Global Information Management

NOTAM Services over SWIM

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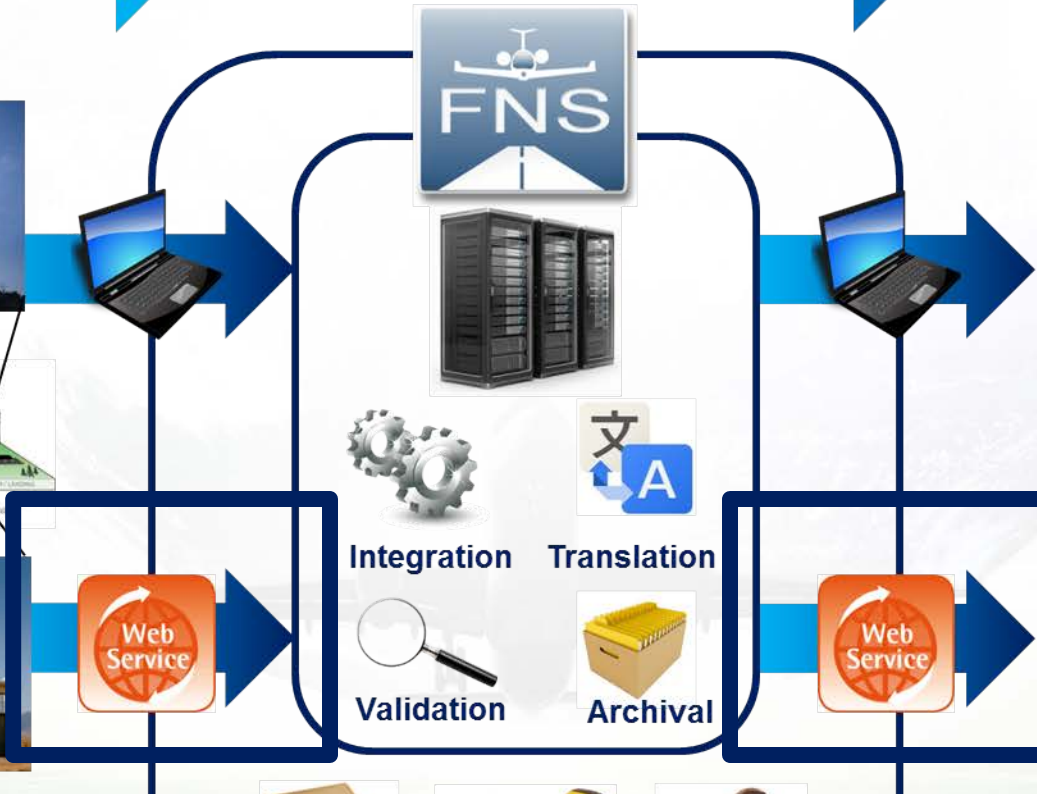

