



Office of the
DEPUTY CHIEF MANAGEMENT OFFICER

Heading, Altitude & Airspeed: Service Orientation, Cloud & Semantics – All or Nothing!

January 25, 2012

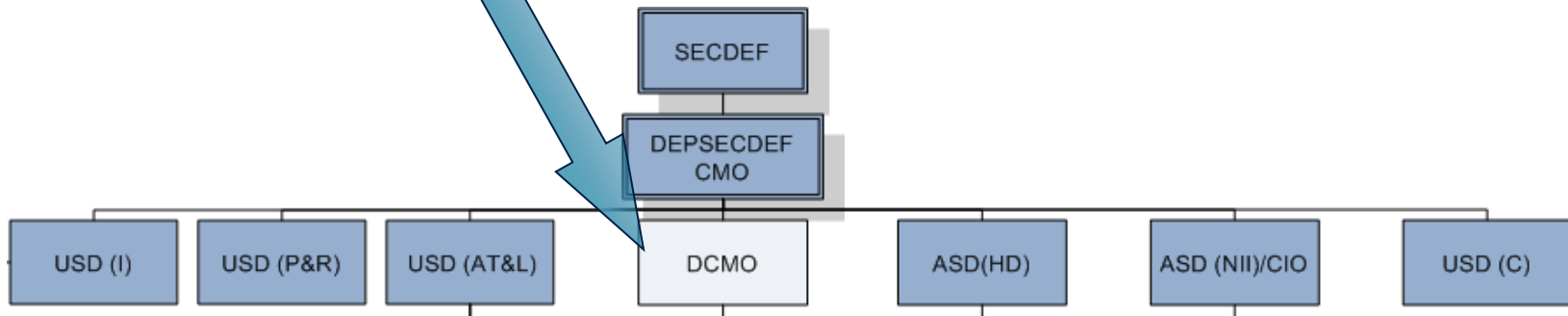
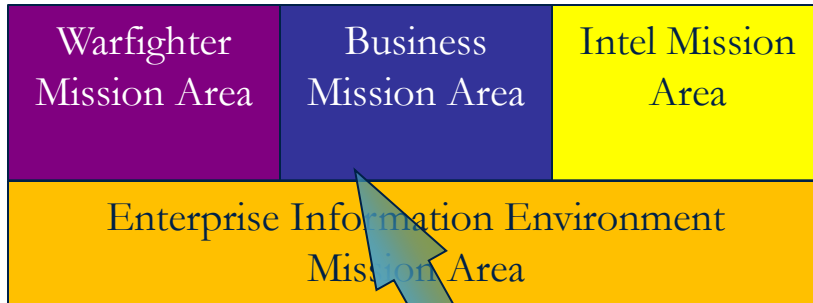
Dennis E. Wisnosky
DoD BMA CTO & Chief Architect

DoD Semantic Technology Clip

http://www.youtube.com/watch?v=OzW3Gc_yA2A



Missions of the DoD



Dennis E. Wisnosky, DoD BMA CTO & Chief Architect in the Office of the Deputy Chief Management Officer (DCMO)





Reach of the Business Mission Area

Arctic Ocean

Arctic Ocean

The Business Operating Environment

"The Secretary of Defense is responsible for a half-trillion dollar enterprise that is roughly an order of magnitude larger than any commercial corporation that has ever existed. DoD estimates that business support activities—the Defense Agencies and the business support operations within the Military Departments—comprise 53% of the DoD enterprise."

