifacts
 - Standard language for describing EAs

Background (continued)

- DoDAF 1.0 released in August 2003
- DoDAF 1.5 released April 2007
 - First step in evolution of DoDAF
 - Goals included:
 - Provide Net Centric environment guidance
 - Move towards more data centric architecture descriptions

Major Changes - Net Centric Guidance

- Net Centric Environment
 - Includes services orientation for systems products
- New material for many products
 - Net Centric Product Description sections
 - Some common sense, some new insights
 - Some new terminology

Example Net Centric Guidance

- New terminology and data elements
 - *Service Functionality Provider*
 - Data elements for services
- For OV-2
 - Operational nodes as information and capability providers and consumers
 - *Unanticipated Users*
 - Making sure all consumers have appropriate providers

New Product Variants

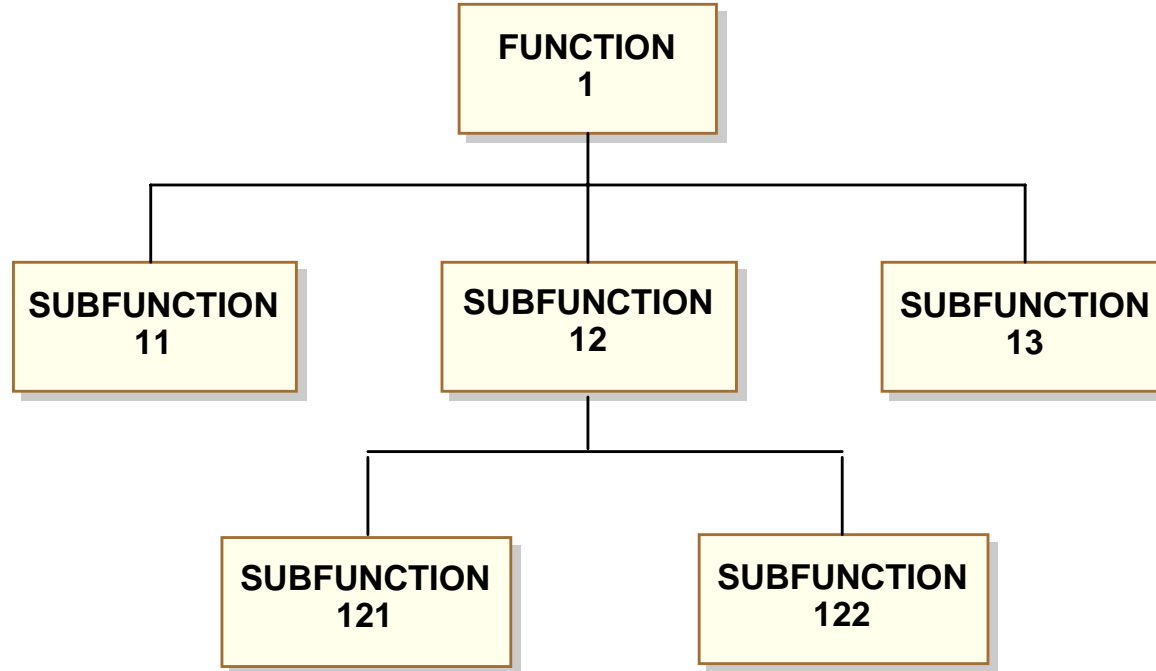
Systems Functionality Description (SV-4a, b)

- SV-4a: same product as for DoDAF 1.0
 - Traditional structured analysis product
 - Focus on system functions and decomposition
- SV-4b: Net Centric product
 - Services/Service Oriented Architecture focus
 - Dependencies

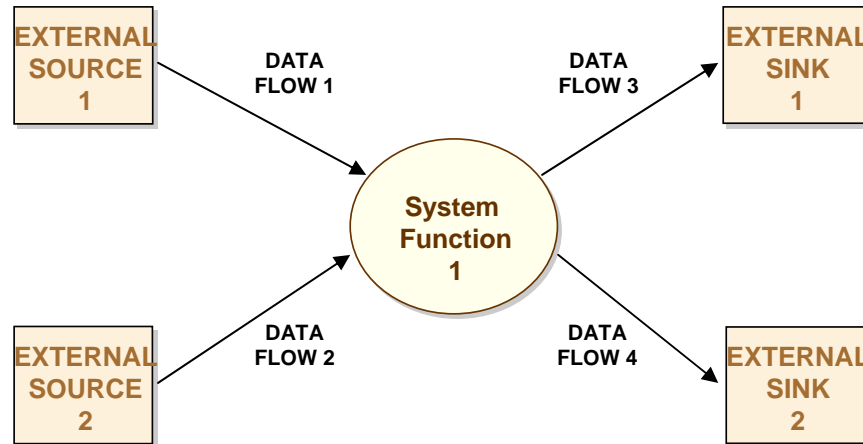
Systems Functionality Description (SV-4a)

