



FAA
FEDERAL AVIATION ADMINISTRATION

Architecting the Amorphous

Solutions
Architects: The
New Heroes
Washington, DC
August 13th, 2003

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Assistant Administrator for
Information Services and
Chief Information Officer





OUTLINE

- ➔ • An “Amorphous” and Complex System of Systems
- Enterprise Architecture as a Unifying Framework
- Some Indications of Progress





National Airspace System (NAS)



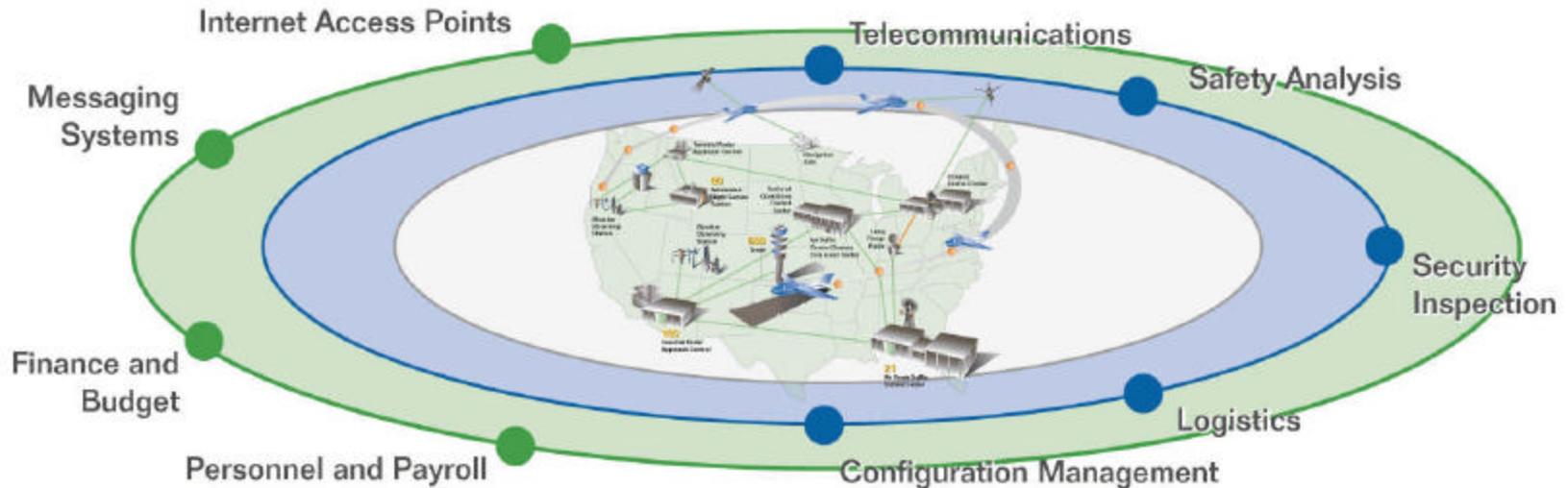
FAA's Job

- Manage more than 30,000 commercial flights to move 2,000,000 passengers safely each day
- Support more than 35,000 general aviation flights on a daily basis
- Regulate and certify the people and aircraft that use our airspace





System of Systems



421 Systems

- National Airspace System
- Mission Support
- Administrative

- National Airspace System
- Mission Support
- Administrative

104
110
207

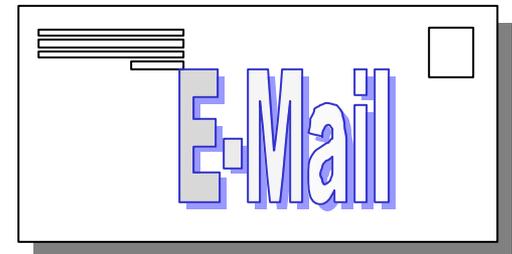
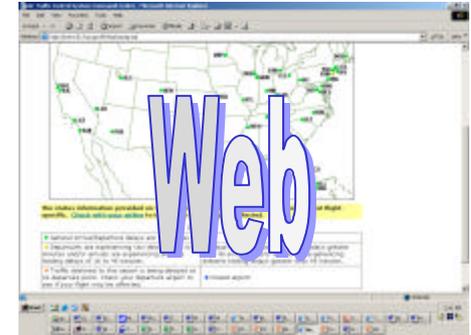
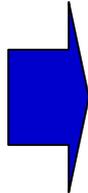




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Fly.FAA.Gov, a mission support application, presents NAS data to the public via the Web and E-Mail