South Pacific Ocean

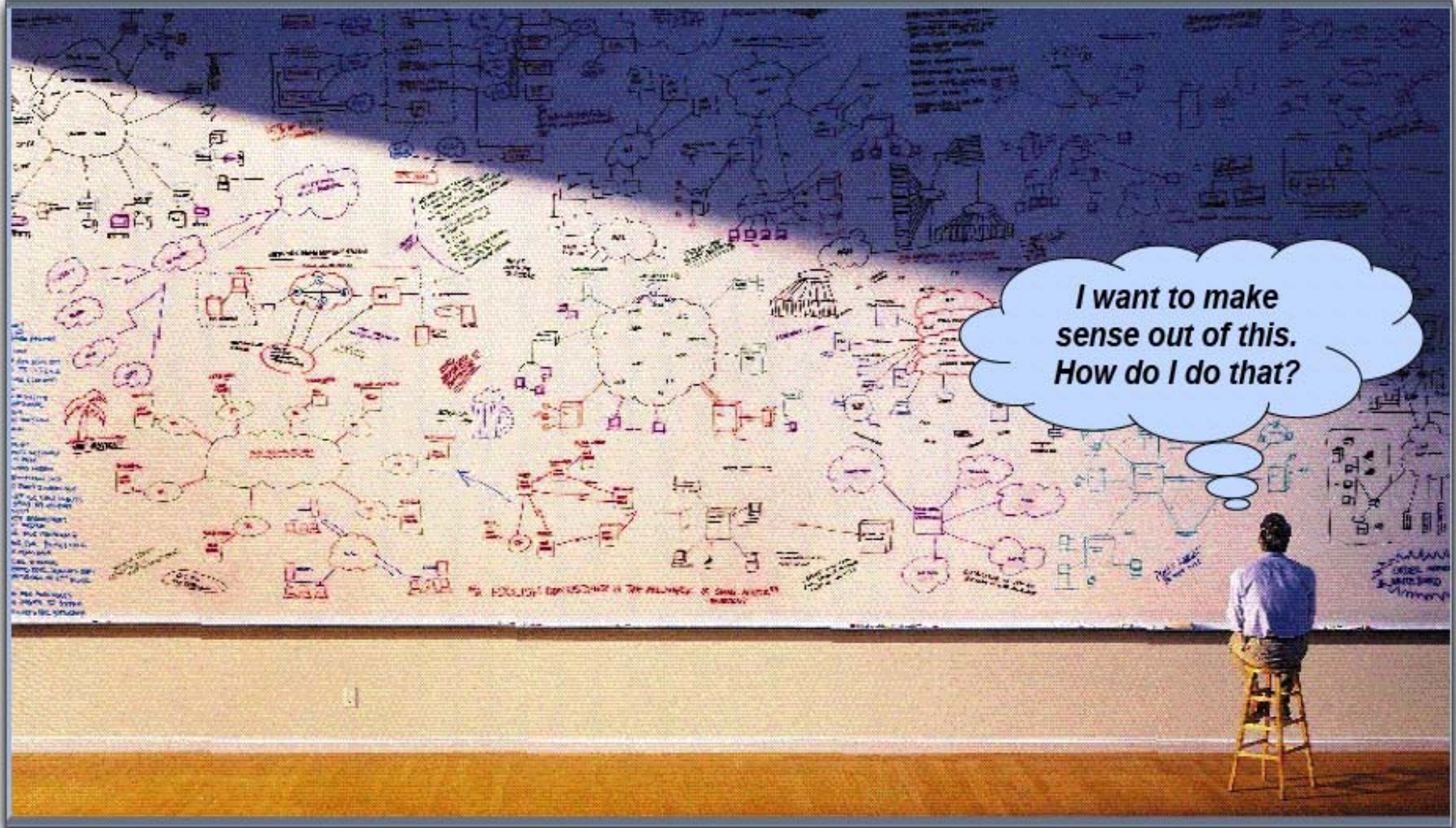
South Atlantic Ocean

Indian Ocean

Global Reach!