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AIR TRANSPORTATION INFORMATION EXCHANGE CONFERENCE

Global Information Management

August 25-27, 2015

NOAA Auditorium and Science Center • Silver Spring, MD
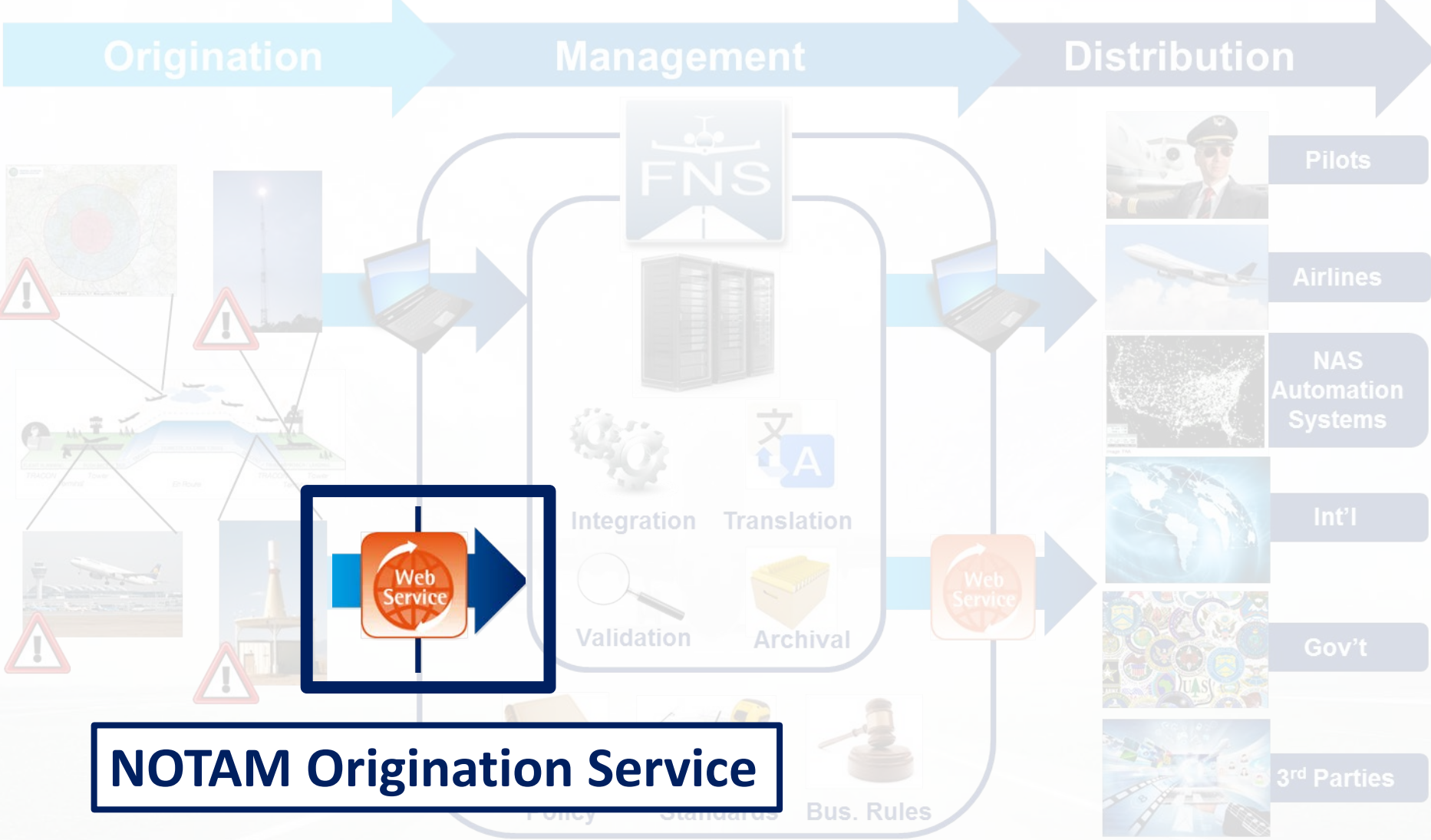
NOTAM Modernization

Origination **Management** **Distribution**

FNS

Integration Translation

Validation Archival

Web Service

Web Service

Pilots

Airlines

NAS Automation Systems

Int'l

Gov't

3rd Parties

Web services for collecting and disseminating digital NOTAM data

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Benefits of NOTAM Services

- System-to-system interface
- Efficient transmission of data
- Data validation & business rules
- Standardized templates & formats
- Integration of NOTAM and baseline aeronautical data

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NOTAM Modernization

Federal NOTAM System
Implementing the Pilot's Bill of Rights

Digitally at the Source:
- More Timely
- More Accurate

Originate Digital NOTAMs

Store NOTAMs Digitally
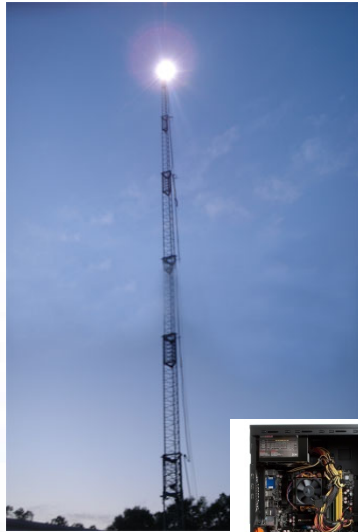
- Archived
- Available to the Public

NOTAM Distribution Service/SWIM

FNS NOTAM Search

- User-Friendly Format
- Filterable
- Timely Delivery
- Searchable
- Relevant (Route Specific)

- Standards Based (AIXM) NOTAM Information

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# NOS Today

AIXM web service

Tower Light Outage
NOTAMS

Tower Remote Monitoring System

- Tower light NOTAMs are the **second largest** category of NOTAMs in the NAS
- **~85%** of these NOTAMs are originated via the NOS

NOTAM Origination Service

- NOS enables integration of third-party software to directly submit NOTAMs to FNS

