

# SWIM Users Forum

April 11, 2019

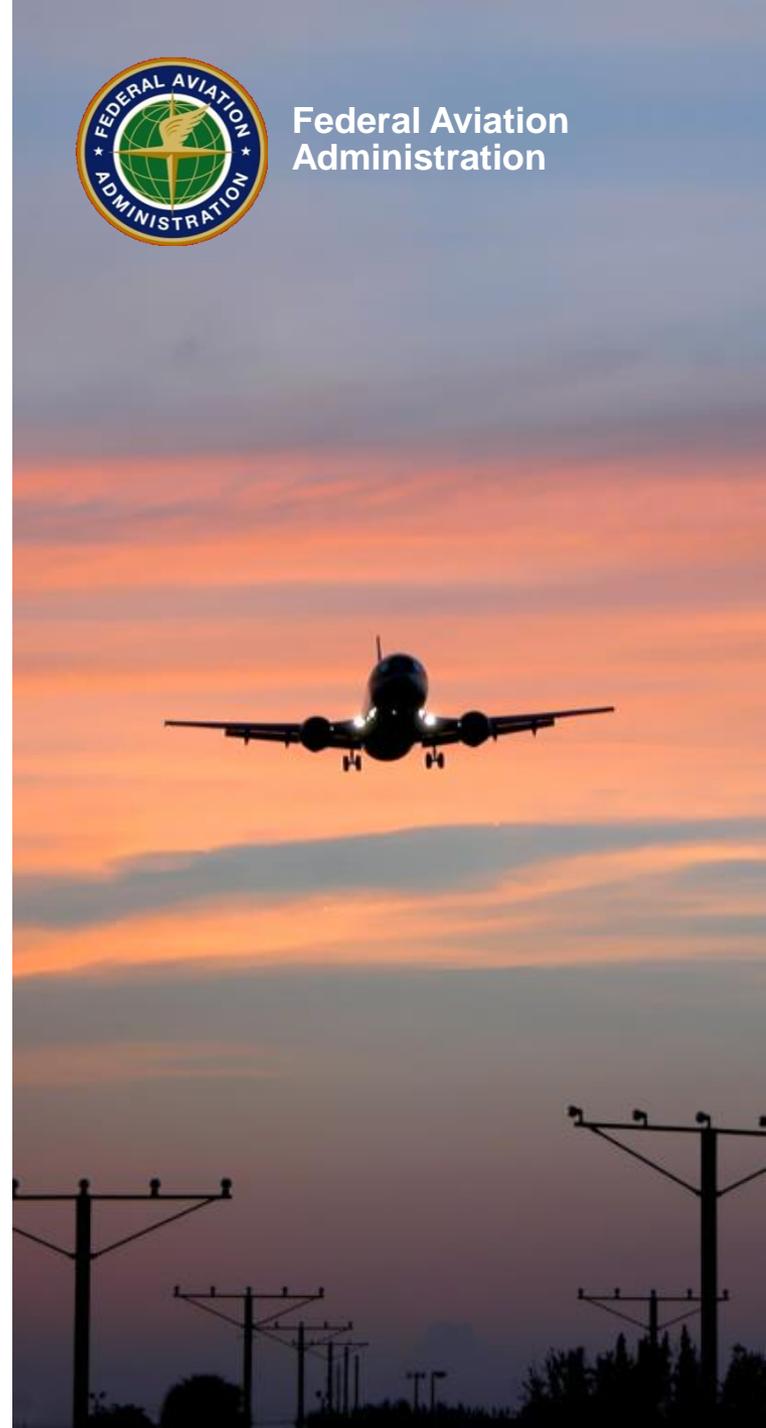
Washington, DC

Hosted by:

The SWIM Program Office



Federal Aviation  
Administration

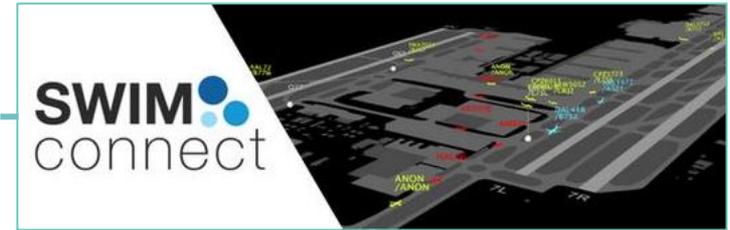


# Today's Agenda

- 1 Meet the newest member of the SWIM Leadership Team



- 2 STDDS / AIM FNS



- 3 Policy Update



- 4 Cloud Services



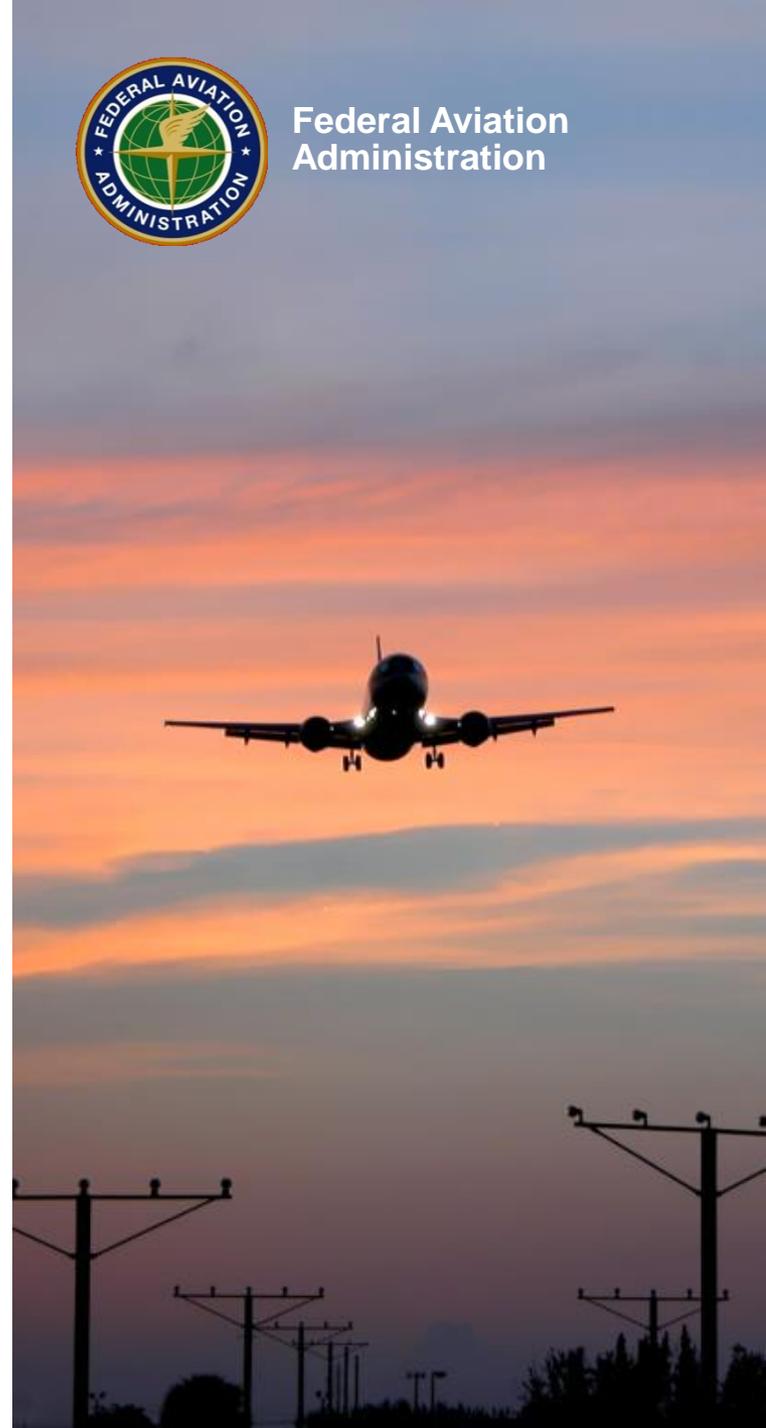
- 5 Upcoming Events



# STDDS Update



Federal Aviation  
Administration



# STDDS R4 Updates

- **STDDS R4 Deployment complete:**

- All 38 STDDS TRACONS are now publishing R4 data
  - Enhanced SFDPS data in SMES requires ASDE-X release 10.4.2, which is currently being deployed
- Most new R4 STARS and ASSC sites are now connected, a few have delayed connections or IOCs due to the shut down
  - See the STDDS [Site Availability File](#) for more detail

- **STDDS R4 Resources:**

- R4 changes are documented in the [Release Notes](#) and include:
  - Integration of SFDPS flight plan data to SMES, TAIS, TDES
  - Publication of filtered TDES data and TDLS D-ATIS messages
- Technical documentation such as JMSDDs, schema, and sample data are located on the [NSRR](#).

# STDDS R5

- **Description**

- Technical Refresh—replacement of hardware at STDDS TRACONS
  - Addition of 2 ASSC sites—ANC and PDX
  - No changes to the schema or functionality

- **Timeline**

- Key Sites Summer 2019, Deployment Fall/Winter 2019



# STDDS R6 Early Look

- **Timeline:**

- Key Sites: Summer 2020
- Deployment: Fall/Winter 2020

- **Select Enhancements:**

- TAIS

- Enhance Track and Flight Plan publication by separating flight plans from tracks, users can subscribe to either/both
- Add rawFlightRules field to TerminalAutomationFlightPlan message

- TDES

- Enhance TDES with 8 new TDLS messages
- Publish additional TDLS data—beacon code, ERAM ECID, aircraft type—in TDES messages
- Parse and publish entire dataHeader in DATISMessage