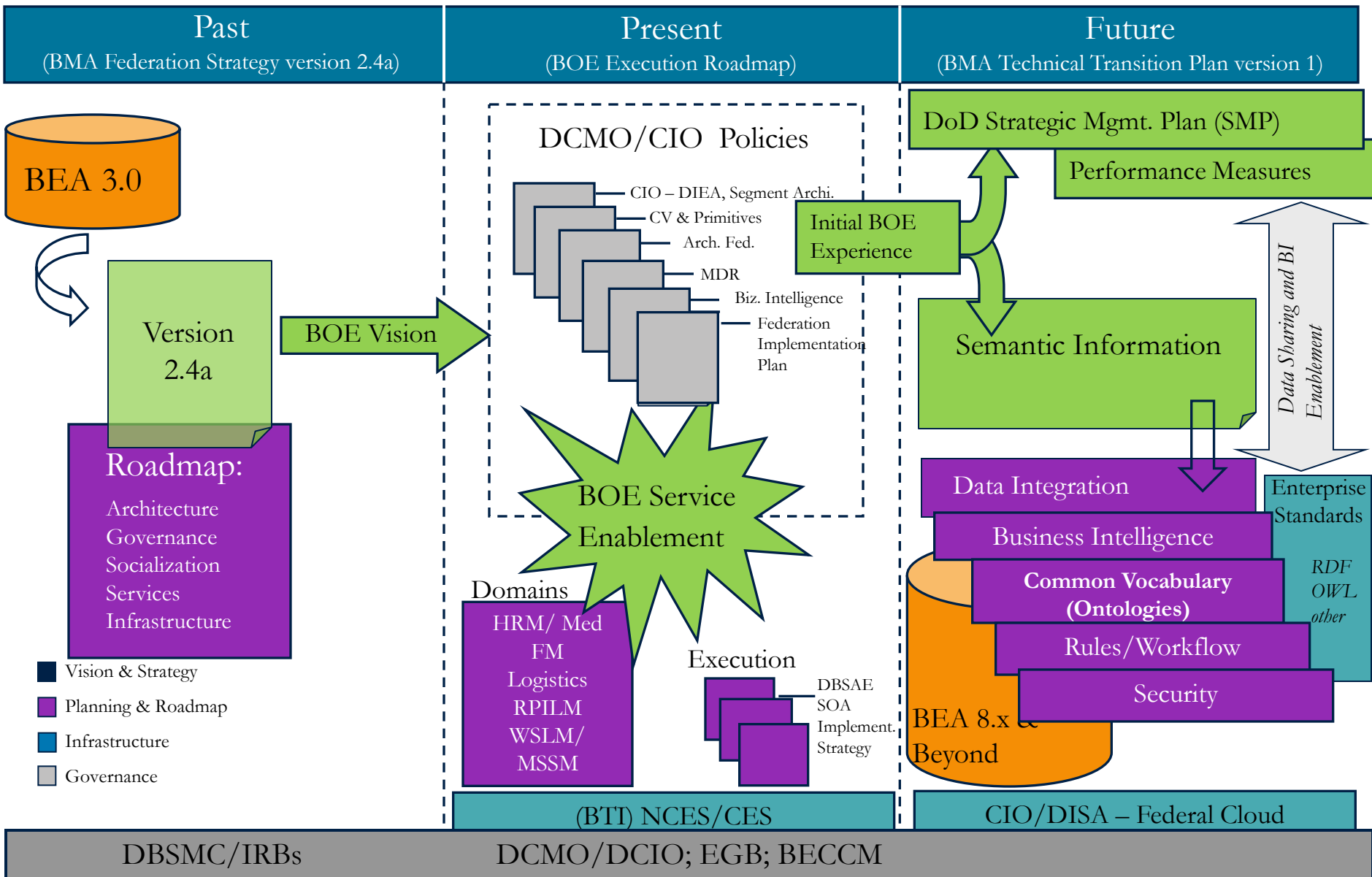


DoD Management Challenges





Strategy and Roadmap for DoD Business Operations Transformation



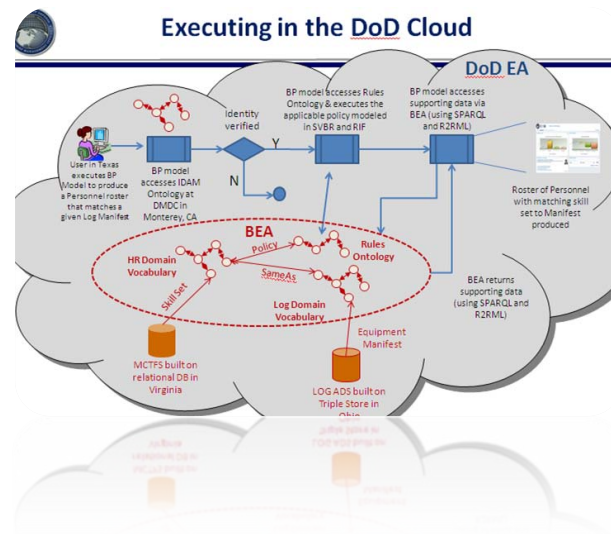


SOA – Cloud - Semantics

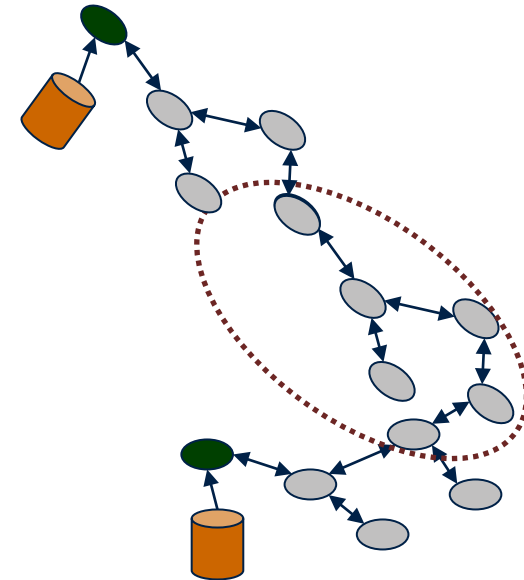
Services Oriented Architecture



Cloud



Semantic Technology



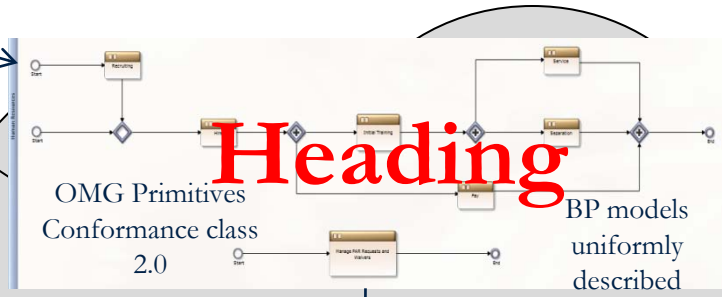


A Vision for DoD Solution Architectures

User executes BP

NCES

Altitude