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NOS SWIM Integration
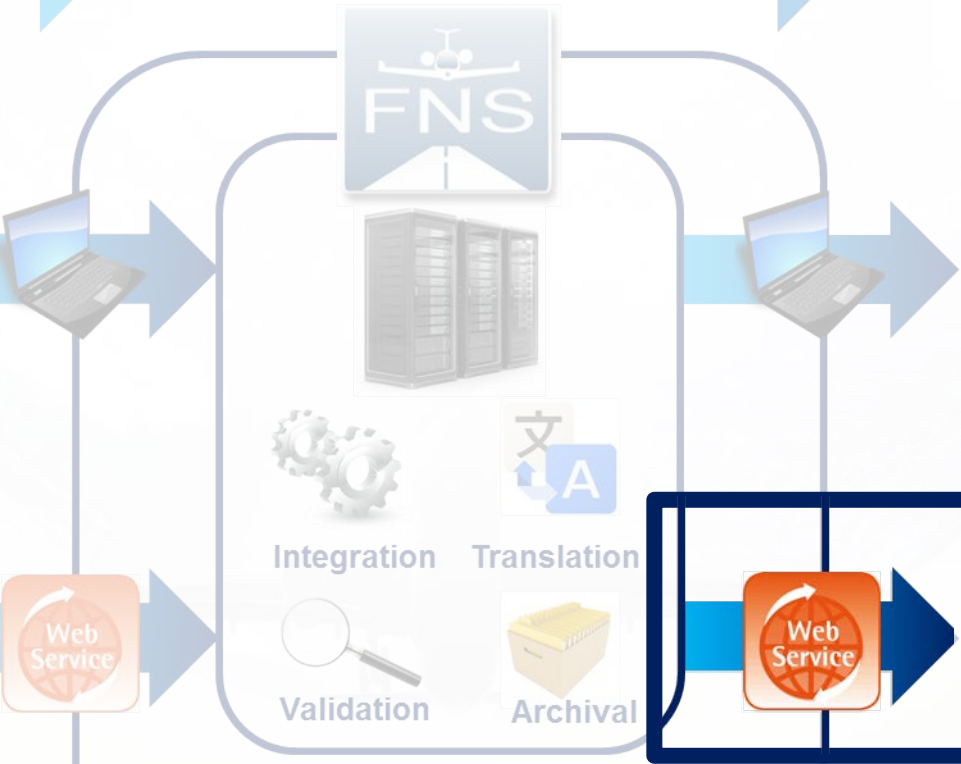
Originators   FAA SWIM
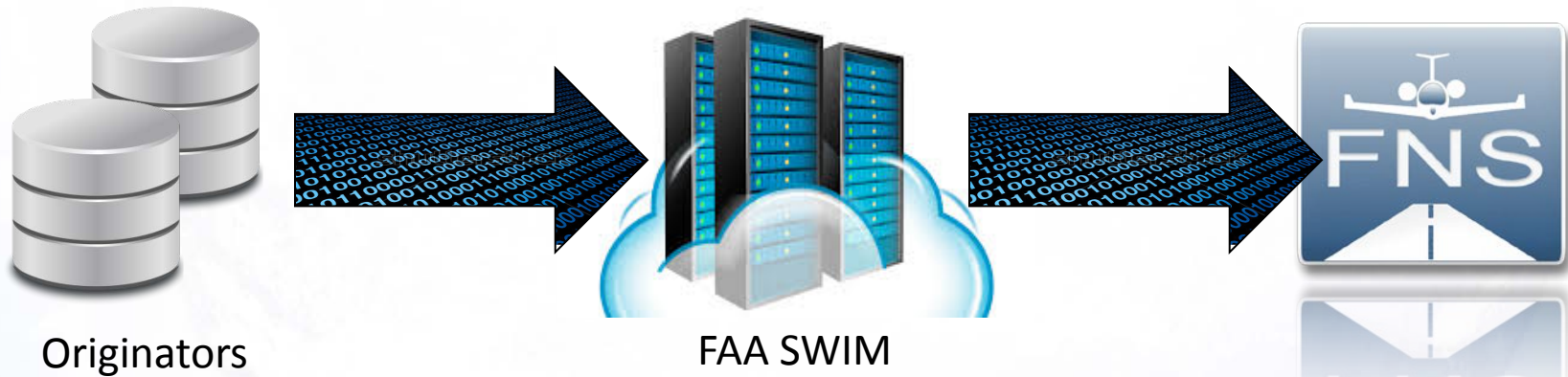
Why SWIM integration?

