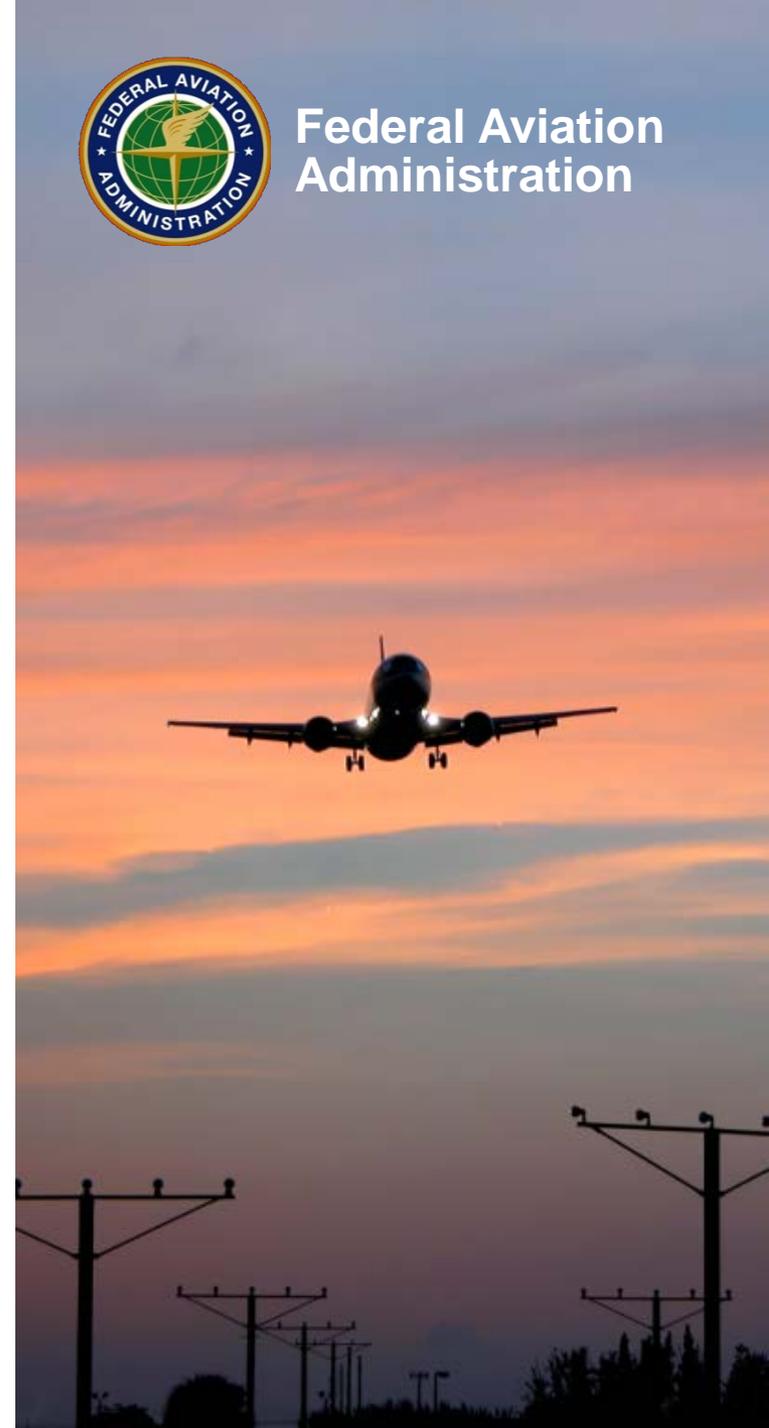


# SWIM Users Forum – Session # 8



Federal Aviation  
Administration

**By:** SWIM Program Office  
**To:** SWIM Consumers  
**Date:** October 8, 2015



# User Forum Logistics

- **Date:**
  - October 8, 2015 - 2:30 pm – 4:00pm
- **Location:**
  - Noblis Lakes Conference Rm – A&B
- **Go-to-Meeting: Please register for “SWIM Users Forum” at SWIM Website:**
- [http://www.faa.gov/nextgen/programs/swim/users\\_forum/](http://www.faa.gov/nextgen/programs/swim/users_forum/), <http://1.usa.gov/1HyD6SW>
- **User Forum briefing distributed via invitation & on SWIM website**  
([www.faa.gov/nextgen/programs/swim/user-forum](http://www.faa.gov/nextgen/programs/swim/user-forum))