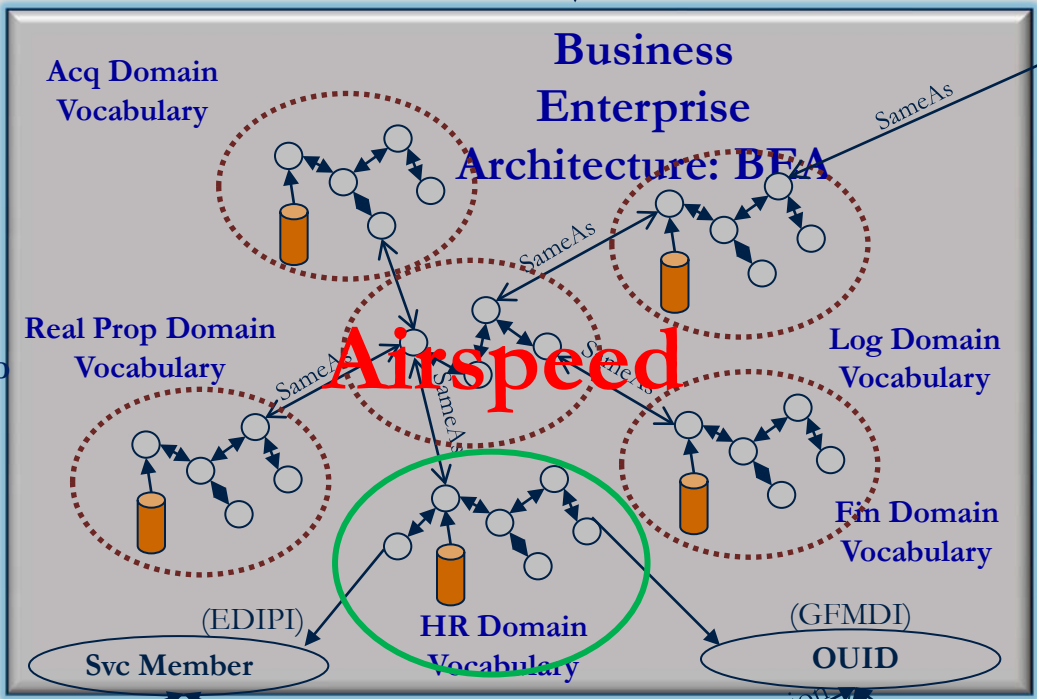


BP executes via BEA directly

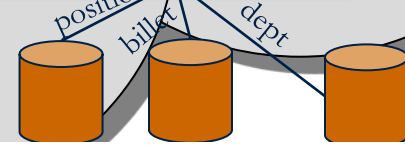
DoD EA

Query BEA directly:

- Enterprise analytics
- Compliance
- IRB/portfolio management



Airspeed



W3C Open Standards Legend: ○ Data described in RDF ↔ Relationship described in OWL ○ DoD Authoritative Data Source

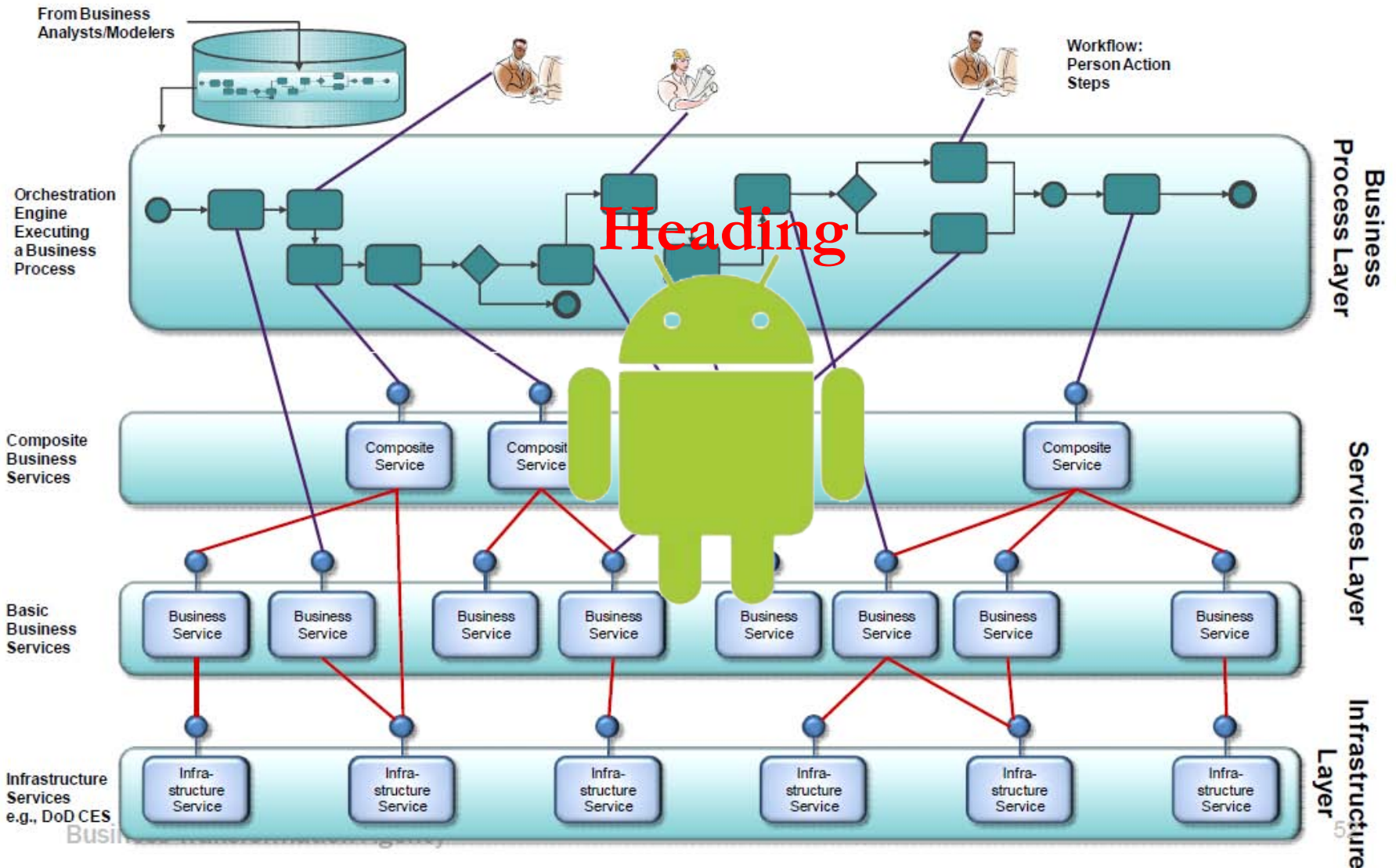


Heading – Altitude - Airspeed

A metaphor to consider!