OUTLINE

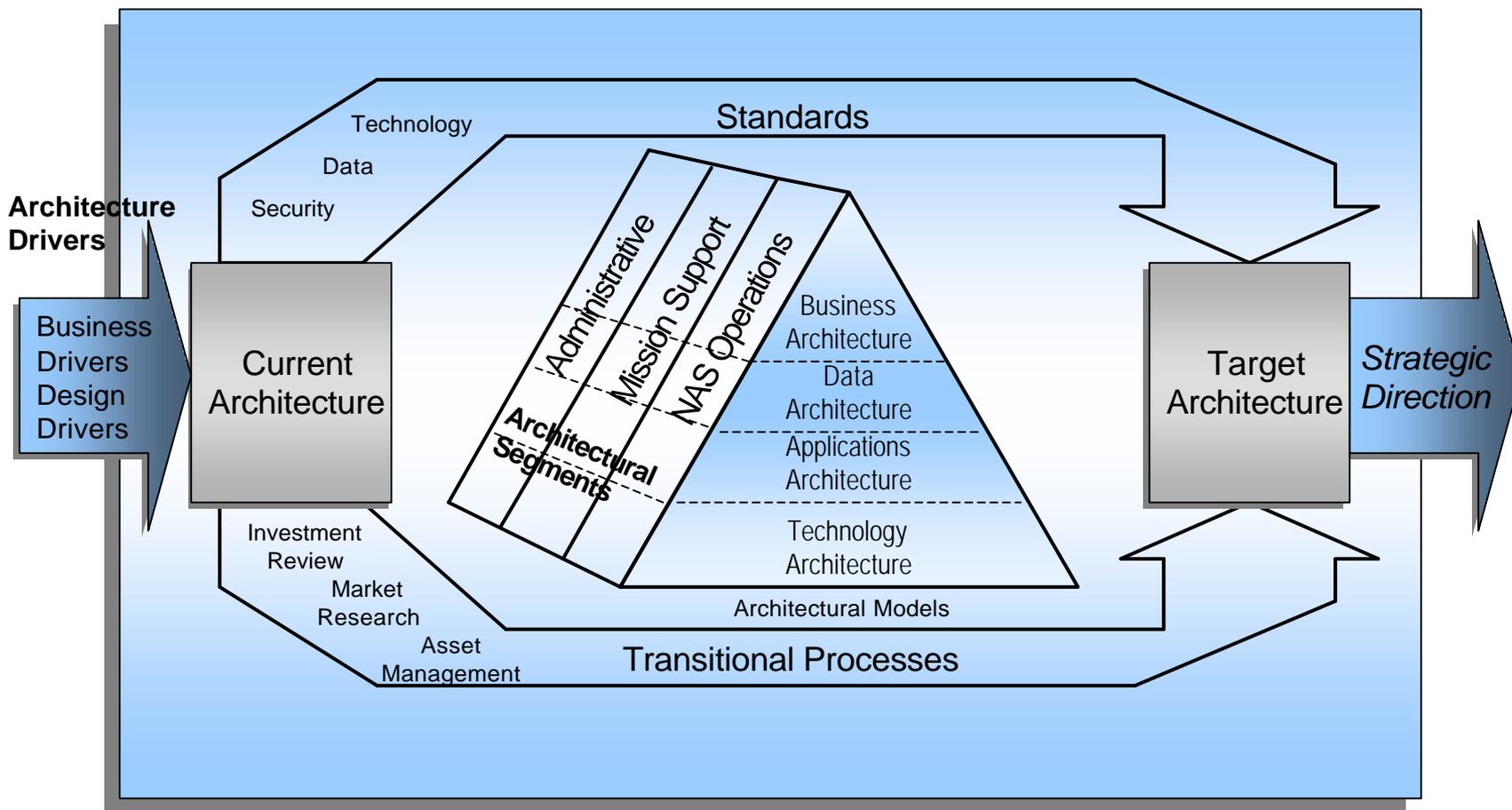
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FAA Enterprise Architecture