# Agenda

- **User Forum Overview**
- **ASD Blocking List - Postponed**
- **SWIM at ATCA**
- **Recap: SWIM Interactive Developer Workshop**
- **External Consumer Access**
- **Open Discussion – All**
  - Q&A
  - Suggest topics for future User Forums
  - Online survey link at the end of the program



# SWIM Users Forum - Overview

- **Purpose:** Monthly educational forum for SWIM Users to obtain program updates, provide feedback, obtain answers to SWIM related questions or data concerns
- **Scope: SWIM Portfolio of Services**
  - Aeronautical Data
  - Flight and Flow Data
  - Weather Data



# SWIM Users Forum - Overview

- **Forum Participation:**

- NAS and non-NAS consumers

- Airlines, Industry service providers, research & development, FAA Programs, Airports

- **SWIM Resources:**

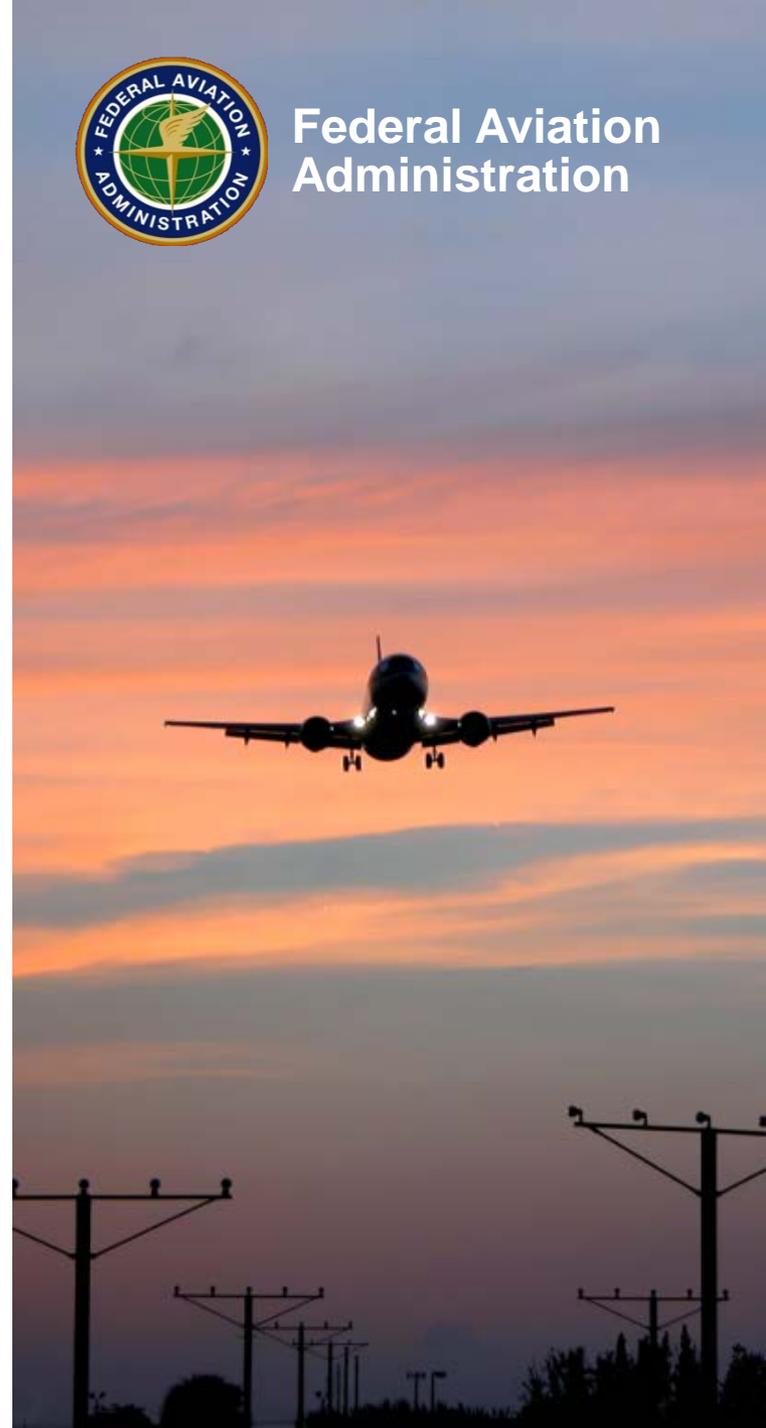
- SWIM website: <http://www.faa.gov/nextgen/programs/swim/>
- NSRR: <https://swimrep.faa.gov/soa>
- SWIM Help Desk:
  - **1-855-FAA-NEMC** (855-322-6362)  
Option #3, “Enterprise Services” for phone support
  - [NEO-ES@faa.gov](mailto:NEO-ES@faa.gov) for email support



