

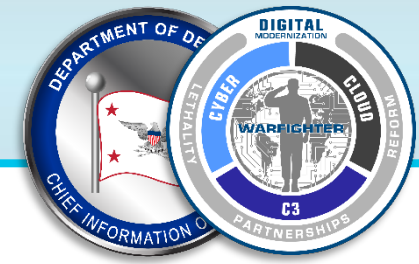


New Architecture Framework

Briefing for “Let's Be Modular & Open” webinar

12 January 2023

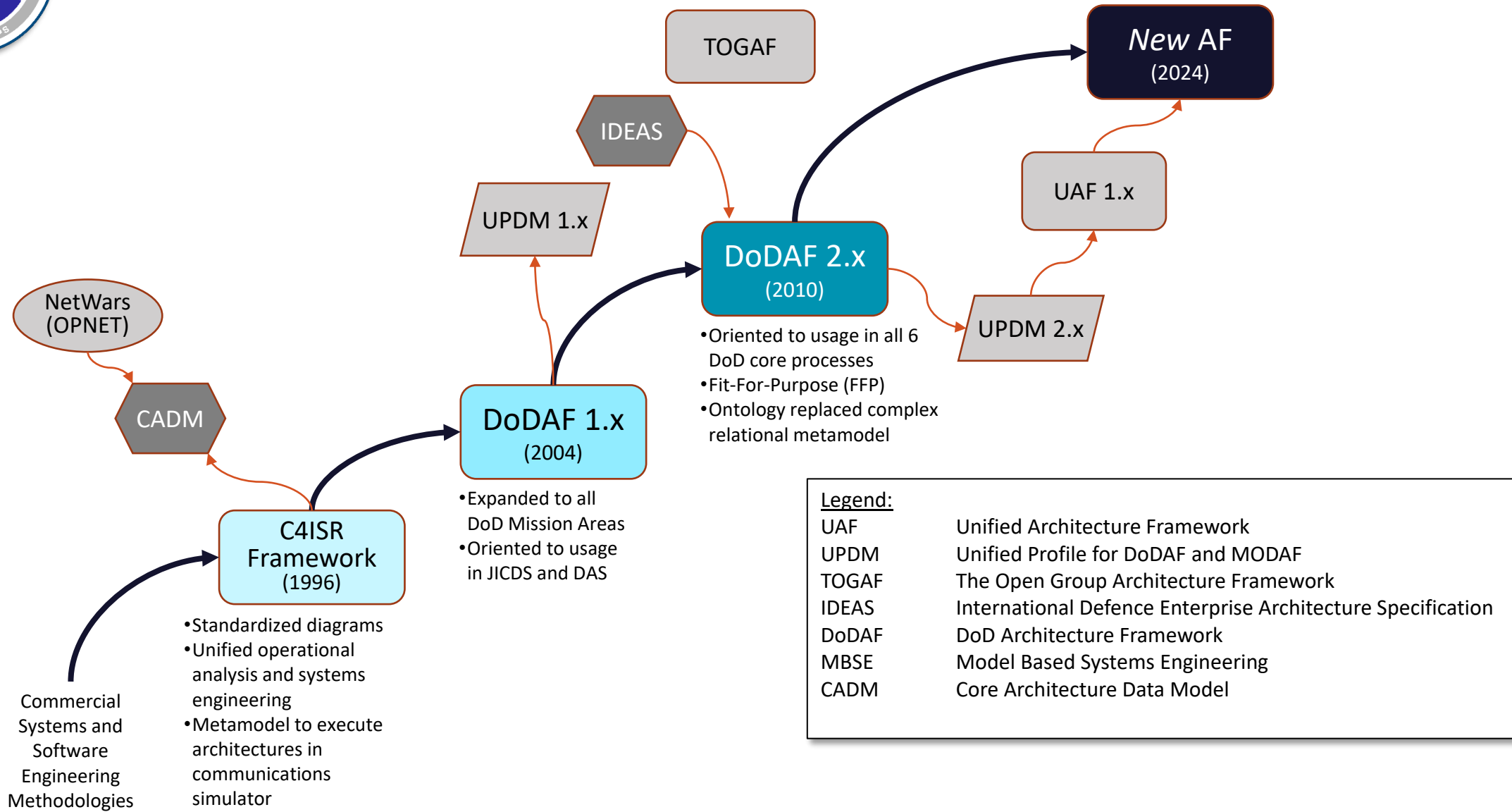
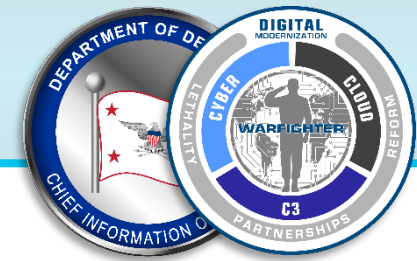
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Briefing Outline

