

# Net-Centric Operations Overview

## Architecture

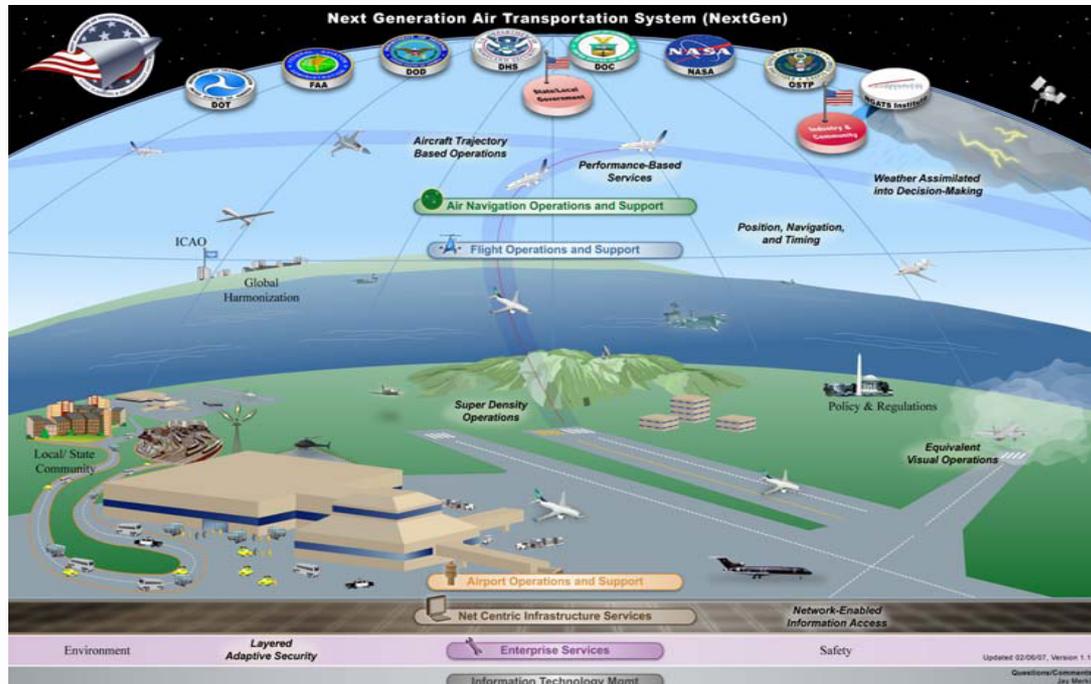
for  
NAS EA Conference

Colonel D. Wreath  
23 June 2009



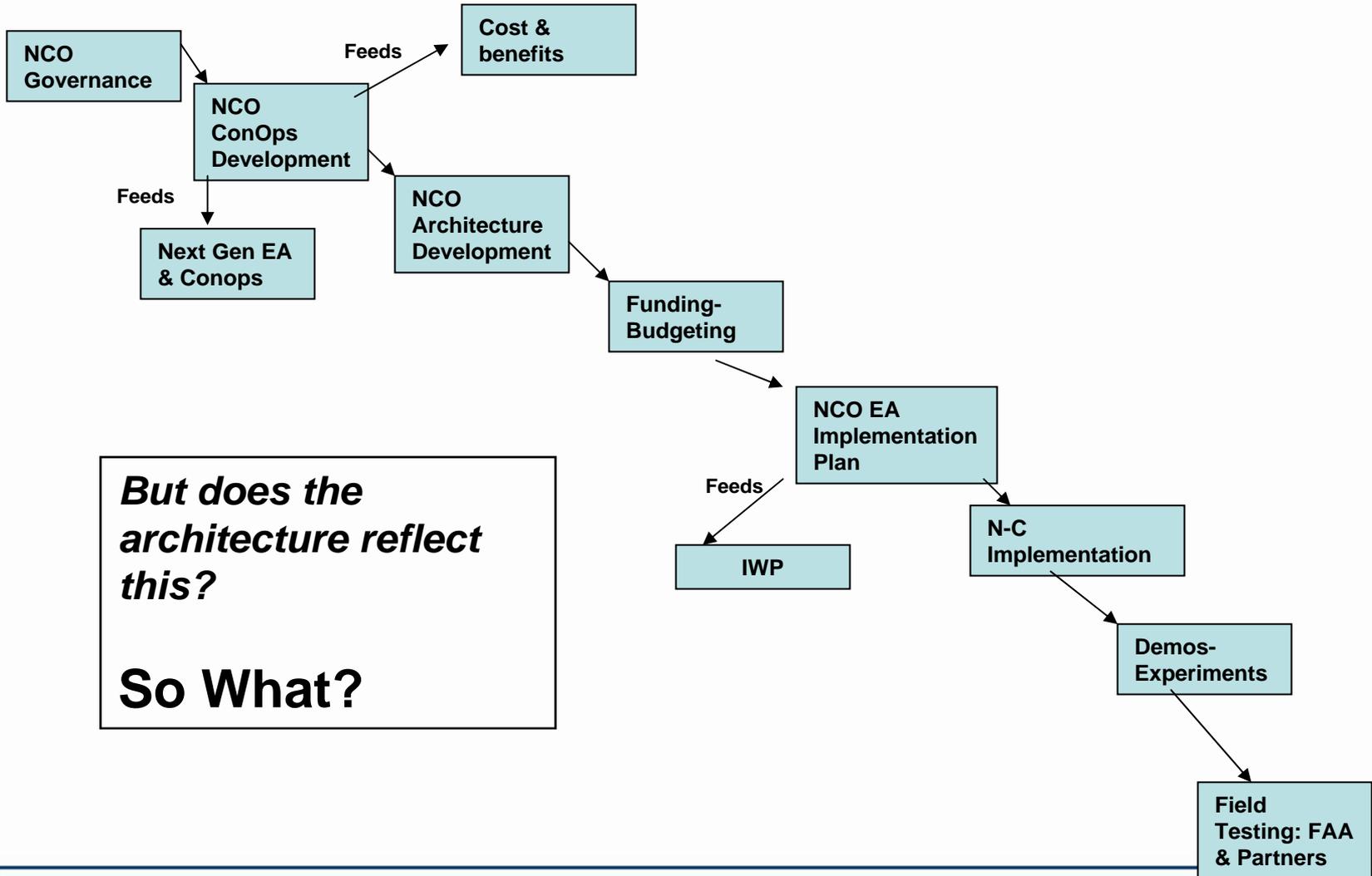
# Introduction

- **Enabling Net-Centric NextGen**
  - Net-centric “ecosystem” exists within a Service Oriented Architecture (SOA)



- Demonstrations and experiments will test, gauge and showcase progress.