- SMES

- Enhance SMES with 3 additional airport movement events—Runway in, Runway out, On runway
- Add \*\_COVAR and DF type fields to the MLAT and ADSB CAT10 messages to improve track precision measure

- ISMC

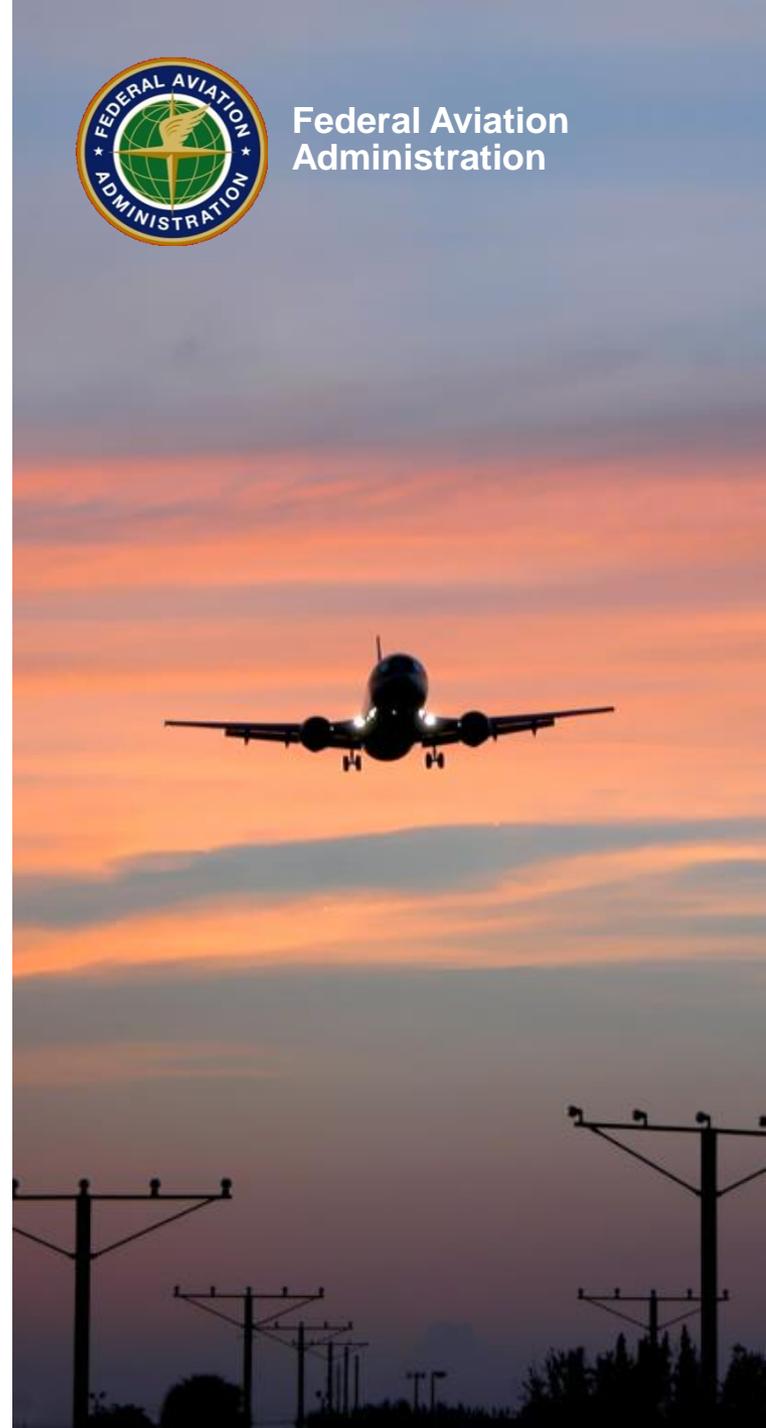
- Publish link status and site heartbeat in MMIXM format in addition to XML native