# SWIM at ATCA



Federal Aviation  
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# At SWIM Connect 2015...

- **SWIM Today:** Accessing real time Weather, Aeronautical, & Flight data through a single connection
- **How to Connect:** Making it easy to discover, connect and consume SWIM services
- **SWIM Future:** Collaborating to create and customize value added tools and applications



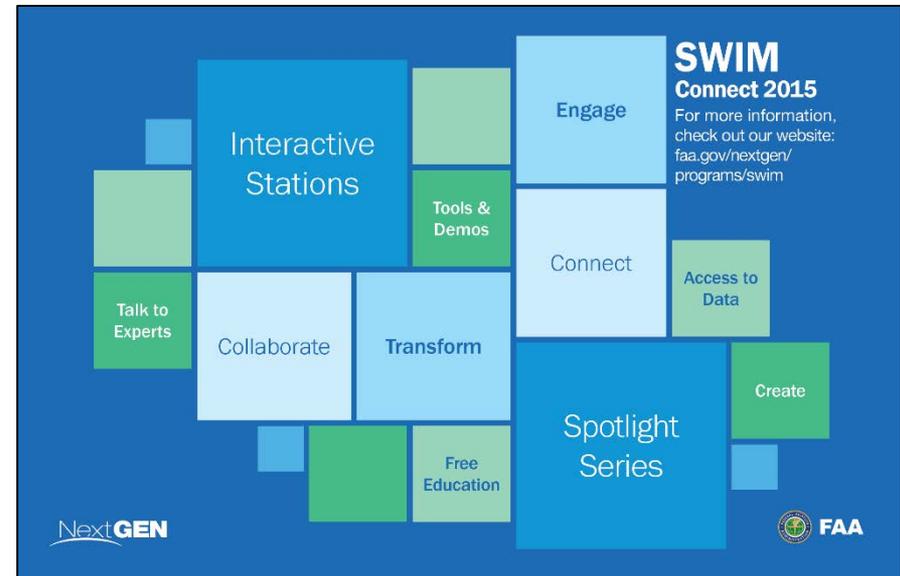
# Spotlight Series: Discussion Themes

- **SWIM in Practice**
  - Information Exchange in the Air
  - SWIM Enabling the Trajectory Based Operations Concept
  - Information Sharing on the Surface
- **SWIM Collaboration**
  - Inter-agency Information Management
  - Research and Development Domain & SWIM Interactive Developer Workshop
  - Using SWIM in NextGen Development
- **Global Perspective**
  - Global Information Sharing Standards Panel
  - International Information Exchange
  - Information Sharing in Commercial Space Operations