- Hierarchical product
 - Each system function can be decomposed
- Has both hierarchy and flow forms
- System functions are allocated to systems in dictionary entries for System Interface Description (SV-1)

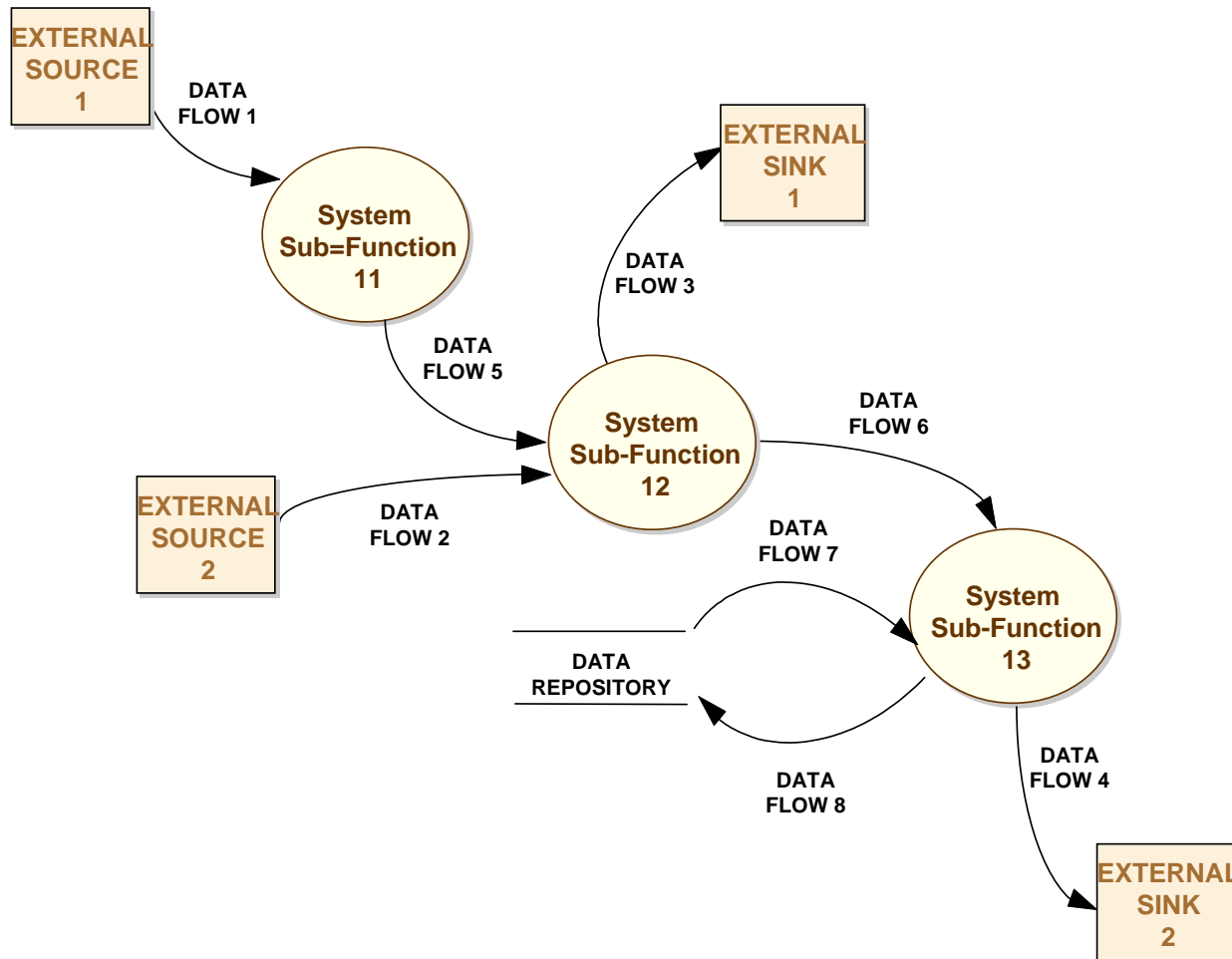
Systems Functionality Description (SV-4a) - Hierarchy