# Update on Aeronautical Information Management Federal NOTAM System (AIM FNS)



Federal Aviation  
Administration



# Identity and Access Management (IAM)

## Presented By:

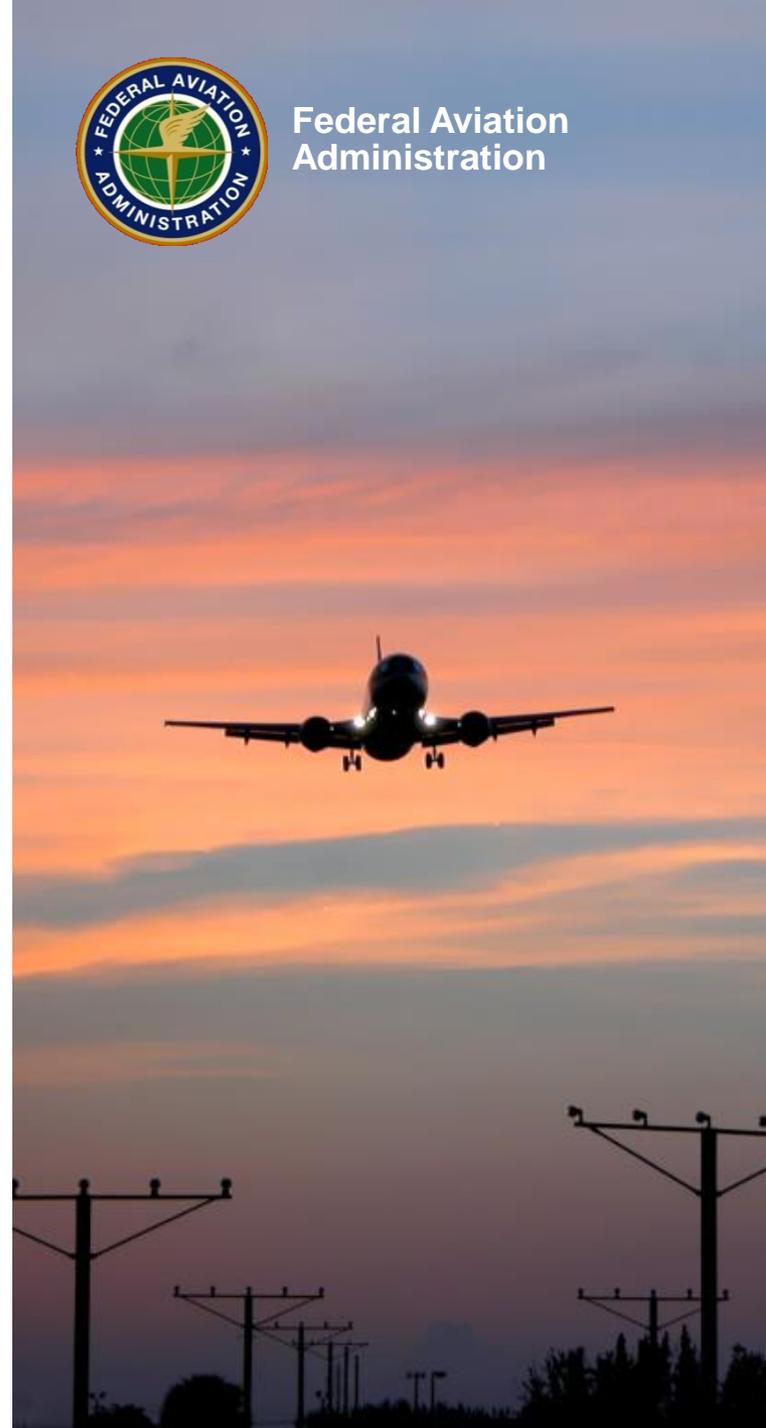
Jim Laymon

IAM Lead

SWIM Program Office



Federal Aviation  
Administration



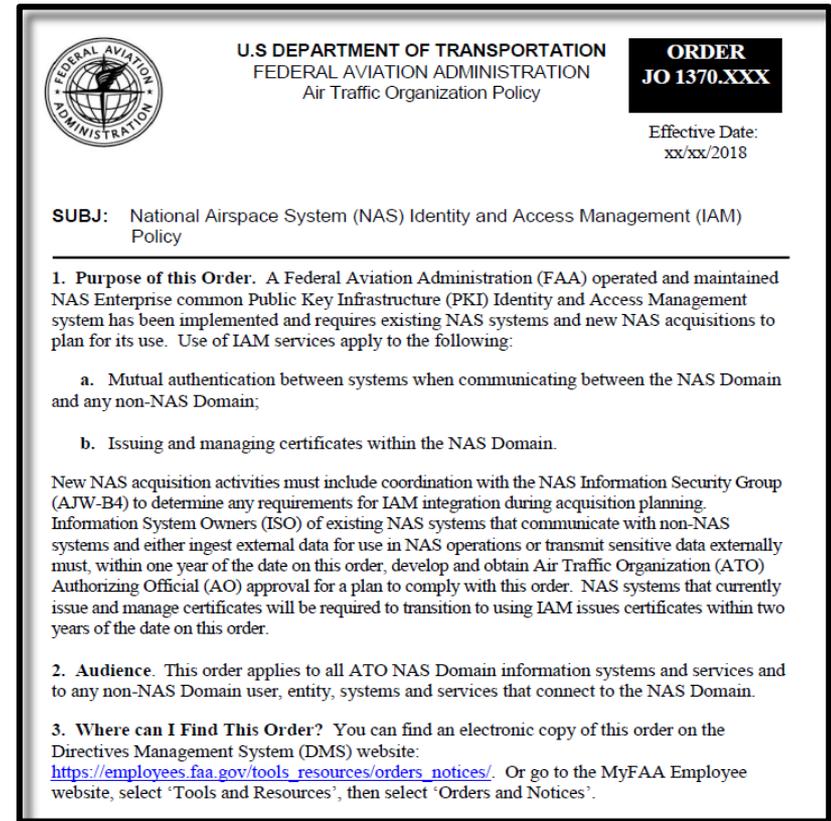
# SWIM Security: Identity and Access Management (IAM)



