

NAS ENTERPRISE ARCHITECTURE CONFERENCE

Raytheon

Customer Success Is Our Mission



Air
Land
Sea
Space
Cyberspace

Innovation. In all domains.

Raytheon's Architecture Activities

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June 23, 2009

Raytheon's Architecture Drivers

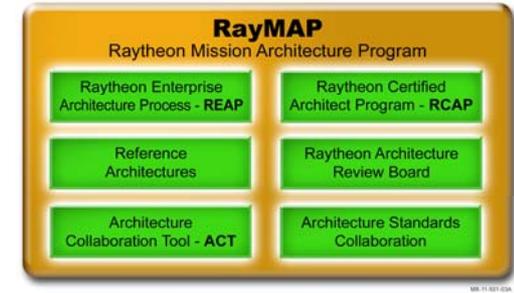
- **Mission Assurance**
critical enabler for developing highly complex systems
- **Global Information Grid**
next generation, net-centric systems-of-systems require formalized architecting approach
- **2004 DoD Mandate Memo**
requires use of DoD Architecture Framework (DoDAF) for “...all architectures developed by and for the Office of Secretary of Defense (OSD)...”
- **Office of Management & Budget**
mandates enterprise architecture development for all Departments/Agencies/Administrations
- **DoD Instruction 5000.02**
December 2008 update (note the ‘shall’):
“Program managers shall employ MOSA [Modular Open Systems Approach] to design for affordable change, enable evolutionary acquisition, and rapidly field affordable systems that are interoperable in the joint battle space.”

ARCHITECTURE : INTEGRAL TO RAYTHEON ENGINEERING

Raytheon's Response To Drivers



ET&MA RAYTHEON MISSION ARCHITECTURE PROGRAM

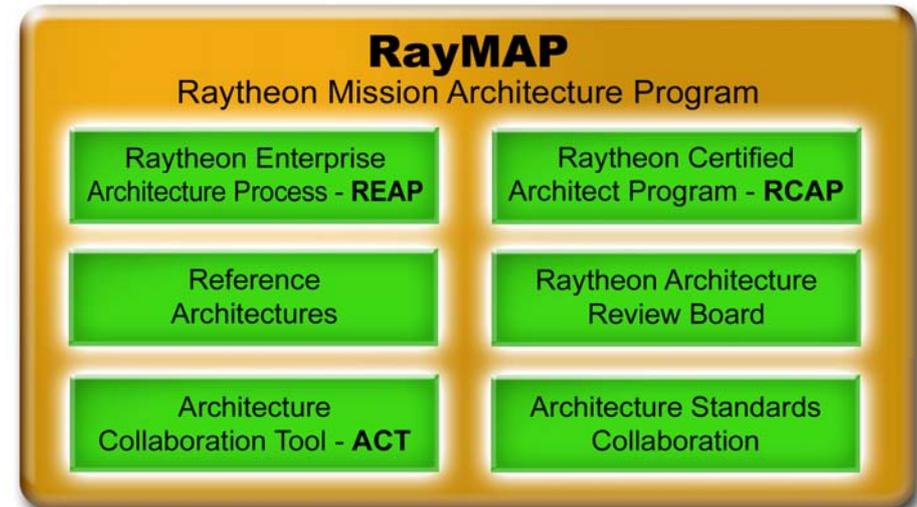


A set of corporate architecture initiatives* to standardize and support Raytheon Engineering's architecture governance, standards-based process, internal training and certification, architect community collaboration, reference architectures, and architecting tools.