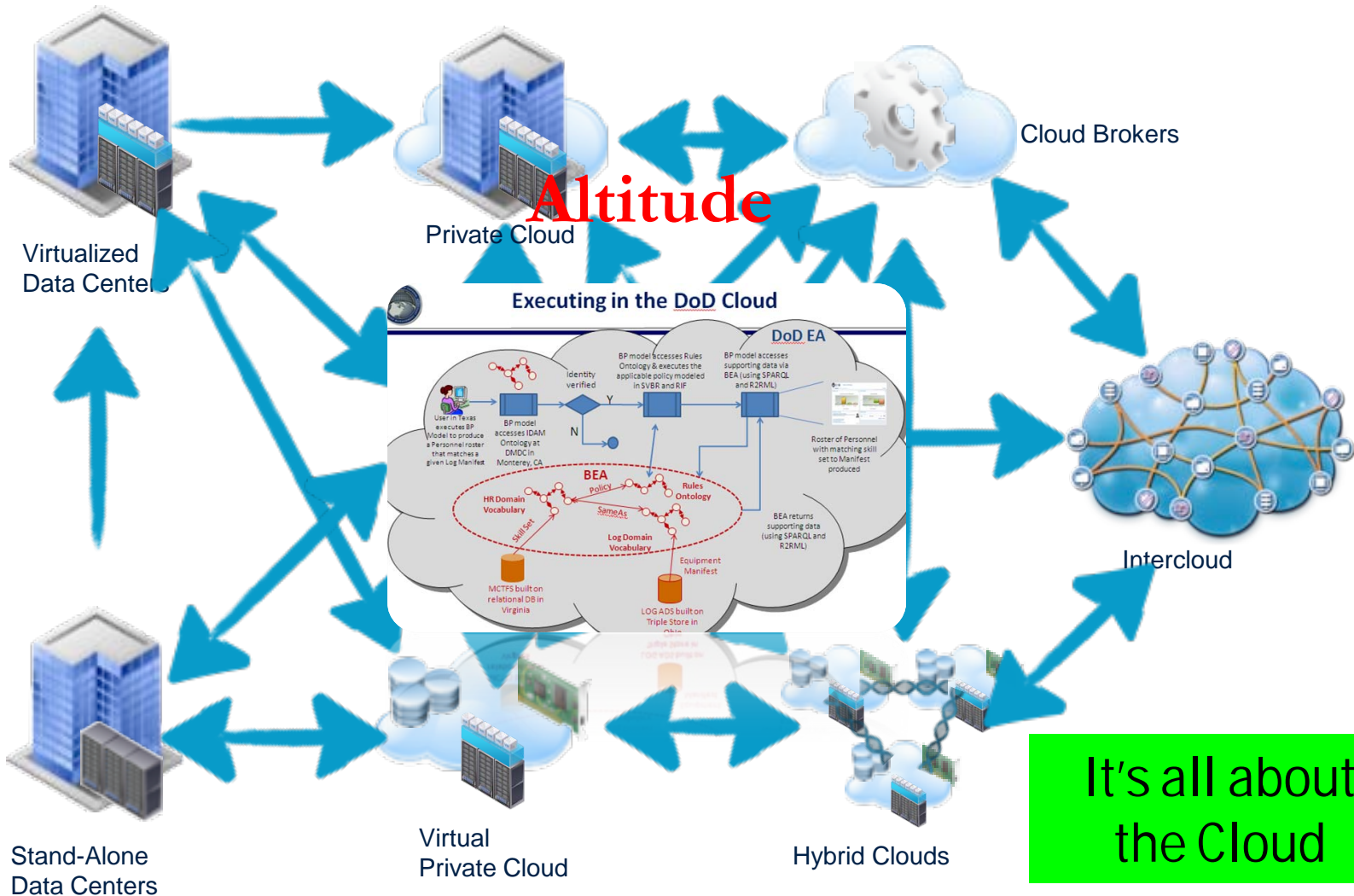
(SOA) Services Orchestration



It's all about Services



The Cloud



It's all about the Cloud

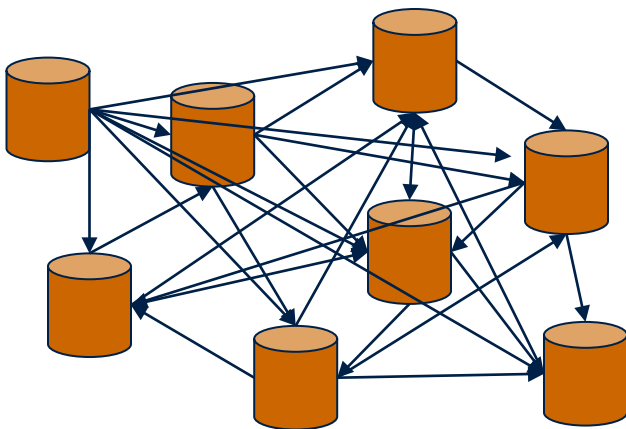
Federation / Workload Portability / Interoperability



Semantic Technology

Current State System of Systems

(near) Exponential
Integration problem (n^2)