- **Mutual Strong Authentication is required per the Draft FAA Policy Order #1370.48**
  - Required Uses for certificate authentication:
    - External producers sending data into NAS
    - Sensitive Data distributed from NAS
- **FAA utilizes the Federal PKI trust framework**
  - U.S. Federal PKI Common Policy Framework
- **Reduces NAS cyber risks by:**
  - Reducing the chance of unauthorized access to NAS assets
  - Guarantees identity of information provider

# Who must comply with new policy?

- **New FAA acquisition activities** must coordinate with NAS Information Security Group (AJW-B4)
- **Existing FAA systems** that communicate with non-NAS systems and either ingest external data or transmit sensitive data externally, must within one year of policy effective date obtain approval for a plan to comply with this order.
- **FAA Systems that currently issue and manage certificates** will be required to transition to using IAM issued certificates within two years of policy effective date.



# Fed Trusted Device Certificate Providers

Organization	Customer Service	Tech Support
<b>DigiCert</b>	Kris Singh (801) 701-9642	Ben Wilson (801) 701-9678
<b>Entrust</b>	Dan Miller (703) 346-1164	Bryan Rosensteel (202) 277-6082
<b>Exostar</b>	Jim Zullo (703) 793-7733	(703) 793-7800
<b>IdenTrust</b>	Jerry Cox (801) 384-3534	Helpdesk@IdenTrust.com (888) 882-1104
<b>Widepoint</b>	Caroline Godfrey (855) 909-1109	(800) 816-5548



# Contact Information

## SWIM Program

**Melissa Matthews**

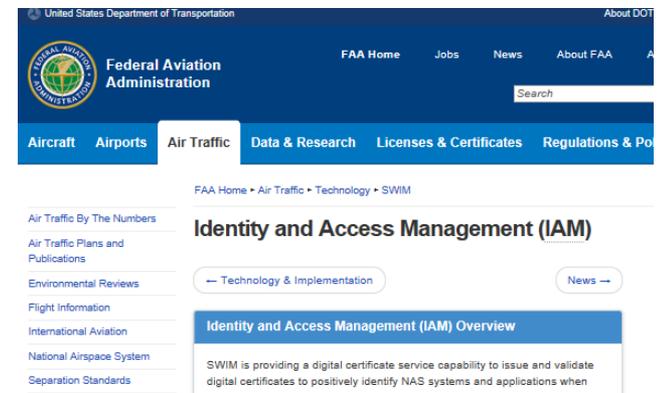
SWIM Program Manager (A)

SWIM Capabilities Lead

[Melissa.Matthews@faa.gov](mailto:Melissa.Matthews@faa.gov)

**Jim Laymon, IAM Project Lead**

[Jim.Laymon@faa.gov](mailto:Jim.Laymon@faa.gov)