- Better support integration with internal and external users
- Simplify user interactions with NOS
- Reduce resources required to onboard and submit digital NOTAMs
- Leverage FAA SWIM architecture

Potential New Users:

- Airport NOTAMs (Third party operations & maintenance software)
- Equipment NOTAMs (FAA Technical Operations systems)
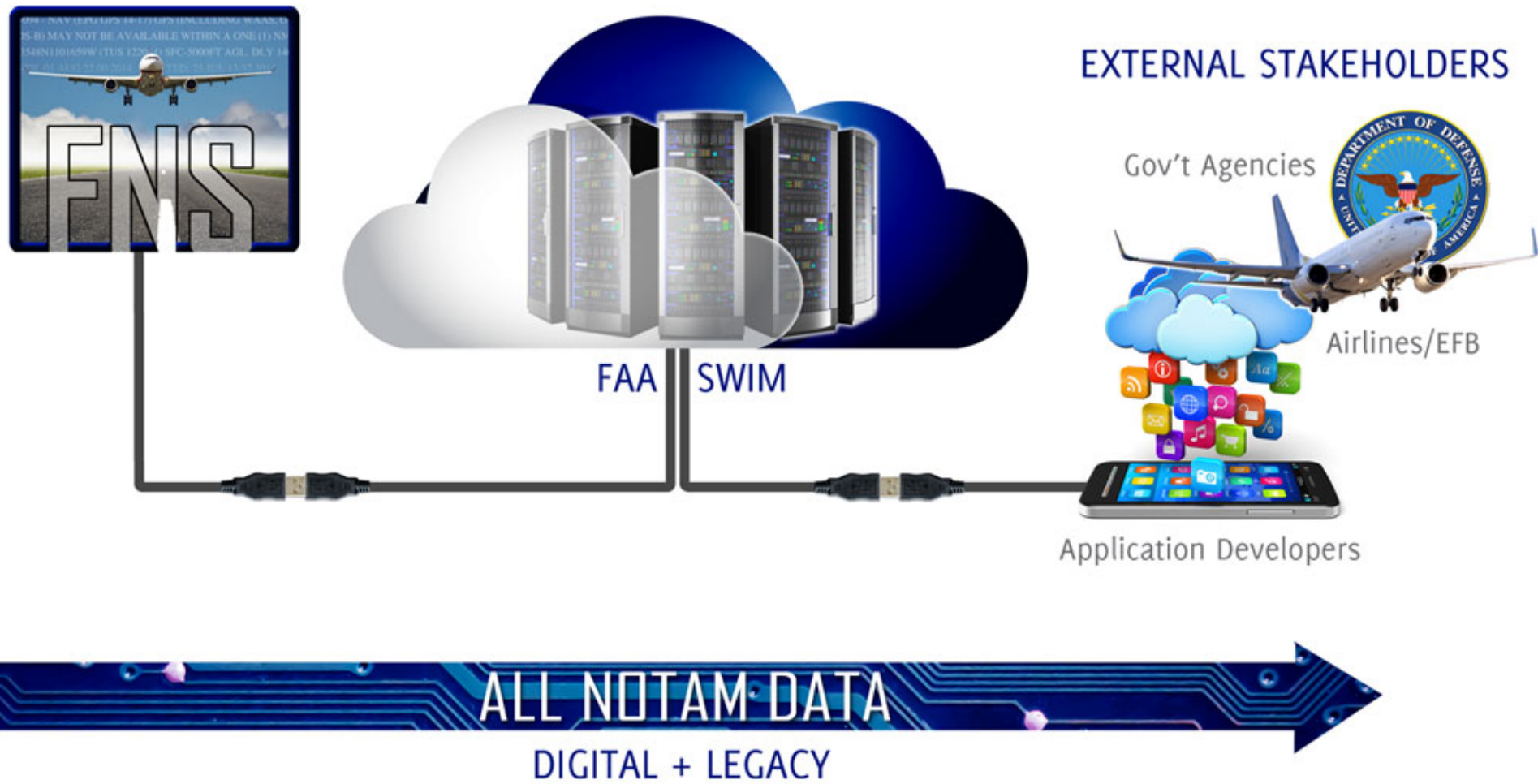- Airspace NOTAMs (SAA, TFR management systems)

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NOTAM Modernization

Air Transportation Information Exchange Conference - Global Information Management

Origination → Management → Distribution

FNS

Integration   Translation

Validation   Archival

Policy   Standards   Bus. Rules

Pilots

Airlines

NAS Automation Systems

Int'l

Gov't

NOTAM Distribution Service

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NOTAM Distribution Service Concept