Acquisitions will comply with enterprise architecture

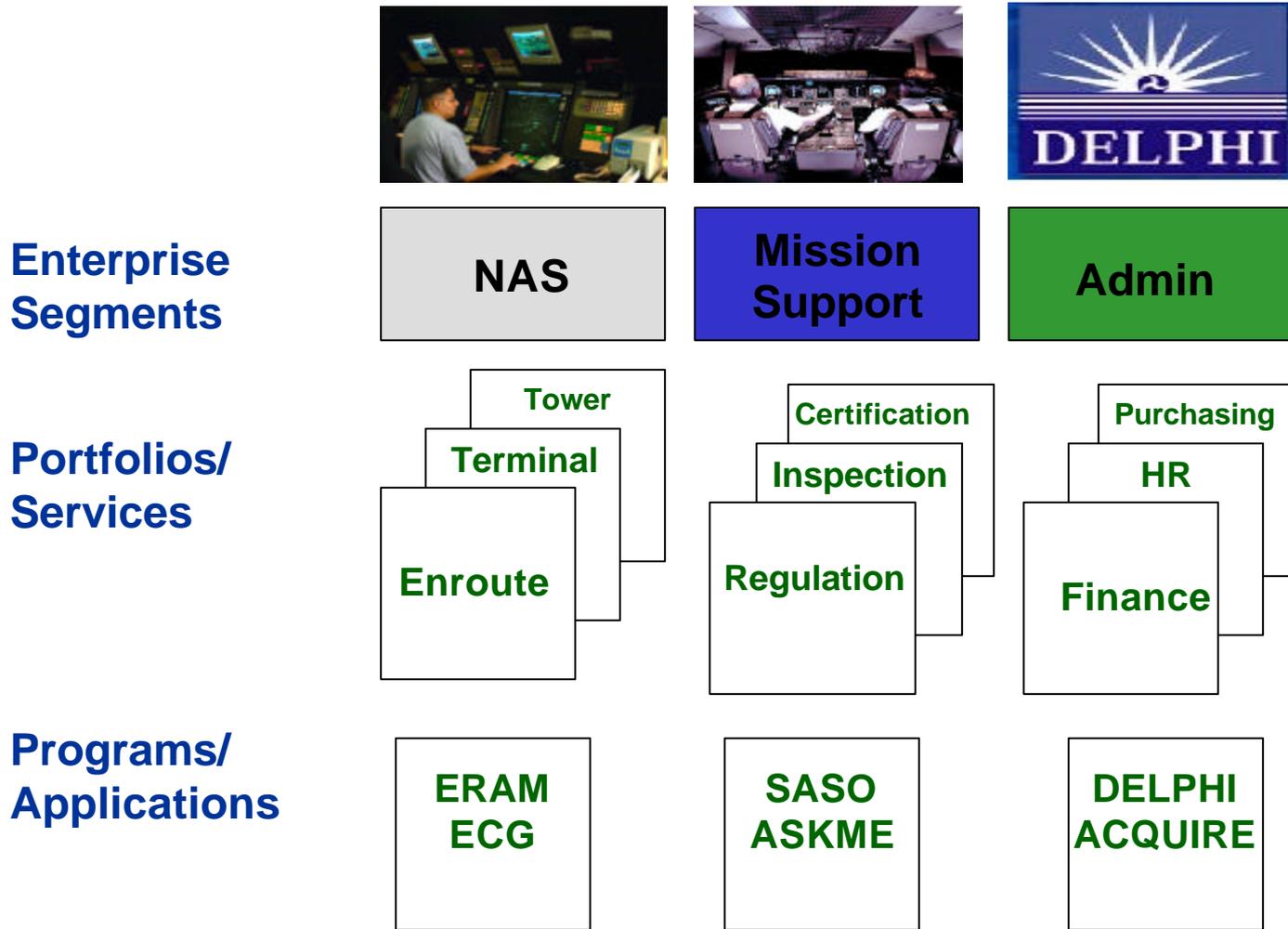




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FAA's Layered Architecture





FAA

Architects' Roles and Relationships

Establishes enterprise-wide architectures, standards, and requirements to maximize business value

Enterprise Segments



NAS



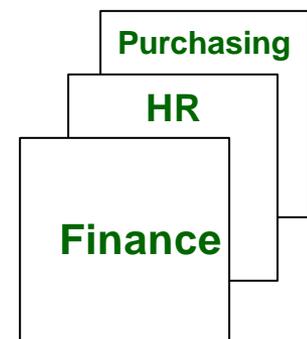
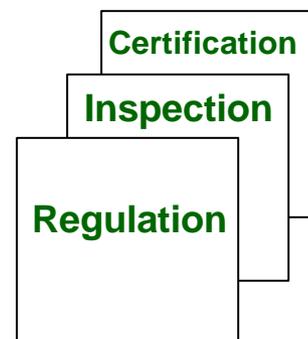
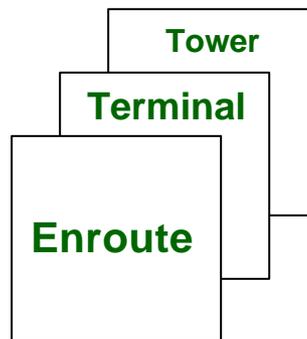
Mission Support