# Visit Us at SWIM Connect 2015

- See our [website](http://www.faa.gov/nextgen/swim) ([www.faa.gov/nextgen/swim](http://www.faa.gov/nextgen/swim)) for updates on Speakers and Events
- Follow us on Twitter: [#FAASWIM](https://twitter.com/FAASWIM) [#ATCA60](https://twitter.com/ATCA60)

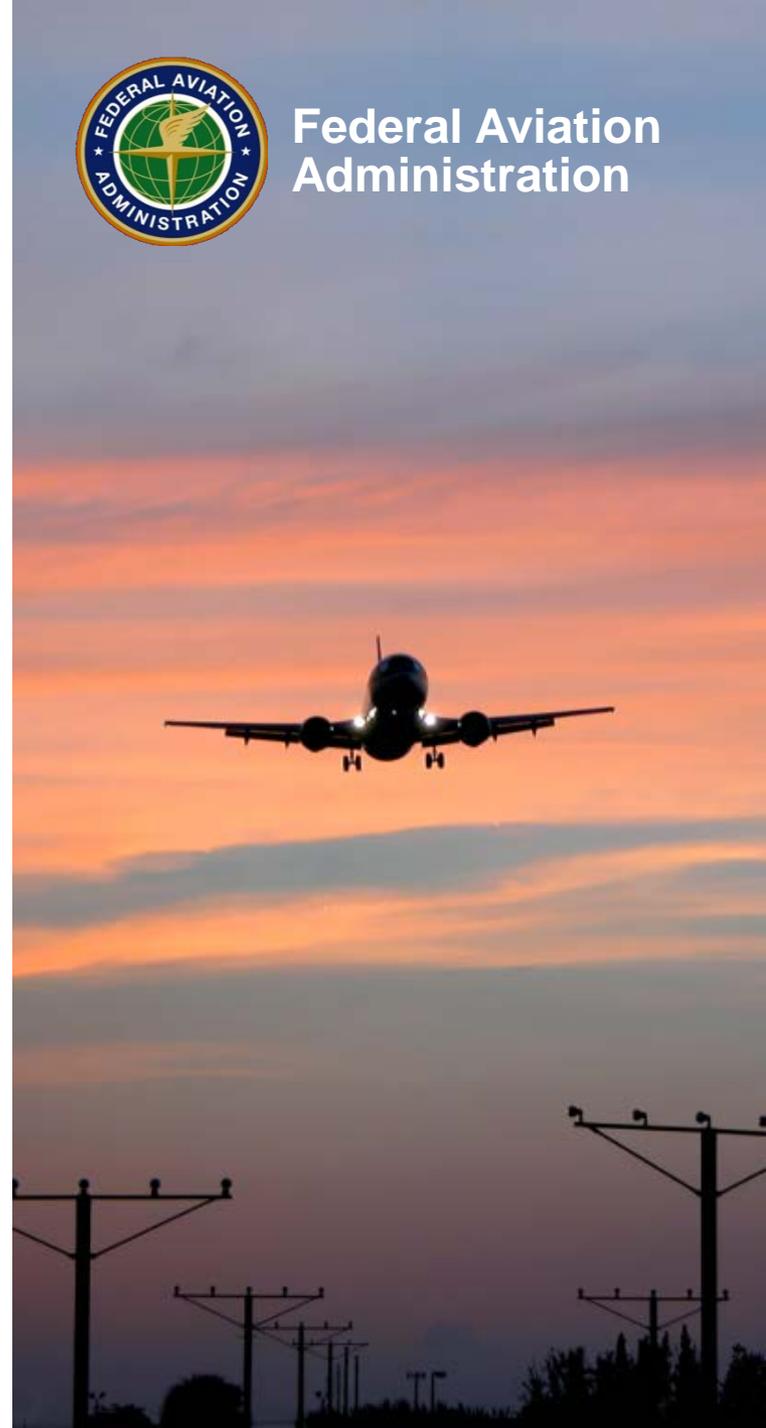


# Recap: SWIM Interactive Developer Workshop

Workshop Co-Chairs  
Jonathan Standley, NextGen  
Joe Lahoud, SWIM Program Office