*Most in place for several years now

Elements of RayMAP

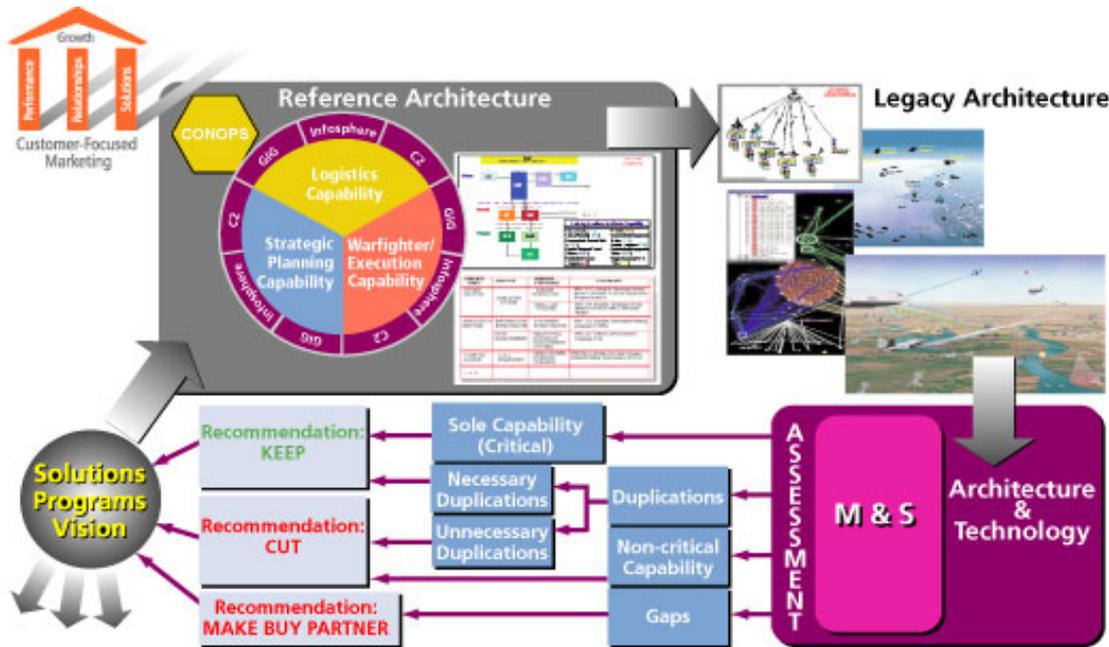
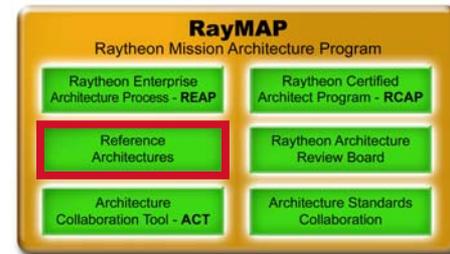
- **Raytheon Enterprise Architecture Process**
standards-based architecture process
- **Raytheon Certified Architect Program**
formally defined architect certification program
- **Reference Architectures**
domain-specific templates for architecture efforts
- **Raytheon Architecture Review Board**
governance body
- **Architecture Collaboration Tool**
repository, tools, discussion forums
- **Architecture Standards**
government & industry collaborations to support items above



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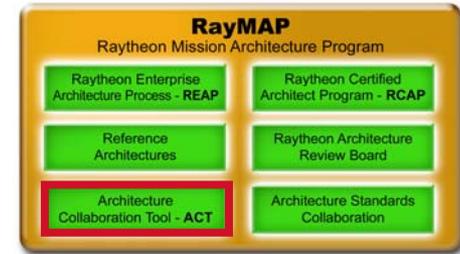
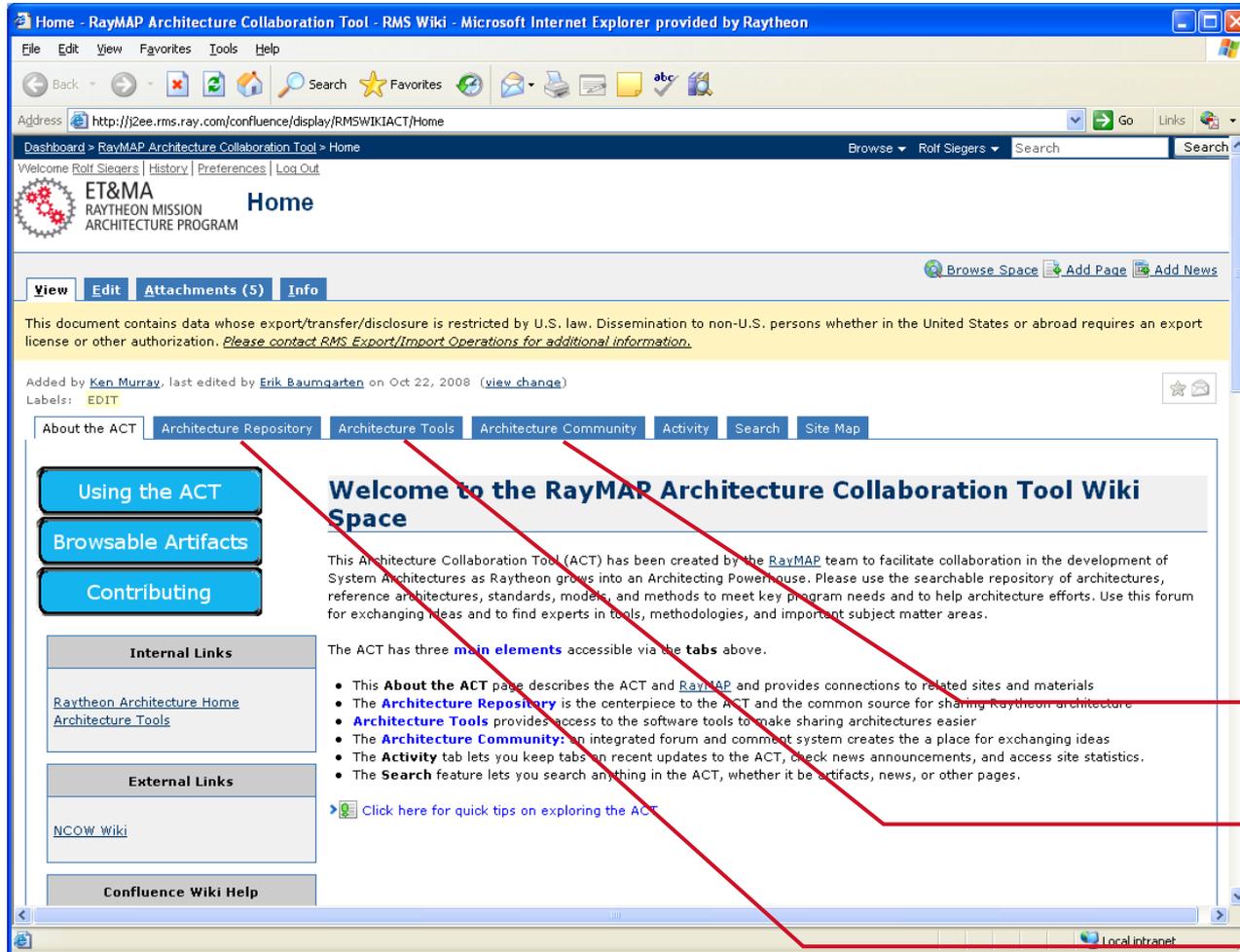
Elements of RayMAP: Reference Architectures (RAs)