Inflexible Data model

Total interoperability for 100 systems > \$4B*

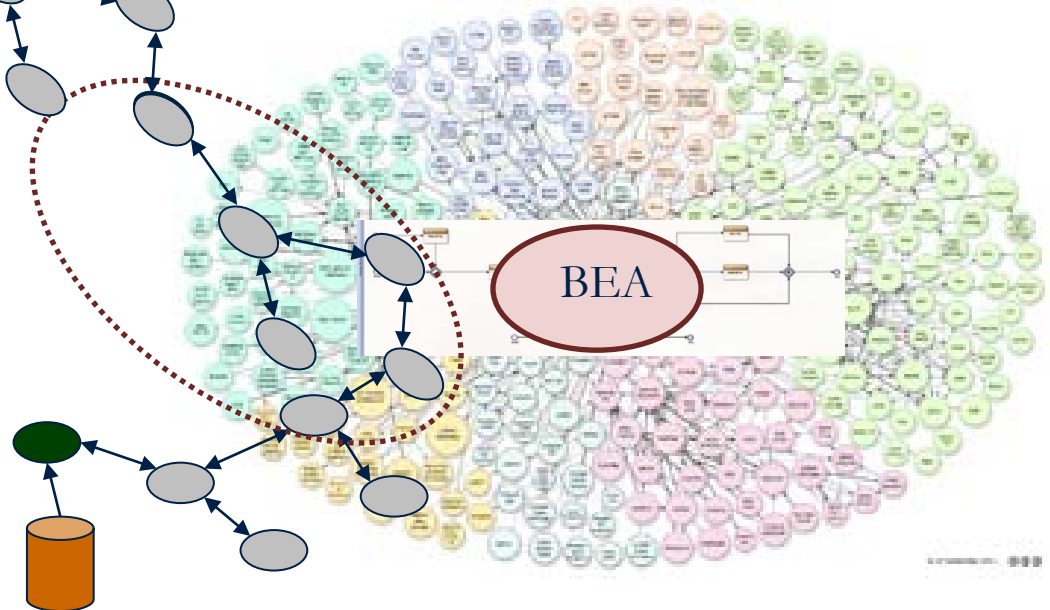
Promotes operational silos

Promotes data duplication

Target State Semantic

BEA
(near) Linear Integration
problem ($2n-1$)

Airspeed



Infinitely extensible data model

Total interoperability for 100 systems < \$40M*

Promotes cross-domain reasoning

Encourages data reduction

It's all about Data



Heading – Altitude - Airspeed

It's all about all SOA-Cloud-Data



In another venue





Heading - Altitude - Airspeed



How Hard is this?





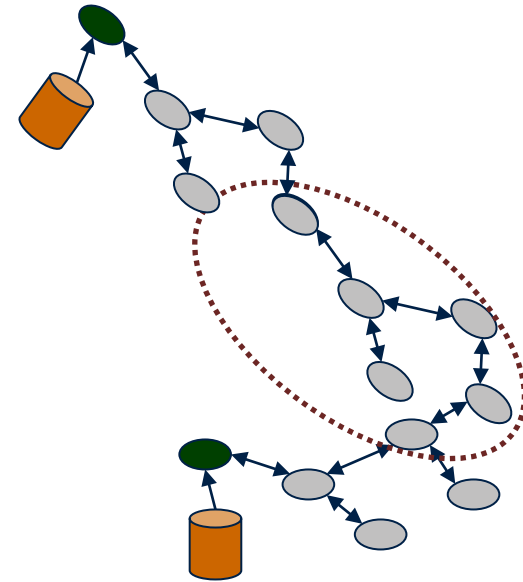
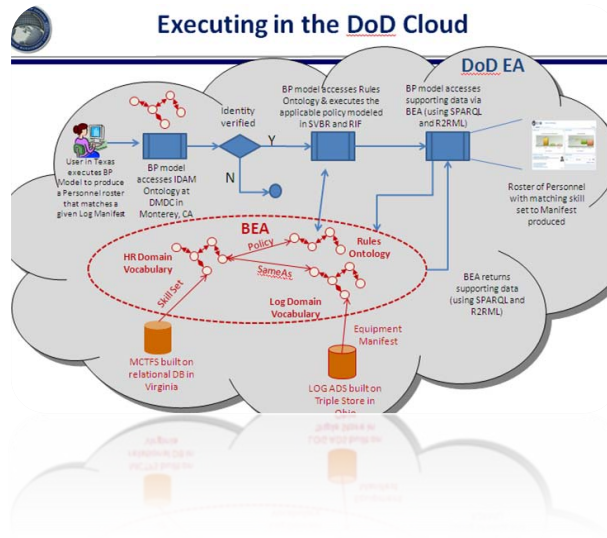
Heading - Altitude - Airspeed