# SWIM connect



## SWIM Cloud Distribution Service (SCDS) Update

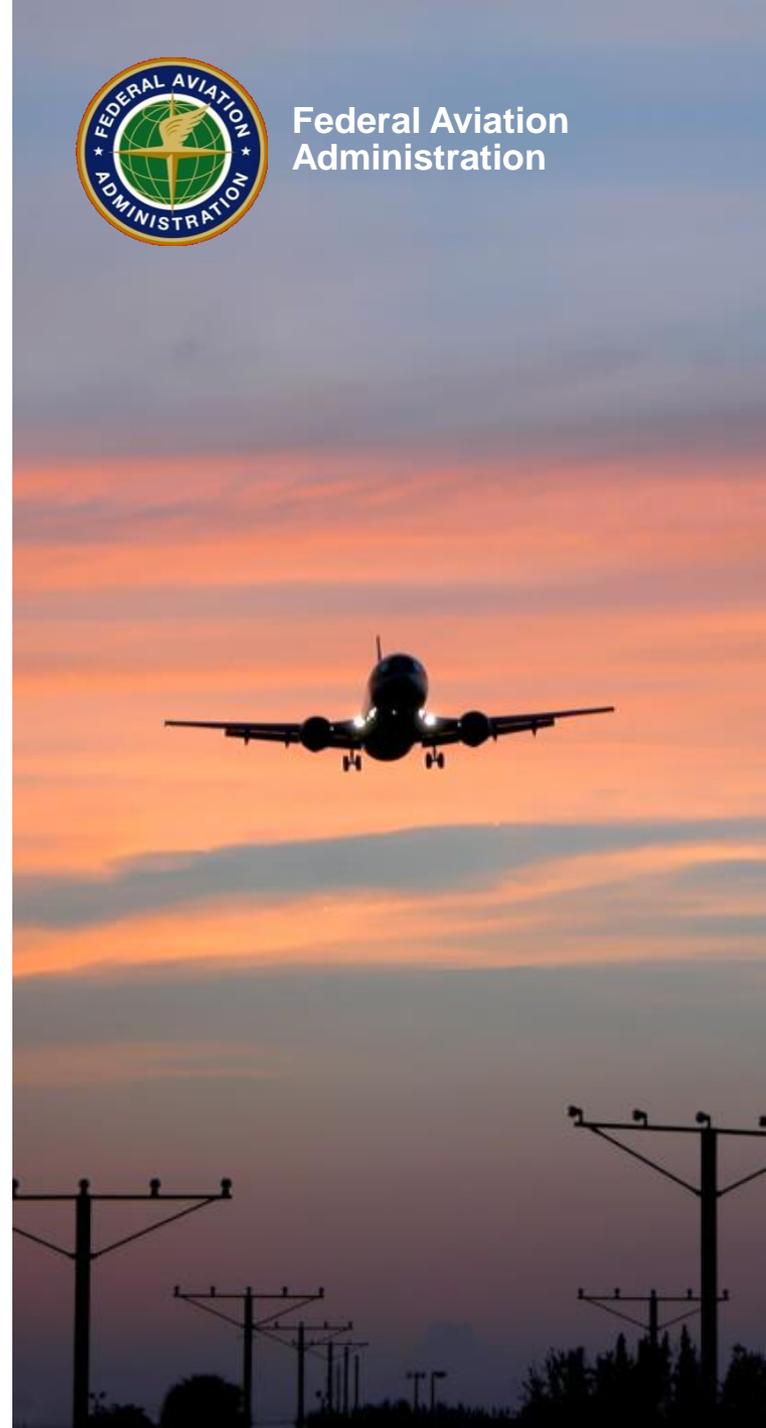
**Presented By:**

Felisa White

SWIM Implementation Lead



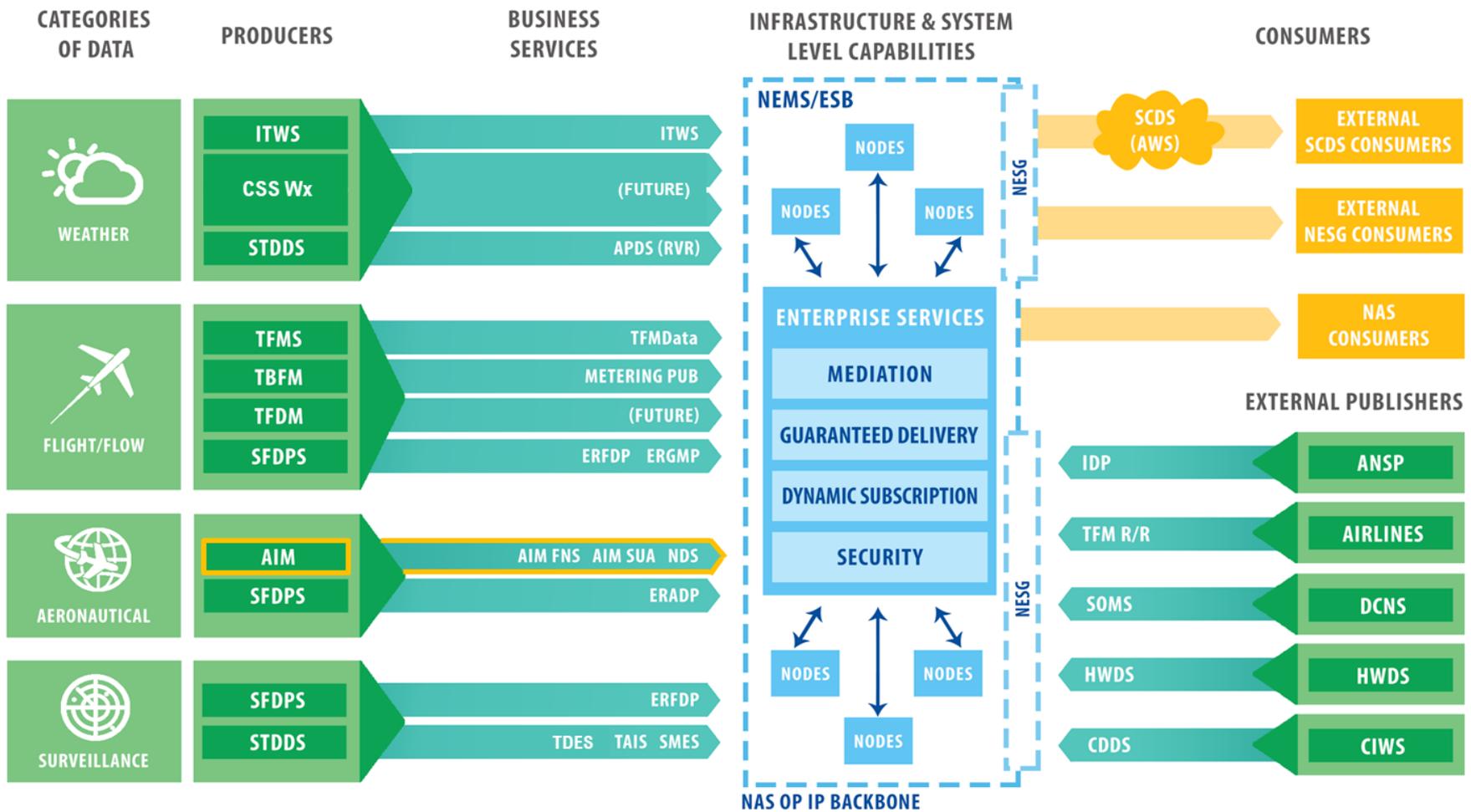
Federal Aviation  
Administration



# SWIM Business Services

130 Million Messages Per Day

4.3TB Consumed Per Day



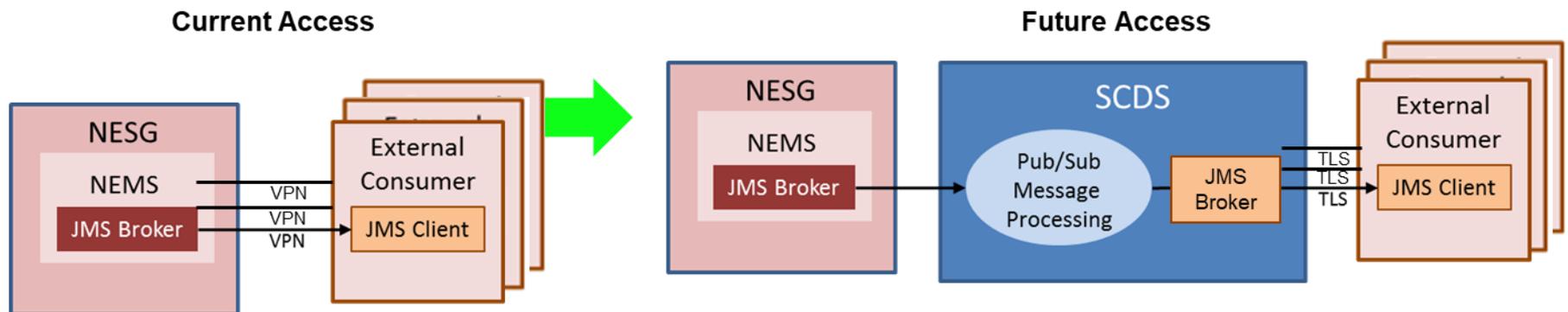
\*denotes SWIM Business Service not available on SCDS



# SWIM Cloud Distribution Service (SCDS)

**SCDS is a publicly accessible cloud-based infrastructure dedicated to providing real-time SWIM data to the public via Solace JMS messaging.** This service will include access to the same publicly available data that is currently offered via the NAS Enterprise Service Gateway (NESG) SWIM implementation.

- **Provides access to all publicly available pub/sub SWIM services**
  - Data is forwarded from NAS Enterprise Security Gateway (NESG) via a secure connection and will automate failover between ACY and OEX
  - Distributes data to SCDS users over a TLS connection



# SCDS Experience

**Help Desk Support:**  
dedicated Help Desk



**Self-service Provisioning:** Ability to create connections in real time



**Service Management:** Fine-grain filtering ability



**Highly Available Connectivity:**  
Redundant connection and cloud technology, create a reliable environment



**Subscription Level Metrics:** Detailed view of message rates, bandwidth and other metrics



**Security Controls:**  
TLS connection technology

# Consumer Services NESG vs. SCDS

CONSUMER SERVICES	NESG	SCDS	Notes
Data Request	✓	✓	SCDS expedites data request process
Data Access Approval	✓	✓	SCDS expedites data release process
Self Provisioning		✓	
No Service Acceptance Tests Required (L3, SA, etc.)		✓	SCDS does not require SAT
Sensitive Data Availability	✓		Sensitive data will not be shared via SCDS
Help Desk Resolution	✓	✓	Enterprise Data Services (EDS) provides 24/7/365 resolution
Web Services	✓		SCDS does not currently support web services
Sample Data Availability	✓	✓	NESG request is manual, SCDS is automated
Jumpstart Kit Availability	✓	✓	NESG available on request, SCDS is self-service
Data Metrics / Statistics		✓	
SWIM Service Status (self-service)		✓	
Client Data Compression	✓	✓	
Client Data Encryption (required)	VPN	SSL/TLS	



# Demo

# On-boarding Plan Overview

The FAA has put together a comprehensive on-boarding and communications plan to make the transition as smooth as possible.