Systems Functionality Description (SV-4a) Flow Diagram – Context Diagram



Systems Functionality Description (SV-4a) Flow Diagram – 1st Level Decomposition



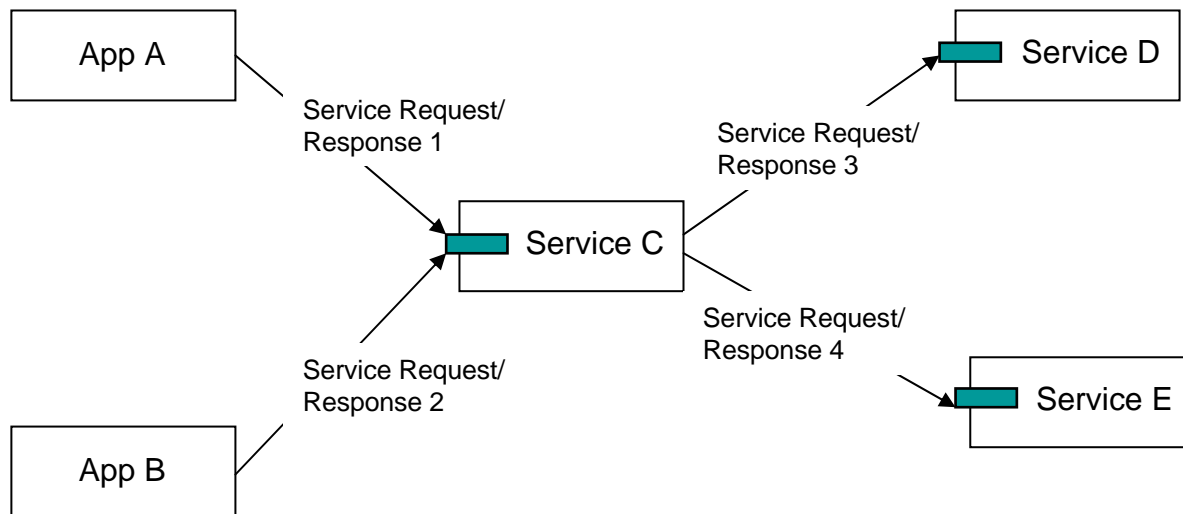
Systems Functionality Description (SV-4b) - Net Centric Environment

- Focus is on data flows and producer/consumer relationships among services
 - Standard service interfaces
- Producer/consumer relationships among applications and services

Systems Functionality Description (SV-4b) - Net Centric Environment

- Hierarchical form: May not be applicable - relationships are dependencies not decomposition
 - Families of services?
- Flow form: Not classic decomposition
 - Shows implementation dependencies by type of service
 - Each service can have multiple actual implementations (shown on SV-1)

Systems Functionality Description (SV-4b) - Example



Operational Activity to System Function Traceability Matrix (SV-5)

- New variants
 - A & B: Specific tailoring of DoDAF 1.0 product - activities and systems/systems functions
 - C & D: Net Centric environment products - services and systems

Operational Activity/Systems Traceability Matrix (SV-5a)