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# Topics

- **About**
- **Summary**
- **Impact**
- **Next Steps**



[www.faa.gov/nextgen/swim](http://www.faa.gov/nextgen/swim)

# About the Workshop

- **Hands-on two and a half day educational event for software developers geared toward getting connected to SWIM Data**
  - Both existing operational data and new data that will be available
  - Developers could bring their own application or use a client application to analyze and/or visualize data
  - Presentations and developer time were given with subject matter experts on hand from:
    - SWIM Program Office
    - Client Application Owner and Data Providers

[www.faa.gov/nextgen/swim](http://www.faa.gov/nextgen/swim)

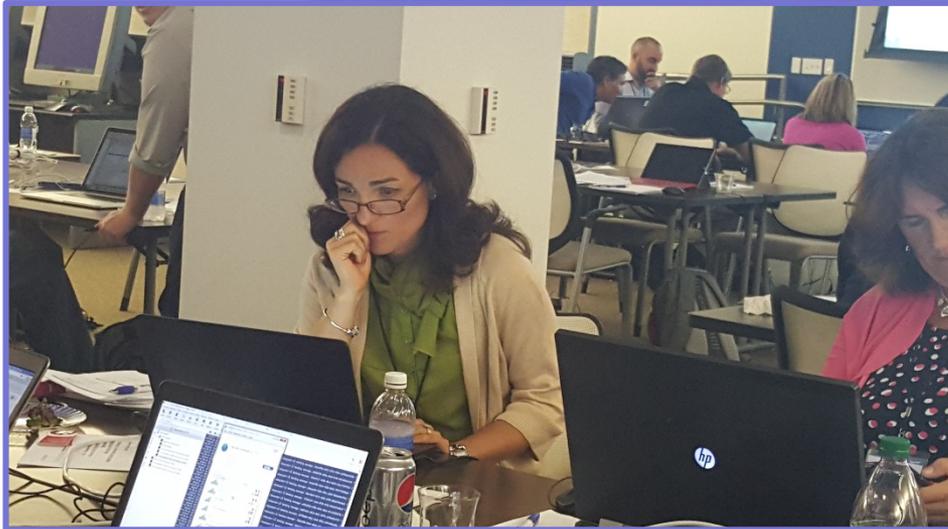
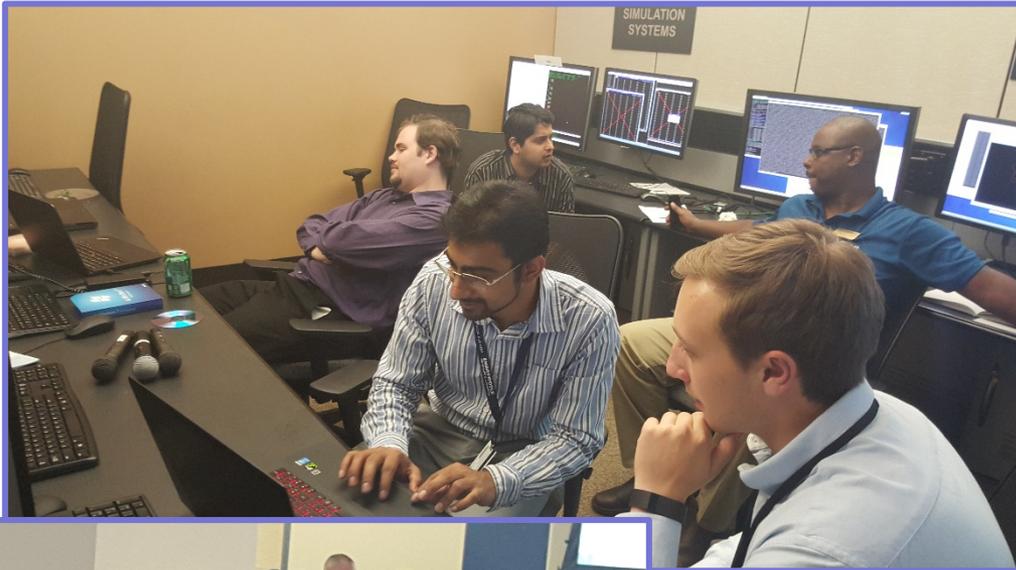