- Starting-point, partially populated templates of various architecture models in several key Raytheon customer domains



- ### Key RAs for NextGen
- Command and Control
 - Information Assurance
 - Communications

Elements of RayMAP: Architecture Collaboration Tool



Key contents:

- RAs & other enablers
- **Architecture** tool licenses
- **Evolving** architecting **cost** estimation tool

Collaboration

Tools

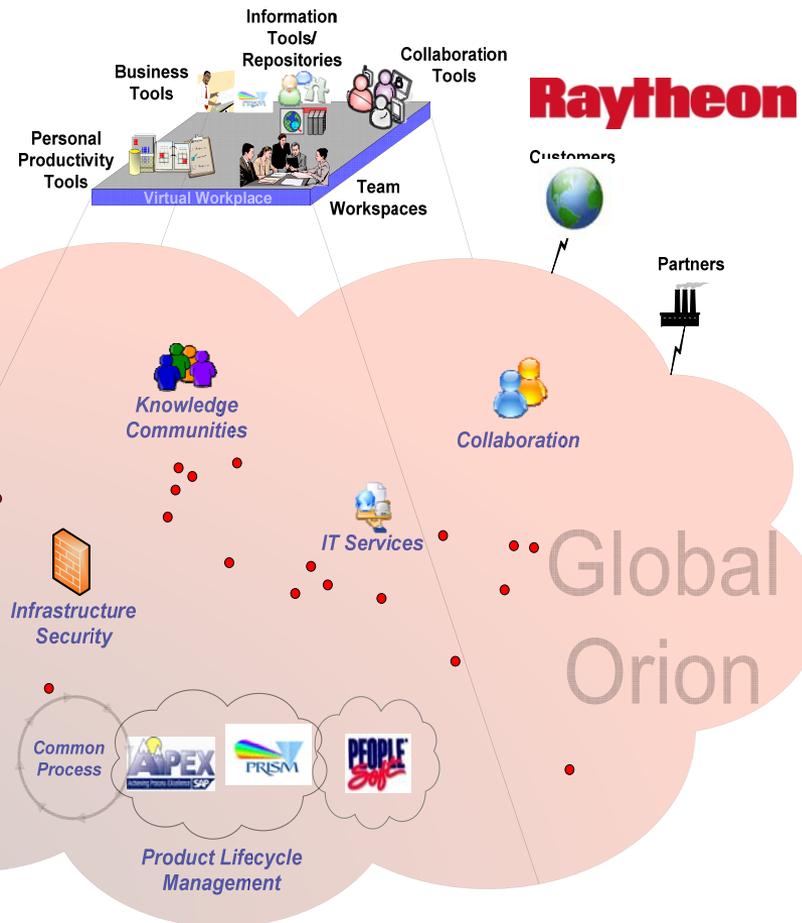
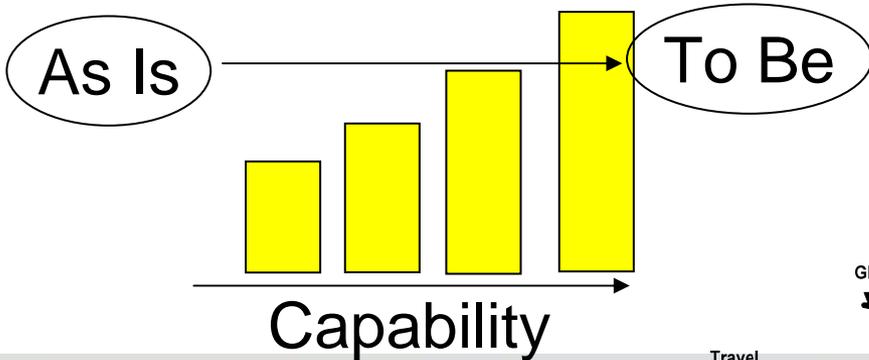
Repository