Example

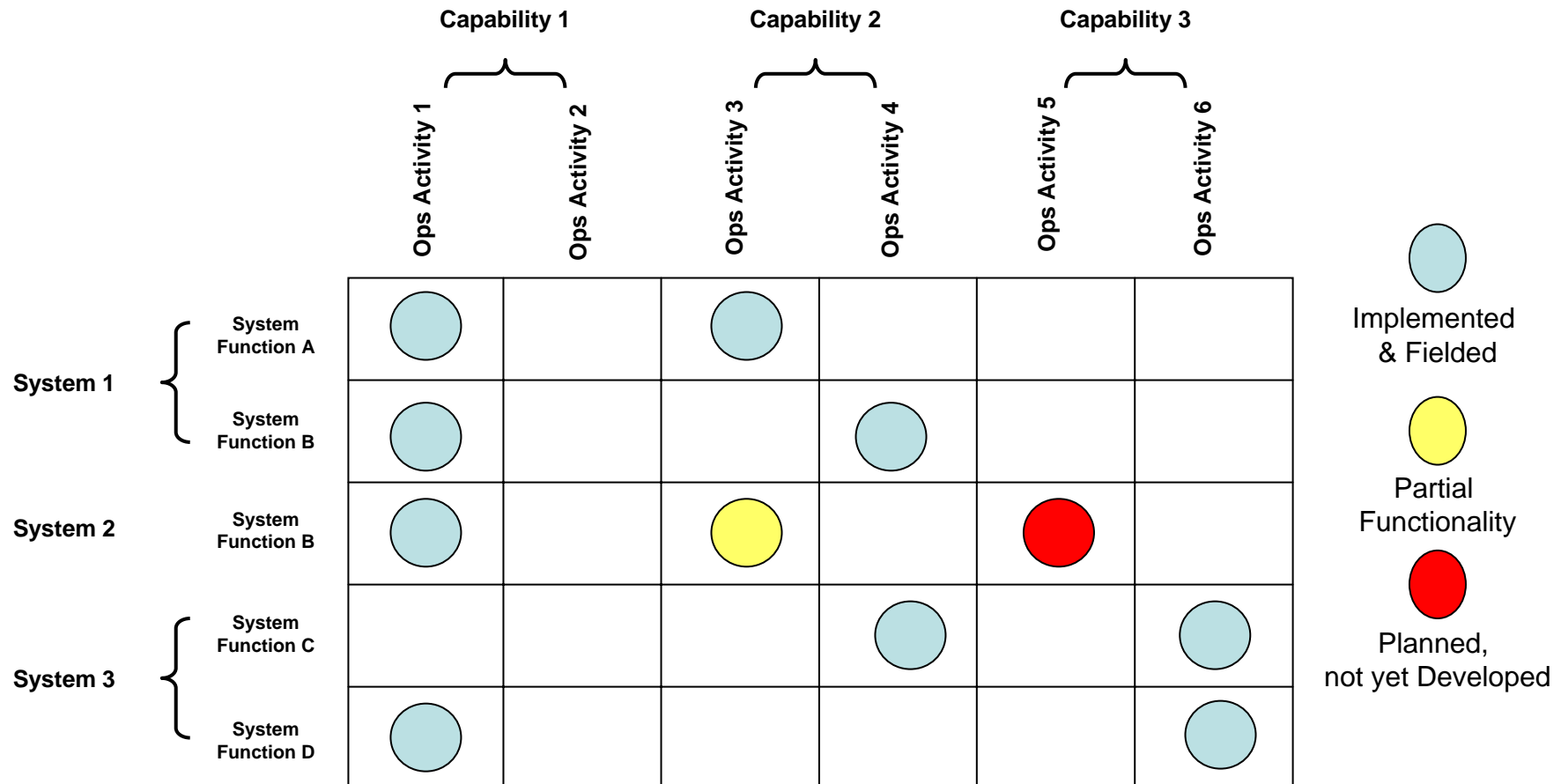
Operational Activities

System Functions	3.11	3.11.3	3.12	3.12.1	3.12.2	3.12.3	3.13	3.14	3.14.1	3.14.2	3.14.3	3.14.4	3.15	3.16	3.17	3.17.1
1	X															
1.1		X														
1.1.1			X													
1.1.1.1	X															
1.1.1.2				X												
1.1.1.3						X										
1.1.2									X							
1.1.2.1			X													
1.1.2.2					X											
1.1.2.3							X									
1.1.3										X						
1.1.3.1												X				
1.1.3.2								X								
1.1.3.3														X		
1.1.3.4														X		

••

Operational Activity/Systems Traceability Matrix (SV-5b)

Example - with Capabilities



Operational Activity/Services Traceability Matrix (SV-5c)

Example for Net-Centric Environments

	Capability 1		Capability 2		Capability 3		Capability 4
	Service A	Service B	Service C	Service D	Service E	Service F	Service G
System 1							X
System 2	X	X					
System 3			X	X			
System 4	X	X	X				
System 5			X				
System 6	X						X

Services/Systems Traceability Matrix (SV-5d)

Example for Net-Centric Environments

	Service A	Service B	Service C	Service D	Service E	Service F	Service G
System 1					X		X
System 2	X						
System 3	X		X				
System 4							
System 5			X				
System 6	X			X			
System 7		X					