EXTERNAL STAKEHOLDERS

Gov't Agencies

Airlines/EFB

FAA SWIM

Application Developers

ALL NOTAM DATA

DIGITAL + LEGACY

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Federal NOTAM System
Implementing the Pilot's Bill of Rights

Digitally at the Source:
- More Timely
- More Accurate

Originate Digital NOTAMs

Store NOTAMs

- Centrally Located
- Archived
- Available to the Public

NOTAM Distribution Service/SWIM

NS

Search

- Standards Based (AIXM) NOTAM Information

- User-Friendly Format
- Filterable
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- Searchable
- Relevant (Route Specific)

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Digital NOTAM Event Spec

AIXM implementation facilitates true "digital NOTAM"

Request/Response Service

Consumer		SWIM		FNS-NDS
	→ Request		→ Request	
	← Response		← Response	

Example Query Types:

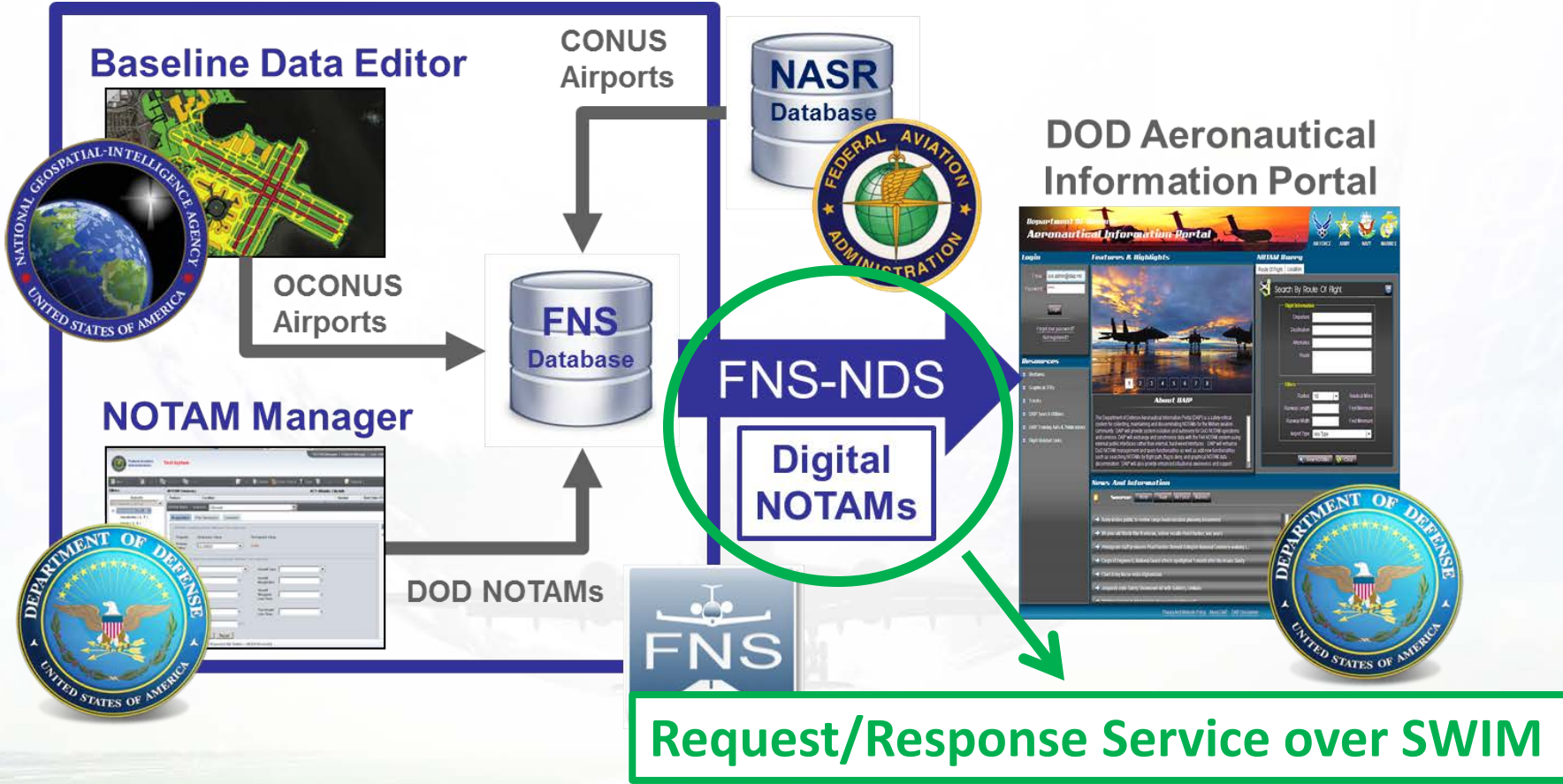| Bulk	• all active NOTAMs
Delta	• changes to NOTAMs in last X minutes
Geographic	• active NOTAMs with X radius of location or coordinates
Location	• active NOTAMs with NOTAM location id
Free Text Search	• active NOTAMs that match text string