- So what can we do with Enterprise Architecture??



Using Enterprise Architectures Investment Planning

Customer's **To Be** Operational Architecture provides Baseline for Planning



RayMAP
Raytheon Mission Architecture Program

Raytheon Enterprise Architecture Process - REAP	Raytheon Certified Architect Program - Home
Reference Architectures	Raytheon Architecture Review Board
Architecture Collaboration Tool - ACT	Architecture Standards Collaboration

Travel

Home

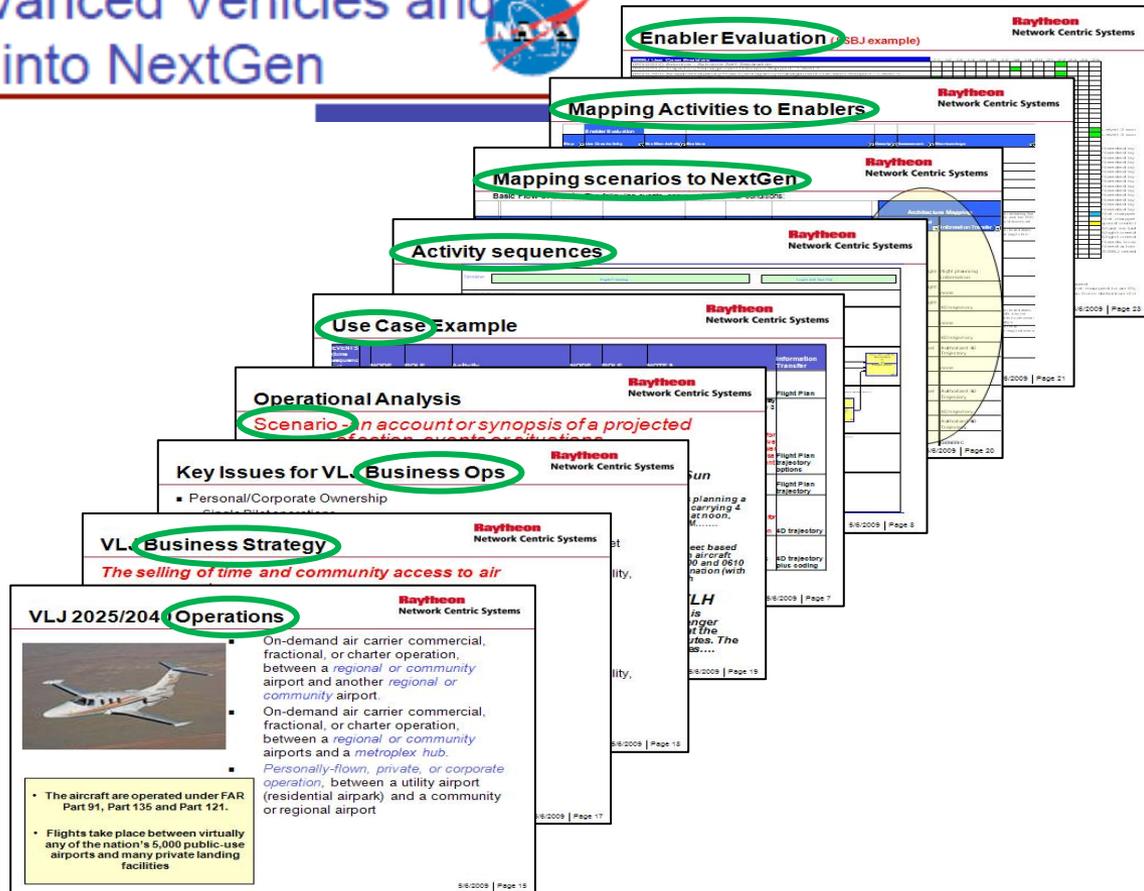
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- Raytheon is using EA in re-architecting our own IT enterprise