DoDAF 1.5
Data Layer Specification:

CADM 1.5

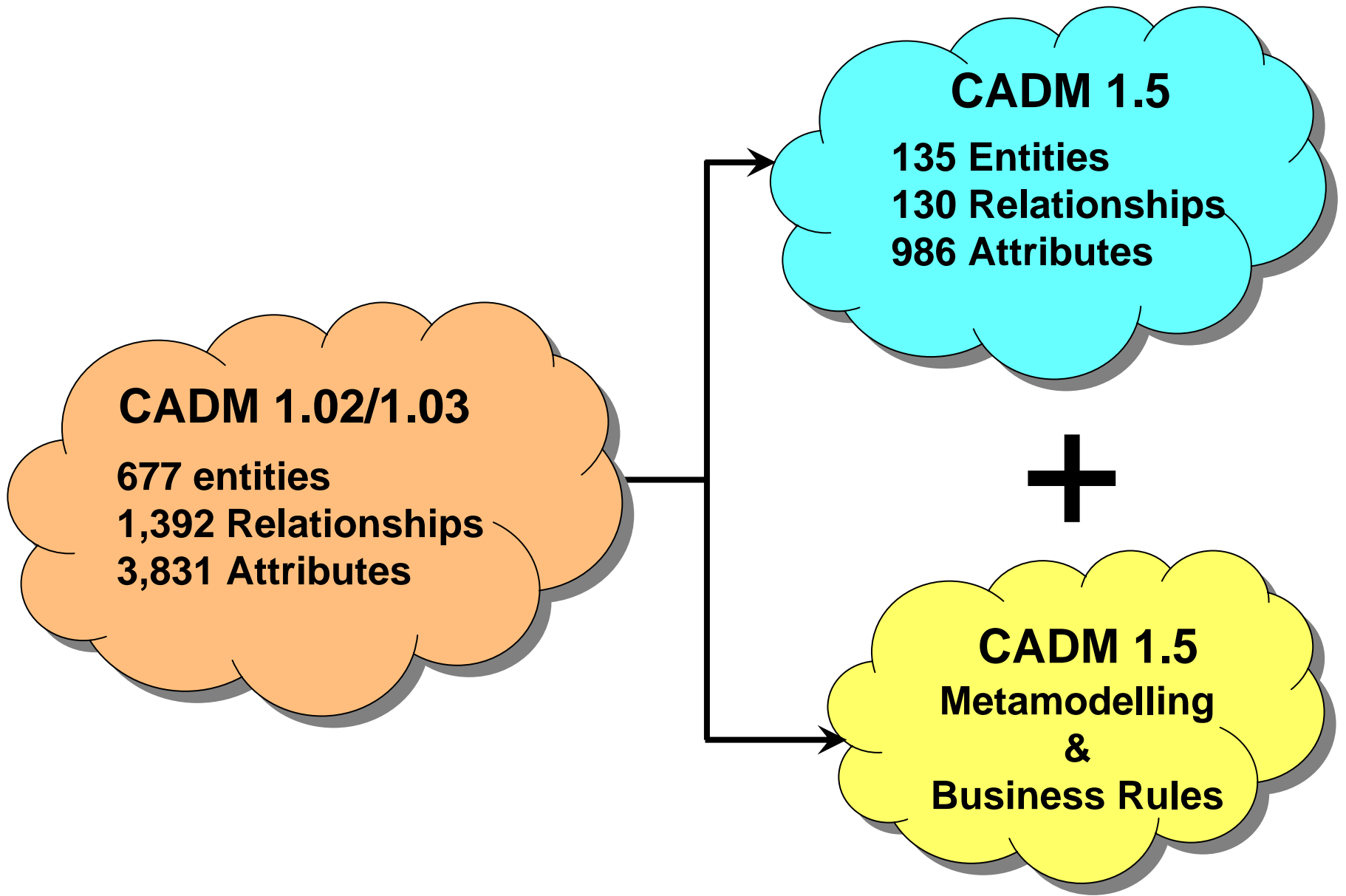
CADM 1.5

- Streamlines CADM 1.02/1.03 Specifications
- Supports Repository Implementation (DARS, etc.)
 - Explicit Versioning
- Scope Identical to CADM 1.02/1.03
 - Any data set built in accordance with CADM 1.02/1.03 can be recast as a CADM 1.5 data set
 - Provides full legacy data transferability
- Reduced Number of:
 - Entities
 - Relations
- Increased Number of BR's to express same CADM 1.02/1.03 semantics
- Aligned with DoDAF 1.5 Content
- All specifications available on-line:

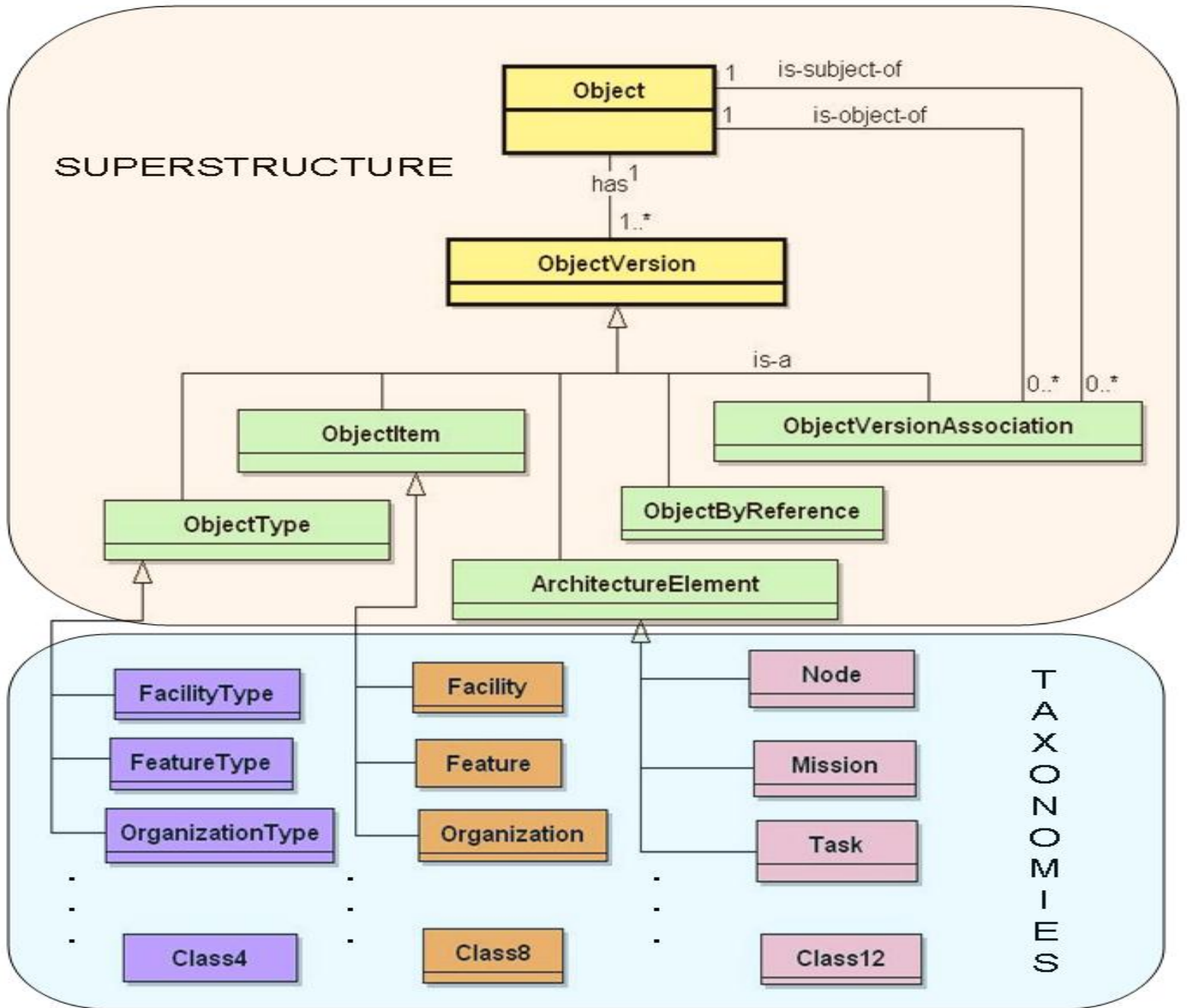
<https://dars1.army.mil/IER/index.jsp>

Methodology

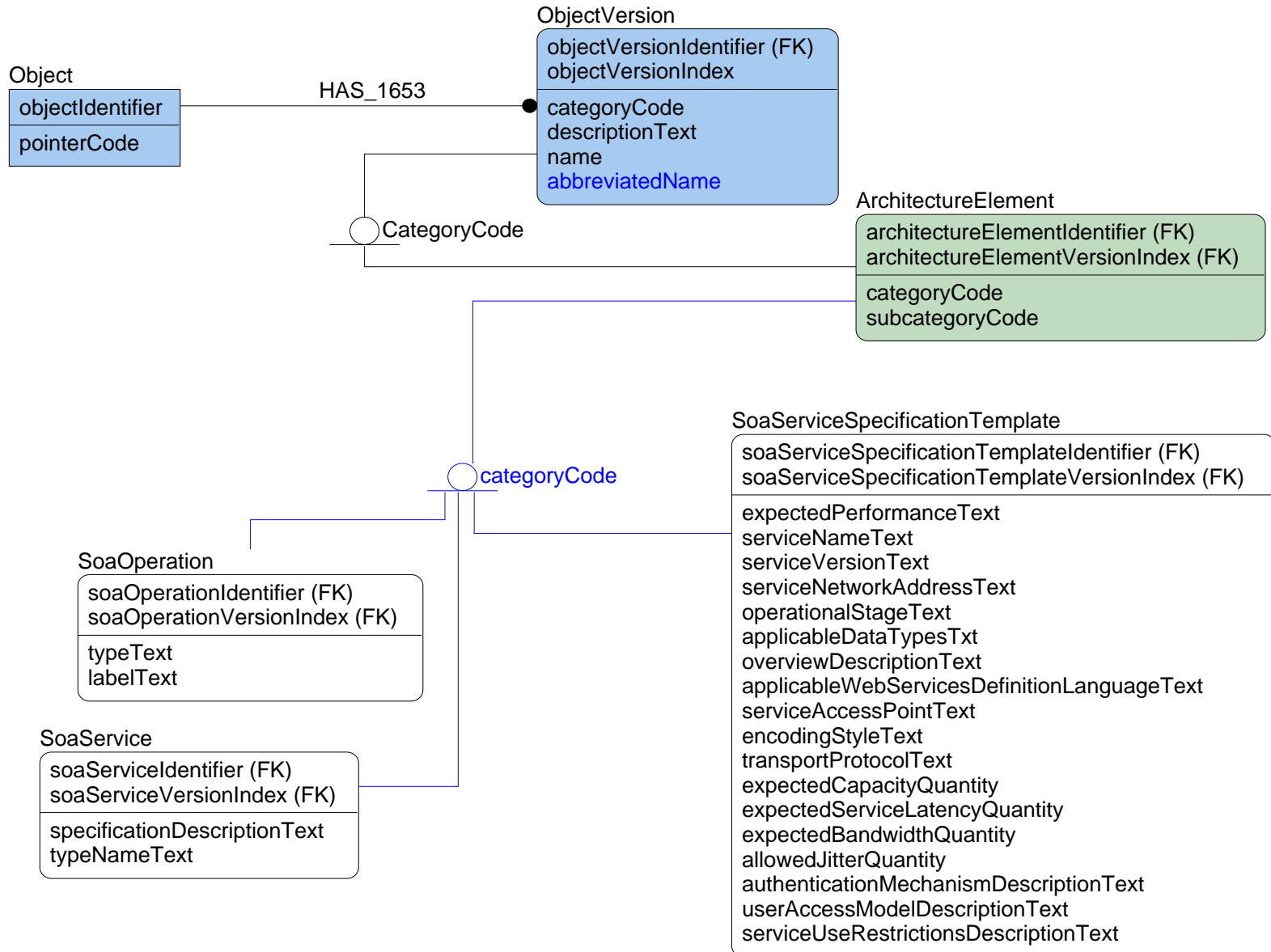
- Addition of New Supertypes
 - Object
 - ObjectVersion
 - ObjectVersionAssociation
 - ObjectByReference
 - ObjectItem
 - ObjectType
 - ArchitectureElement
- Only Essential CADM 1.02/1.03 are modeled explicitly
- All retained CADM 1.02/1.03 entities are now part of one of the following “taxonomies”
 - ObjectType
 - ObjectItem
 - ArchitectureElement
- BR’s provide guidance for implementation



C
A
D
M
1.5



Netcentric Support in CADM 1.5



DoDAF/CADM Evolution