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Publish/Subscribe Service

Consumers → Subscribe → SWIM

Push

Topic: All NOTAMs ← Publish ← FNS-NDS

Other Topics ← Publish

Advantages to Pub/Sub:

- Loose coupling between provider and consumer
- Scalability
- Coming soon!

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Operational Users

Baseline Data Editor

CONUS Airports

NASR Database

DOD Aeronautical Information Portal

OCONUS Airports

FNS Database

NOTAM Manager

FNS-NDS

Digital NOTAMs

DOD NOTAMs

FNS

Request/Response Service over SWIM

New consumers

- FAA OEAAA System, 2 Third-Party Vendors

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How to Connect

1 Test Agreements with FNS Program Office

2 System Development and Testing

3 Coordinate with and connect to SWIM

4 Operational

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Agreements/Development

http://notamdemo.aim.nas.faa.gov/ndshome/

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AGREEMENT

Between

Aeronautical Information Management (AIM) of the

Federal Aviation Administration (FAA)

and

(Company or NOTAM Distribution Service Beta Test User Name)

2

Access to all FNS-NDS technical documents:
- ❑ **Web Service Requirements Document**
- ❑ **Web Service Design Document**
- ❑ **Web Service Definition Language**
- ❑ **NOTAM Event Scenarios**
… and more!

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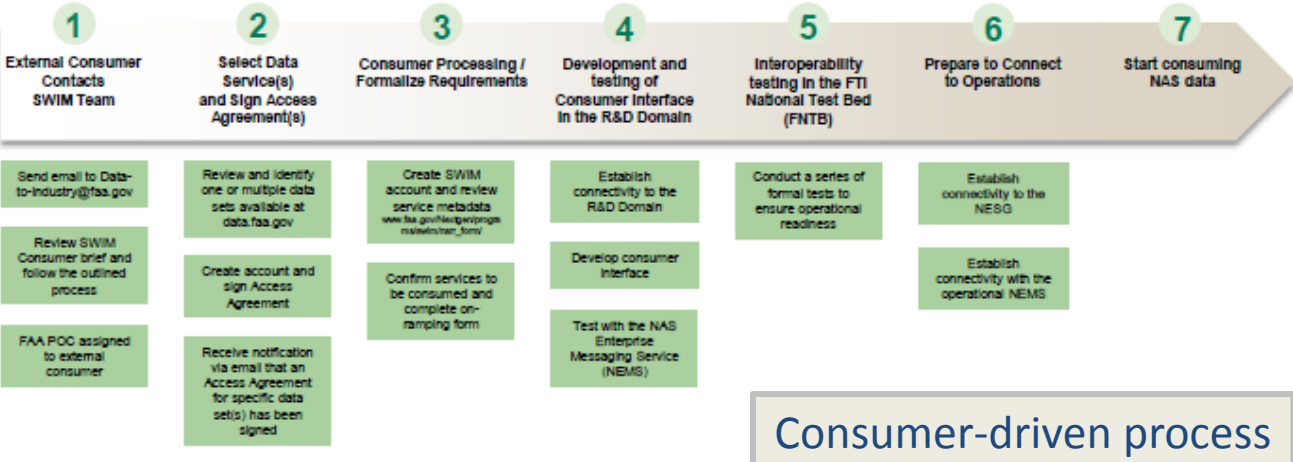
SWIM Coordination

Consumer-driven process 2-6 months

http://www.faa.gov/nextgen/programs/swim/

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Operational Access

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Access to FNS-NDS:
- ❑ **Complete all system testing with SWIM and FNS**
- ❑ **Coordinate with stakeholders**
- ❑ **Begin using digital NOTAMs from FNS!**

FNS

FAA **SWIM**

EXTERNAL STAKEHOLDERS

Gov't Agencies

Airlines/EFB

Application Developers

ALL NOTAM DATA
DIGITAL + LEGACY

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Questions

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