Services Oriented Architecture

Cloud

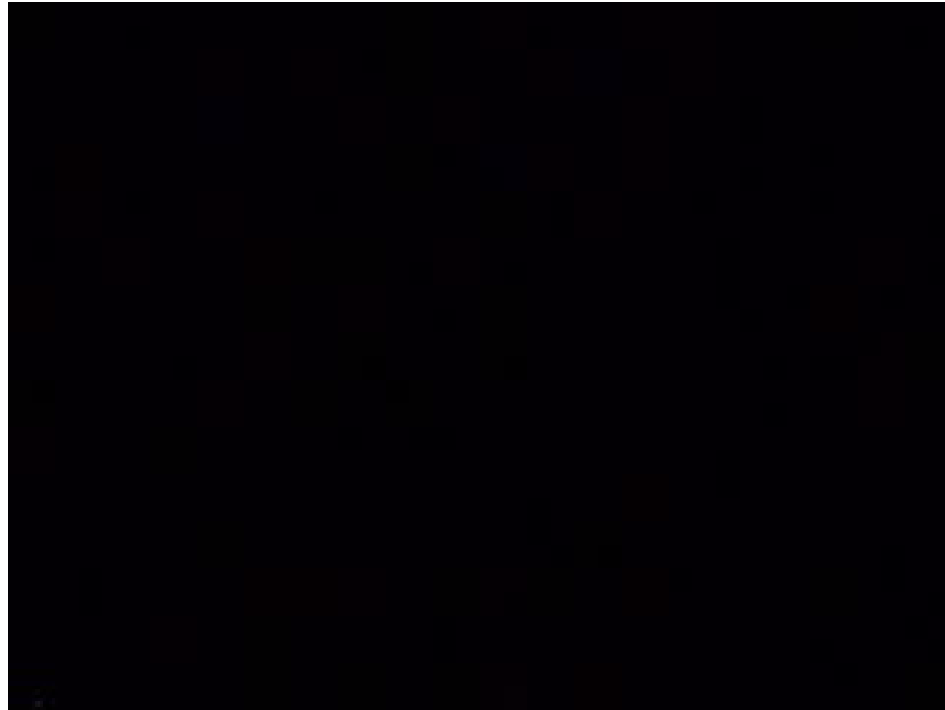
Semantic Technology



Remember. Otherwise...