Admin

Creates architecture for portfolio of applications or systems and aligns with the Enterprise architect

Portfolios/ Services



Develops applications and solutions in accordance with enterprise and portfolio architectures

Programs/ Applications

ERAM
ECG

SASO
ASKME

DELPHI
ACQUIRE





Task Emphasis for Federal and Contractor Architects

	Federal	Contractor
Enable management decisions	X	
Support business planning and visioning	X	
Create architectures and standards	X	X
Assess architecture compliance	X	X
Develop architecture tools		X
Collect process and application information		X





How Many Architects?

	NAS	Mission Support	Admin
Enterprise	7X	X	X
Portfolios/ Services	7X	2X	2X
Programs/ Applications	42X	9X	5X





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The FAA EA Homepage

FAA Enterprise Architecture

Administrative

Mission Support

NAS

Customize

System:

SEARCH

Version 1.0 as of September 30, 2002

SITE MAP

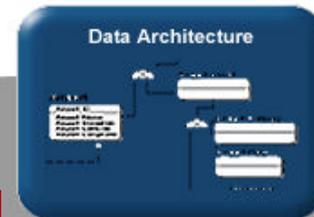
EA HOME

Select the Finance process area

Finance

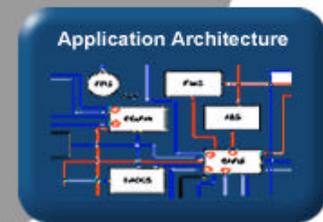
1. SELECT PROCESS AREA

Click on the Business Architecture to see the Finance As-Is processes



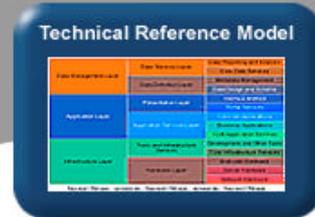
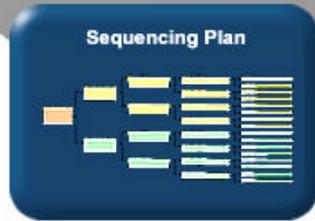
Process Application Data Flows

2. SELECT ARCHITECTURE

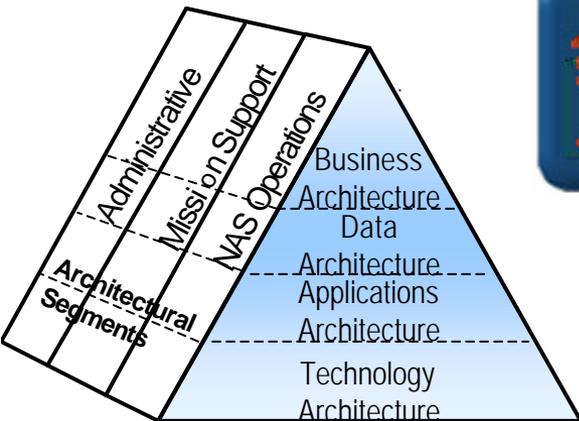


Quick Query

About the FAA EA



Contacts





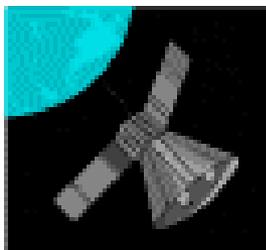
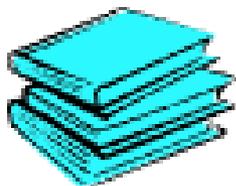
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MISSION SUPPORT

Transformation of Field Inspections From Paper-based to Wireless

TODAY



TOMORROW

Solutions Architects will have the benefit of Enterprise and Portfolio Architectures for guidance





Concluding Remarks

- Enterprise Architecture provides a systematic way of looking at the FAA's complex "system of systems"
- While the National Airspace Architecture has been defined since the mid-1990's, the FAA Enterprise Architecture work is relatively recent, leveraging OMB's Federal Enterprise Architecture
- Historically, Solutions Architects have worked with limited standards and only rudimentary Portfolio/Service architectures – that is changing rapidly
- Emerging data, technical, security, infrastructure, and application standards, as well as new tooling such as the Enterprise Architecture Portal, will make the job of the Solutions Architect easier