Using Enterprise Architectures Impact Assessment

How does a “new” operation/technology/event....impact To Be?

Integration of Advanced Vehicles and Concepts into NextGen

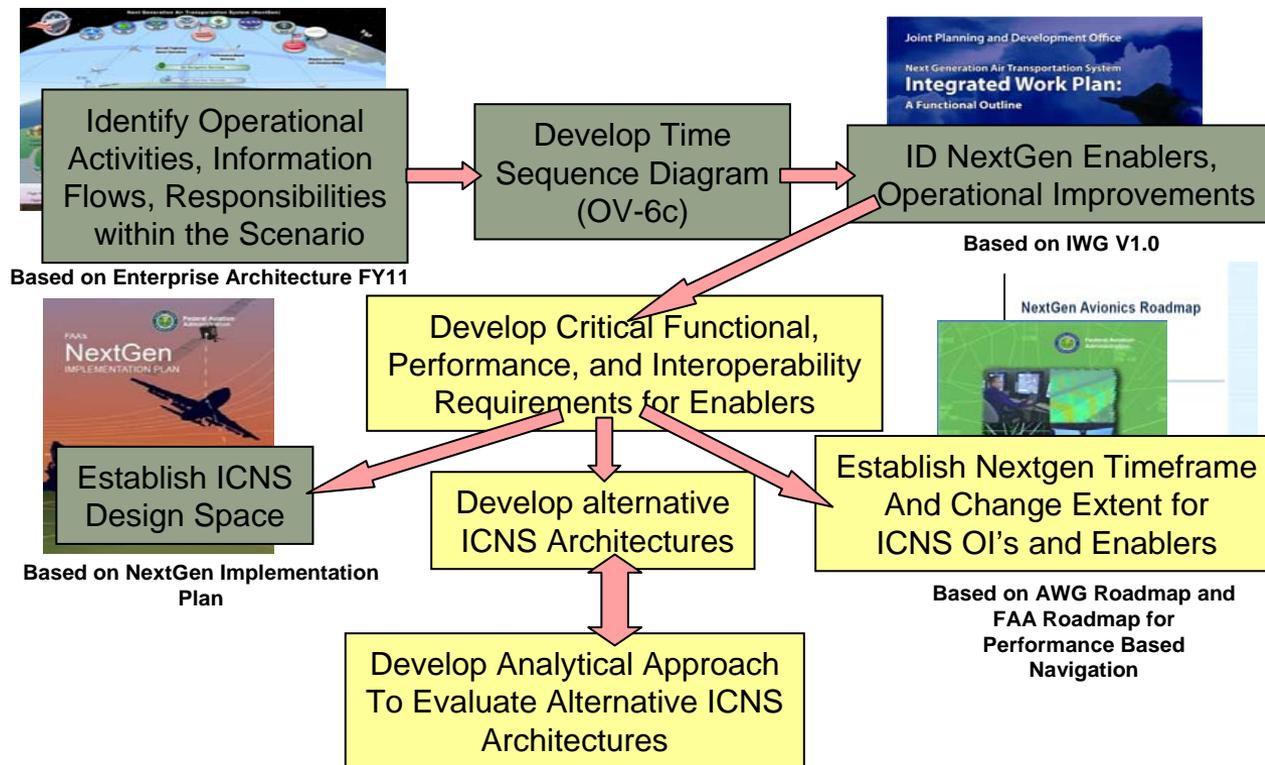


Using Enterprise Architectures Enhanced Planning

Establish future requirements for **To Be** capabilities to focus planning



Integrated Communications, Navigation, & Surveillance Study



Summary

- **Industry is committed to Enterprise Architecture**
 - Raytheon has invested \$Millions in process, training, and resources

- **OMB Mandate/DoD Institution**
 - It's the law!!

- **Operational EA Defines the Future State, allowing...**
 - Commitment of resources to a shared vision
 - Assessment of inevitable technology changes
 - Structured development of requirements