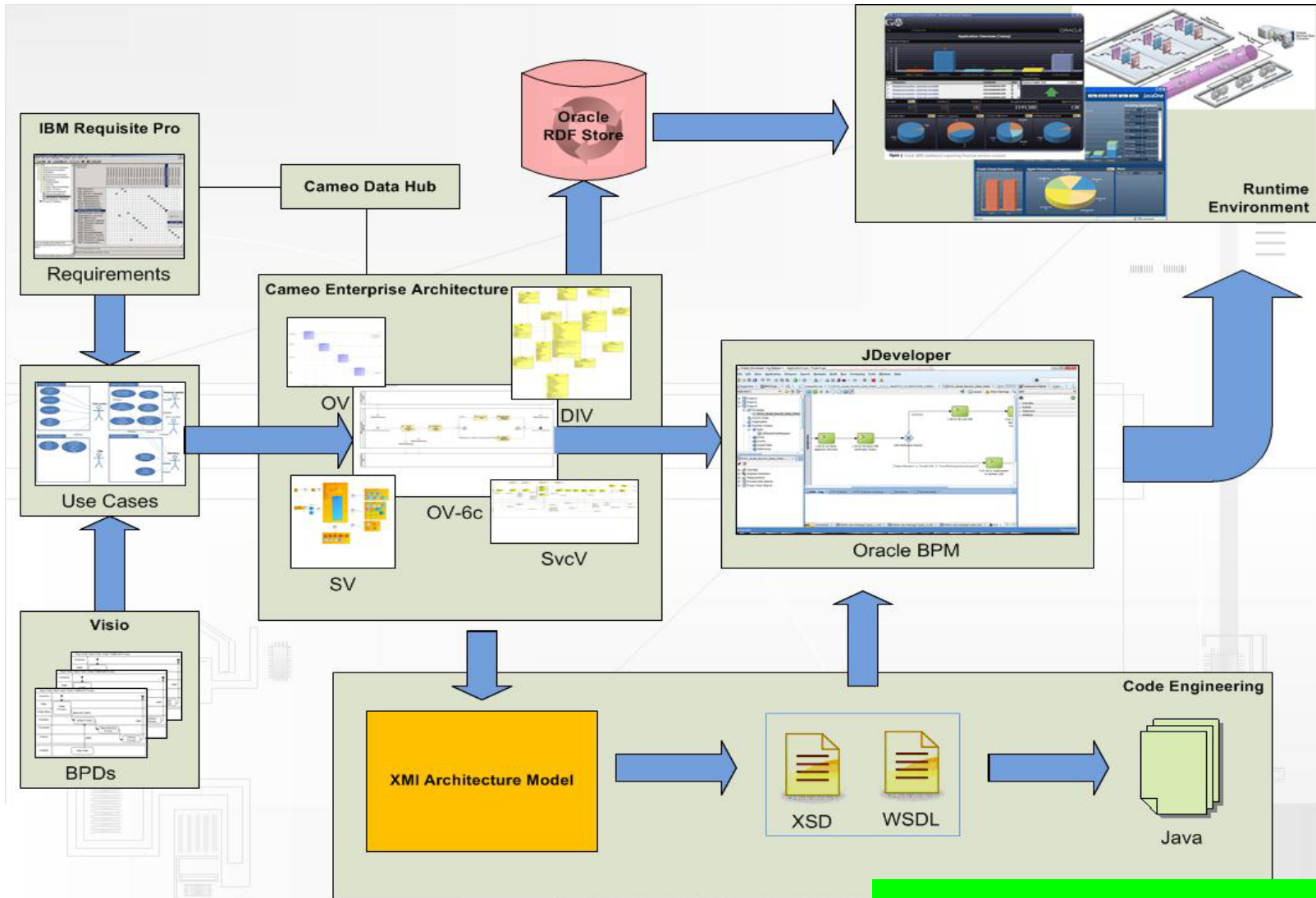
Heading – Altitude - Airspeed



<http://www.youtube.com/watch?v=qh42k3Kvxck>



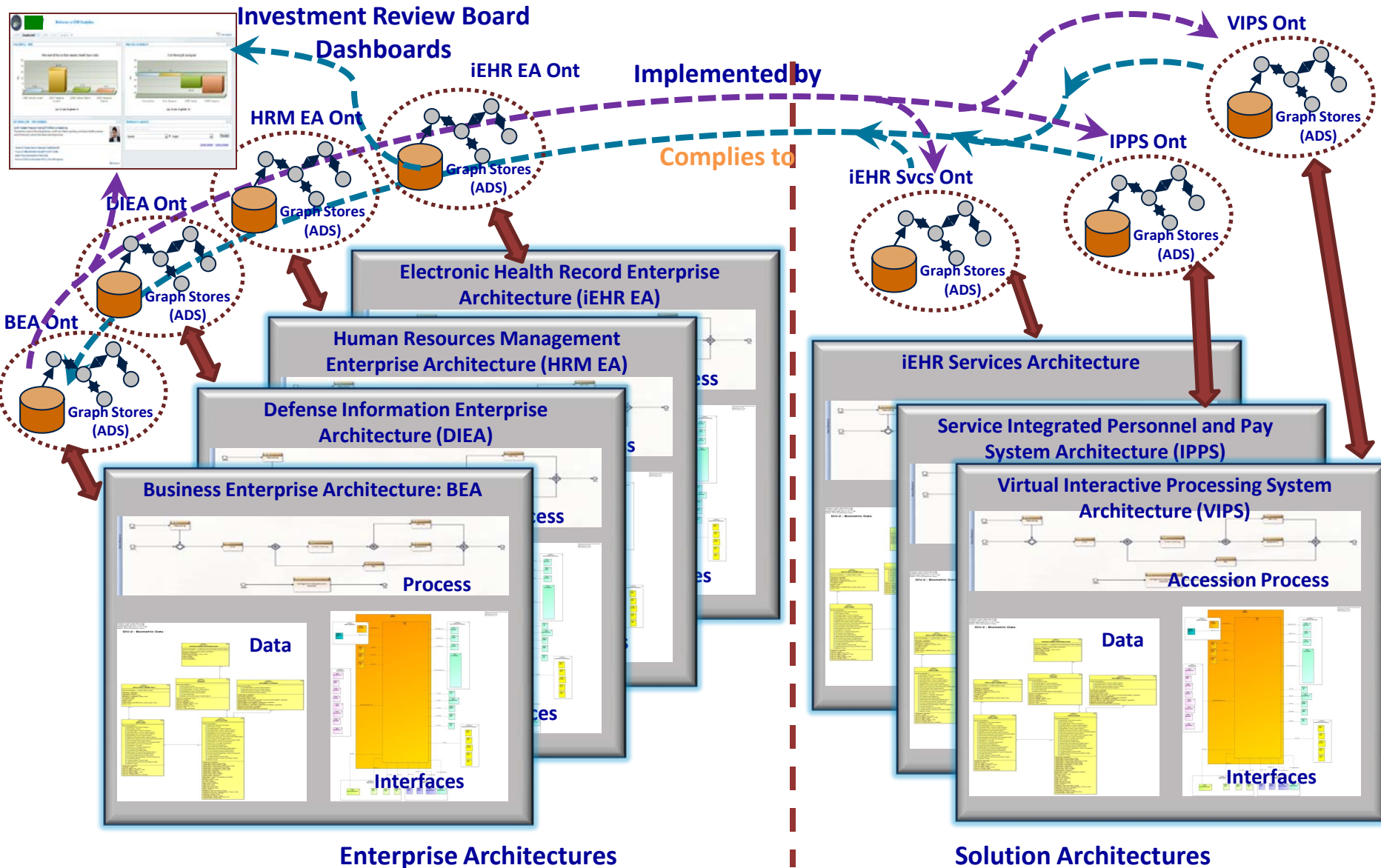
VIPS Solution Architecture



We have proof



Federation through Semantic Architecture

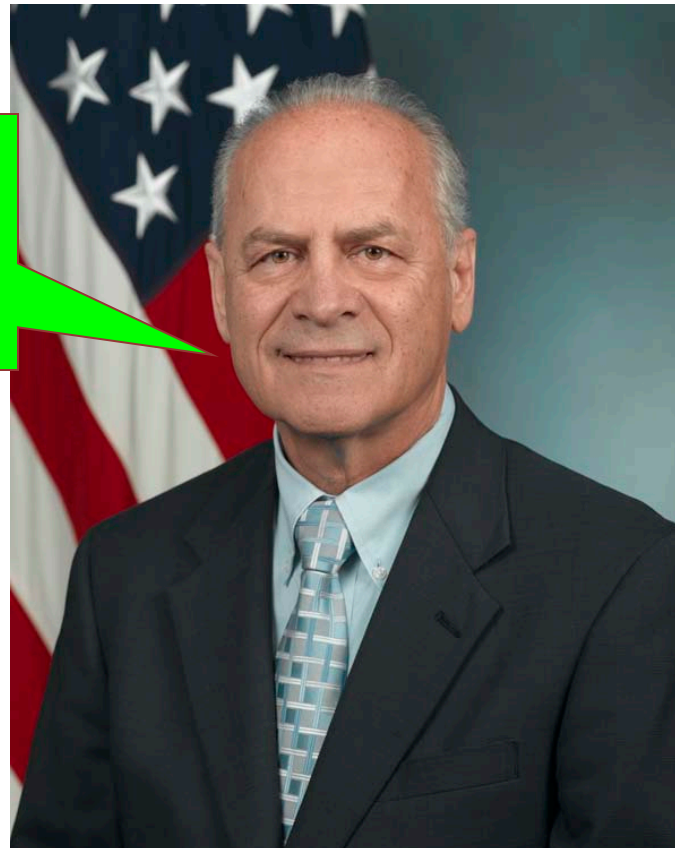




Thank you!

Questions?

Dennis.Wisnosky@osd.mil





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DCMO

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