# One Objective: *Measuring Progress*



# Net-Centric Implementation

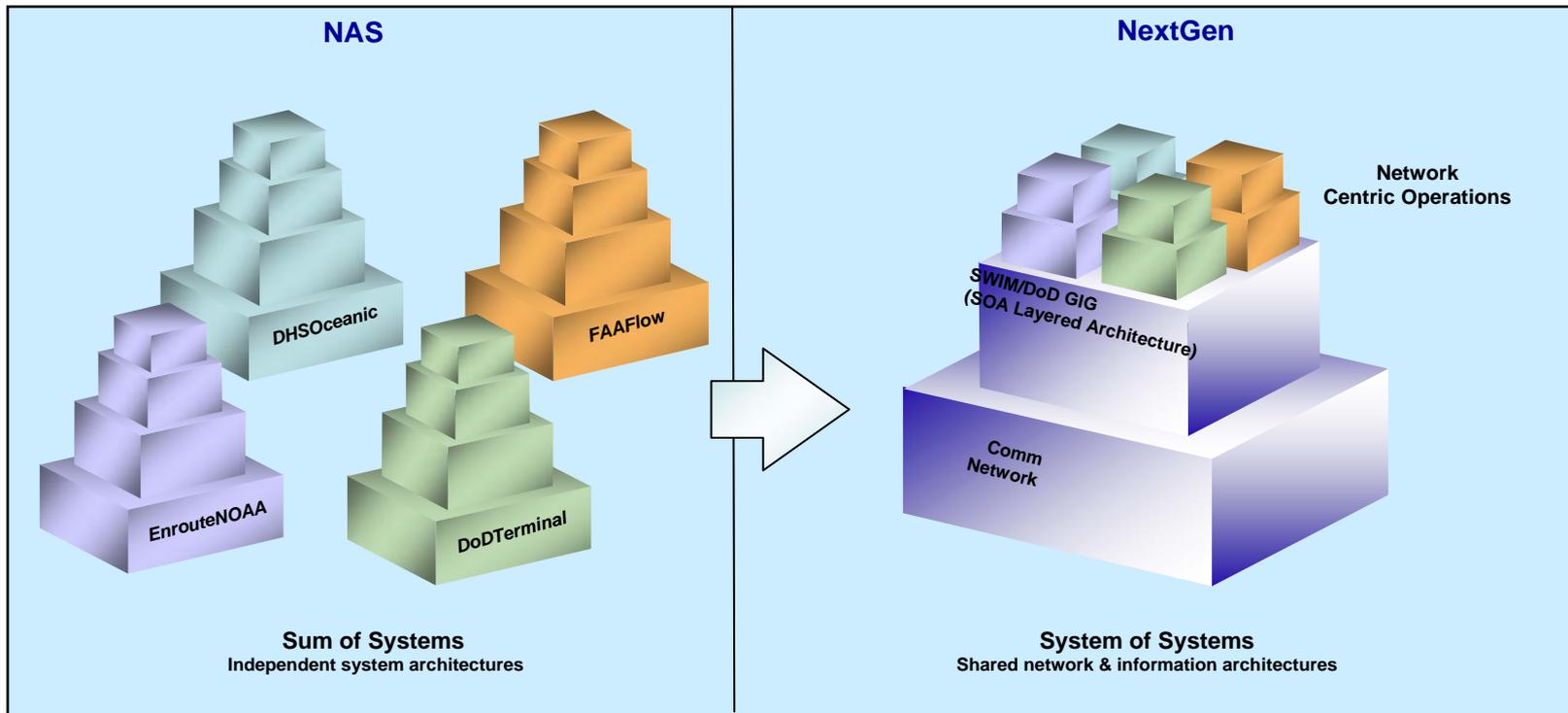
## *Do Architects do this for me?*

- **Modeling business processes** (i.e., Concept of Operations, or CONOPS) -- critical for ensuring that the services know with whom - and when - data are shared on a many-to-many basis
- **Strong information assurance** processes -- required to ensure only authorized persons are provided information services - not the “bad guys.”
- Enterprise is no longer system-centric, but it is transformed to providing information services to **stakeholder subscribers** in the enterprise.
- Result is an “**enterprise of services**”, which is developed and managed radically differently from a system-of-systems.

*Architects – a little help here, too!*

# The Legacy System Challenge

- National Airspace System is tied together by data exchanges among legacy mission systems. Exchange mechanisms are highly change-resistant. They interlock components and limit flexibility.
- N-C SOA envisions a loosely coupled design that masks the underlying technical details.
- Services are allowed to independently access data, business processes, and infrastructure. Result is the agility in which the interface tolerates changes and allows many-to-many exchanges:



# Net-Centric IMEX - An Evolutionary Approach

- Federated data management practices will ~~will~~ **HAVE TO** leverage already-existing national and international information-sharing efforts; such as the counter-terrorism “**Information Sharing Environment,**” (ISE) and the **National Strategy for Information Sharing** as frameworks models.
- Critical qualities of net-enabled information access and exchange are:
  - **Accessible**, discoverable and understandable data and services,
  - **Secure**, trusted and shared information
  - **Real-time**, performance-based, scalable systems that adapt to fit continuously changing environments.

*Architecture help is crucial*

# “Get off the stage” slide

- We’ve had architects for a long time...



- But these guys didn’t have to collaborate...
- We need to architect the RIGHT information exchange model others will WANT to use

**Help by joining the Net Centric Working  
Group  
Google “Next Gen Institute” and apply**

**Questions?**