- Architecture Framework (AF) history from DoD's perspective
- C4ISR AF and DoD AF Successes and shortcomings
- Sample Goals for New AF
- Orchestrating Development of New AF Across DoD

DoD AF History



Legend:

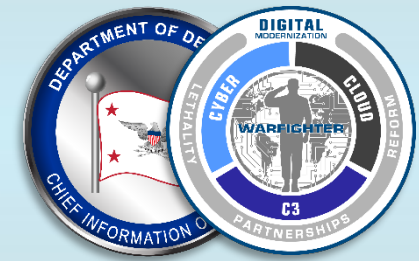
UAF	Unified Architecture Framework
UPDM	Unified Profile for DoDAF and MODAF
TOGAF	The Open Group Architecture Framework
IDEAS	International Defence Enterprise Architecture Specification
DoDAF	DoD Architecture Framework
MBSE	Model Based Systems Engineering
CADM	Core Architecture Data Model

Commercial Systems and Software Engineering Methodologies

- Standardized diagrams
- Unified operational analysis and systems engineering
- Metamodel to execute architectures in communications simulator

- Expanded to all DoD Mission Areas
- Oriented to usage in JICDS and DAS

- Oriented to usage in all 6 DoD core processes
- Fit-For-Purpose (FFP)
- Ontology replaced complex relational metamodel



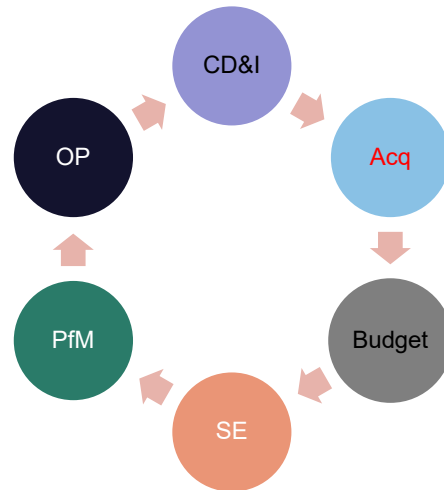
General Successes and Shortcomings

Successes

- AF familiarity is near ubiquitous
- Planned for used in many processes:

- Capabilities integration and development
- Acquisition
- Interoperability assessment and certification
- IT standards
- Systems engineering
- Portfolio management
- Defensible budget
- Operations planning

- Concept of Integrated architecture appreciated:
 - Vertically
 - Horizontally

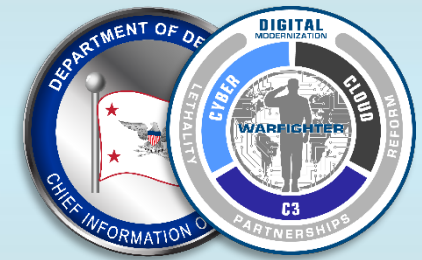


Shortcomings

- Architecting is often a checkbox drill
- Use in processes has issues:

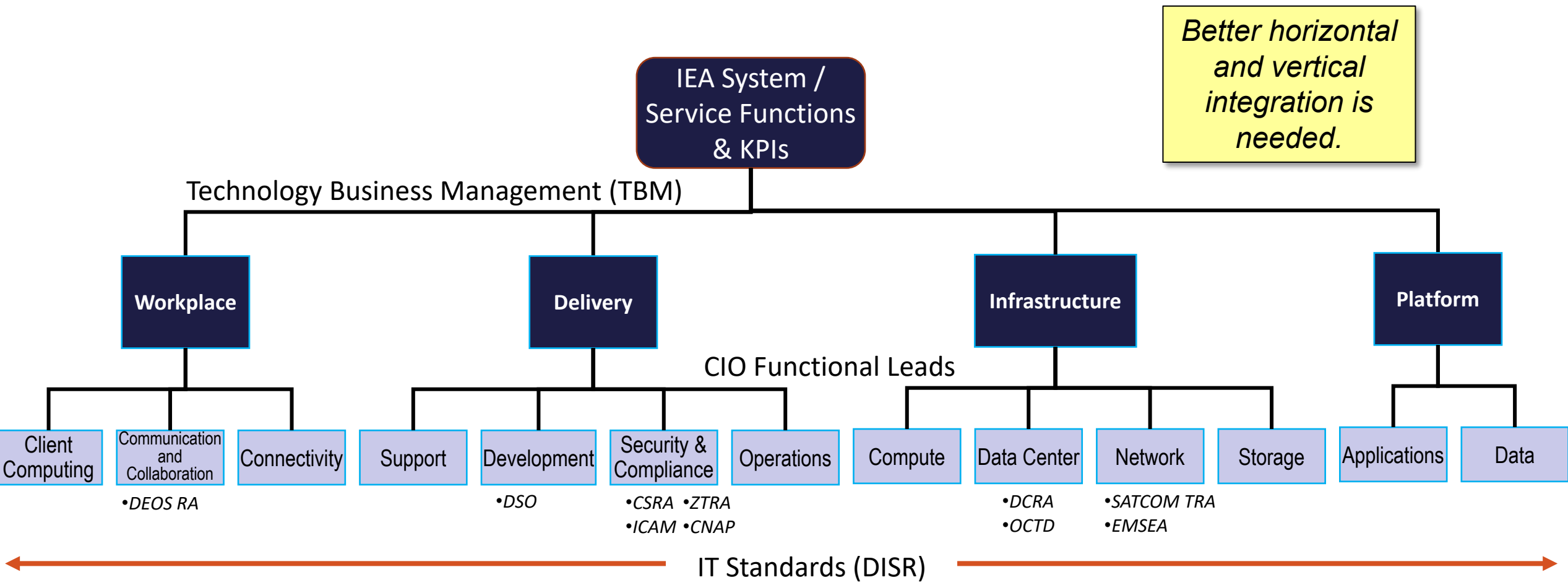
- Yes, but slow paperwork drill
- Use is not rigorous, some pathways do not use
- Slow, manual
- Disconnected
- Often disconnected
- Attempting for IT PfM, CPM still TBD
- Didn't happen, too hard to integrate
- After initial push (CISA), fizzled out

- Integrated architecture has many mechanical issues
 - Vertical path is assertional, not provable
 - Horizontal has never been achievable, even on Joint Information Environment with a Joint Technical Synchronization Organization
- Not integrated into DevSecOps, not considered agile
- Not considered rigorous

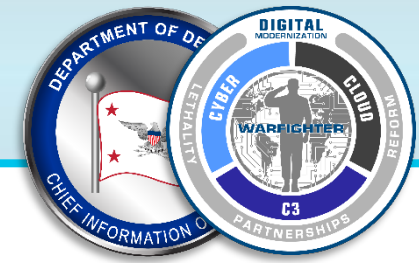


Example of integration challenge: DoD Information Enterprise Architecture (IEA)