## Key Points:

- On-boarding is scheduled to begin by July 2019
- Each user is assigned to an on-boarding “wave” and will be notified via email when their on-boarding process will begin
- Waves are staggered for FAA resource planning purposes
- Each wave will be asked to on-board to SCDS within 90 days of notification
- Current SWIM Consumers will be required to disconnect from the NESG within the 90 day SCDS on-boarding window

**Please be sure to attend any future SWIM Users Forums for additional information and guidance.**

# What do I need to do?

## Now

- **New Users (not currently receiving SWIM data)**
  - Create an FAA Data Access account <https://data.faa.gov/data/register.jsf>
  - Sign access agreements for the data sets you plan to consume
- **Current SWIM Users**
  - Plan for a Summer FY19 transition, ensure resources are available for a timely transition off of the NESG connection to SCDS

## Later

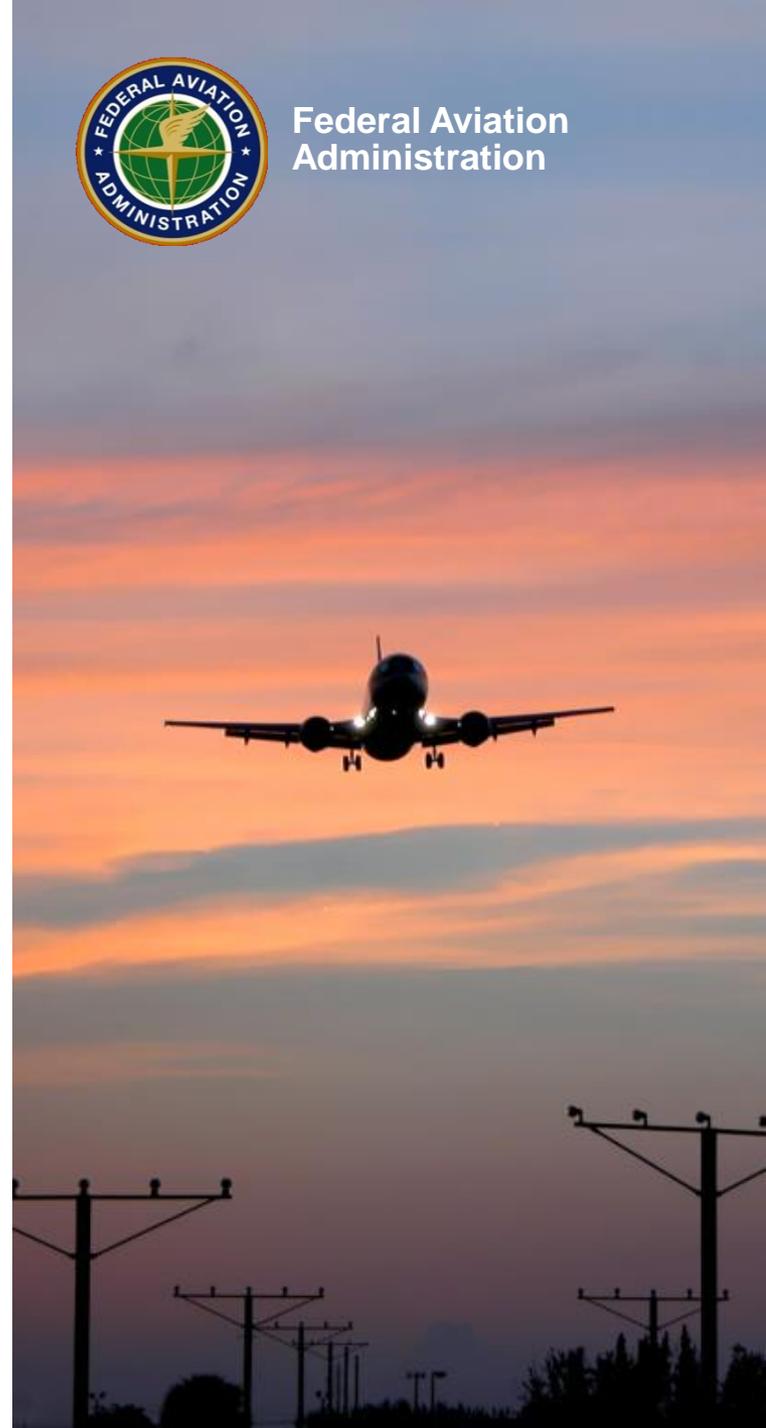
- **You will be notified via email when you can begin SCDS On-boarding**
  - Notifications will be sent from the new SCDS email account ([scds@faa.gov](mailto:scds@faa.gov)) and will contain on-boarding instructions, SCDS overview and user guide
  - (Current Users) You will be provided with a list of data products that you are currently subscribed to. These will be the same data products that you should request on SCDS (*requests to any new data sets will require you to sign the corresponding access agreements*).



# Upcoming Events



Federal Aviation  
Administration



# Upcoming Events

## Tech Center Tuesday: Where Innovations Take Flight

- May 14, 2019
- FAA William J. Hughes Technical Center (New Jersey)

## Next Users Forum

- June 13, 2019
- What topic(s) would you like to see?
  - Email us at [swim@faa.gov](mailto:swim@faa.gov)