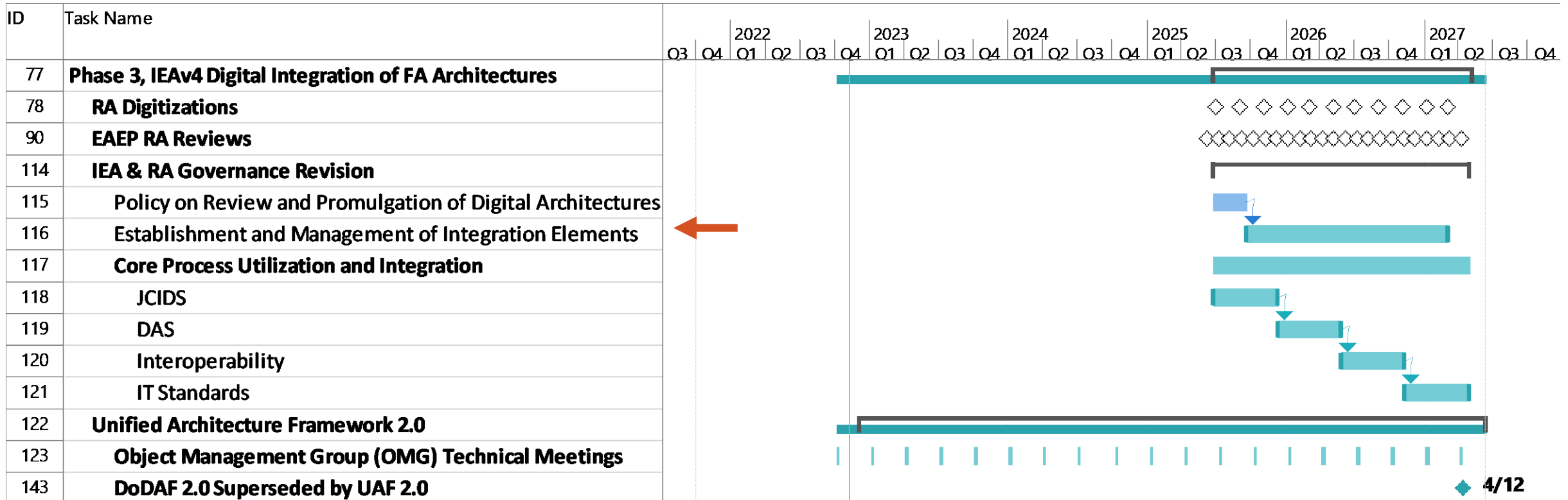
Better horizontal and vertical integration is needed.

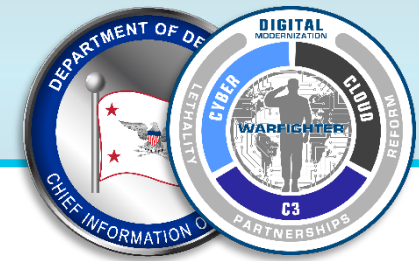


(Acronyms in notes.)



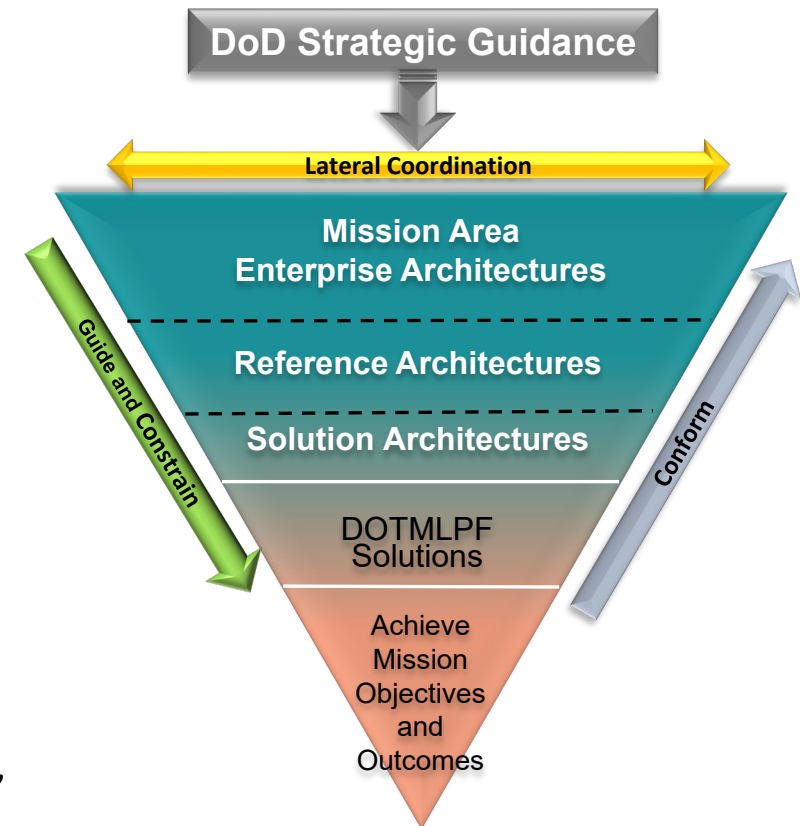
Future Digitized IEA

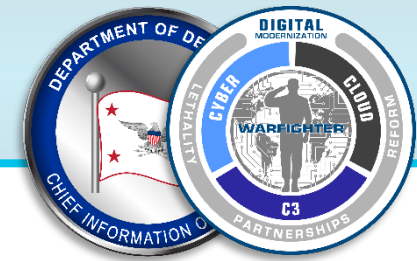




Sample Goals for New AF

- General:
 - Not just another update with more views
 - Support modernization, optimization, and integration
 - Dovetail with R&E's digital engineering / MBSE
 - Fit into DevSecOps
 - Enable simulation and analysis (MS&A)
- Specific:
 - No books, a digital model and a readme
 - Model accessibility for M&S and analytics such as ADVANA, Portfolio Management tools, ..., simpler than XMI
 - Solve the Integrated architecture problem
 - Force/encourage Fit For Purpose (FFP)
 - Eliminate "the administrative burden of architectures"
 - Eliminate checkbox architecting
 - Break away from view-based template filling → Usage focus –
 - But still be accessible to operators/users, analysts, as well as systems and software engineers and usable by specialties, e.g.,
 - RMA
 - CS vulnerability
 - BPR
 - Workflow analysts
 - Capacity analysts



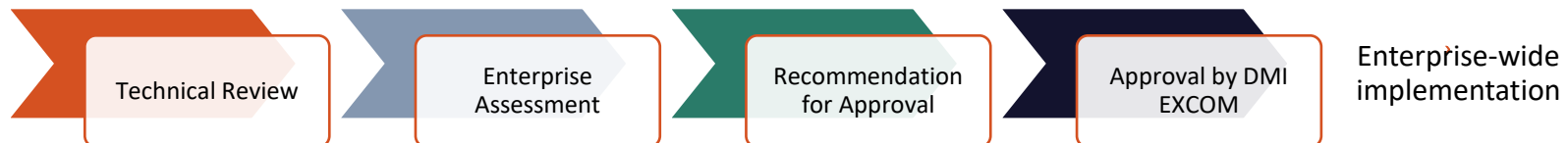


Orchestrating Development of New AF Across DoD

- After each OMG quarterly TC, DoD CIO rep reports back to EAEP
 - CIO reps from most DoD Components
- Collect requirements and feedback on our approach and progress
- Submit incremental drafts for formal comment (via DoD's tasking system)
- OMG adjudicate comments
- Upon final, EAEP recommends to one-star tri-chair (DoD CIO, JS J6, and USCC)
- Issue as guidance

Enterprise Architecture and Engineering Panel (EAEP)

New technologies, initiatives, and threats



Tri-chair:

- ★ DoD CIO
- ★ JS J6
- ★ USCC