# Event Summary

- **40+ participants from all over the world attended**
  - United States, Europe, and Asia-Pacific region
- **Multiple Data Types covered**
  - SWIM Flight Data Publication Service (SFDPS)
  - SWIM Terminal Data Distribution Service (STDDS)
  - Notices to Airmen (NOTAMS)
  - Traffic Flow Management (TFM)
  - Common Support Services – Weather (CSS-Wx)
- **Attendee presentations given**

[www.faa.gov/nextgen/swim](http://www.faa.gov/nextgen/swim)





[www.faa.gov/nextgen/swim](http://www.faa.gov/nextgen/swim)

# Impacts

- **Overwhelming positive response from participants**
  - Captured through video interviews and survey data
- **Frequently asked questions about:**
  - What is available now vs. what will be available
  - How to connect to SWIM for operations
  - Integrating new data into already existing applications

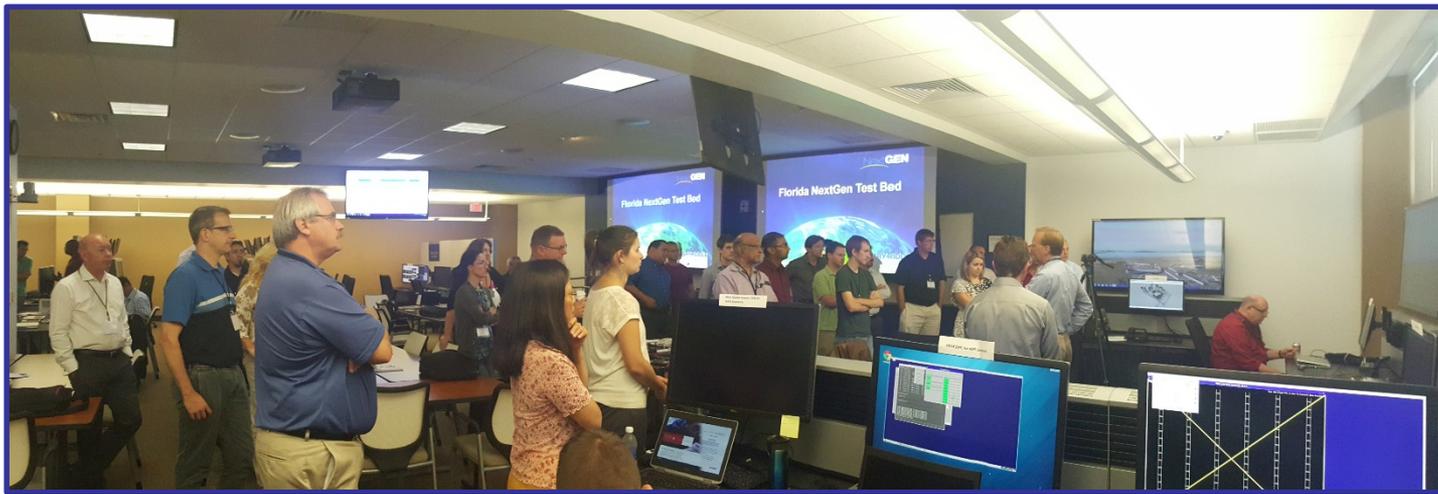


**SWIM**  
Information Access to  
Transform the Aviation  
Community.

-  Enables new and cutting edge tools and applications.
-  Facilitates an innovative, efficiently run airspace.
-  Saves operating and implementation costs.

# Next Steps

- **The possibility of a future developer workshop centered around:**
  - Specific data types in further depth
  - The possibility of a contest
  - Location subject to change
  - Coming in 2016...



# Questions



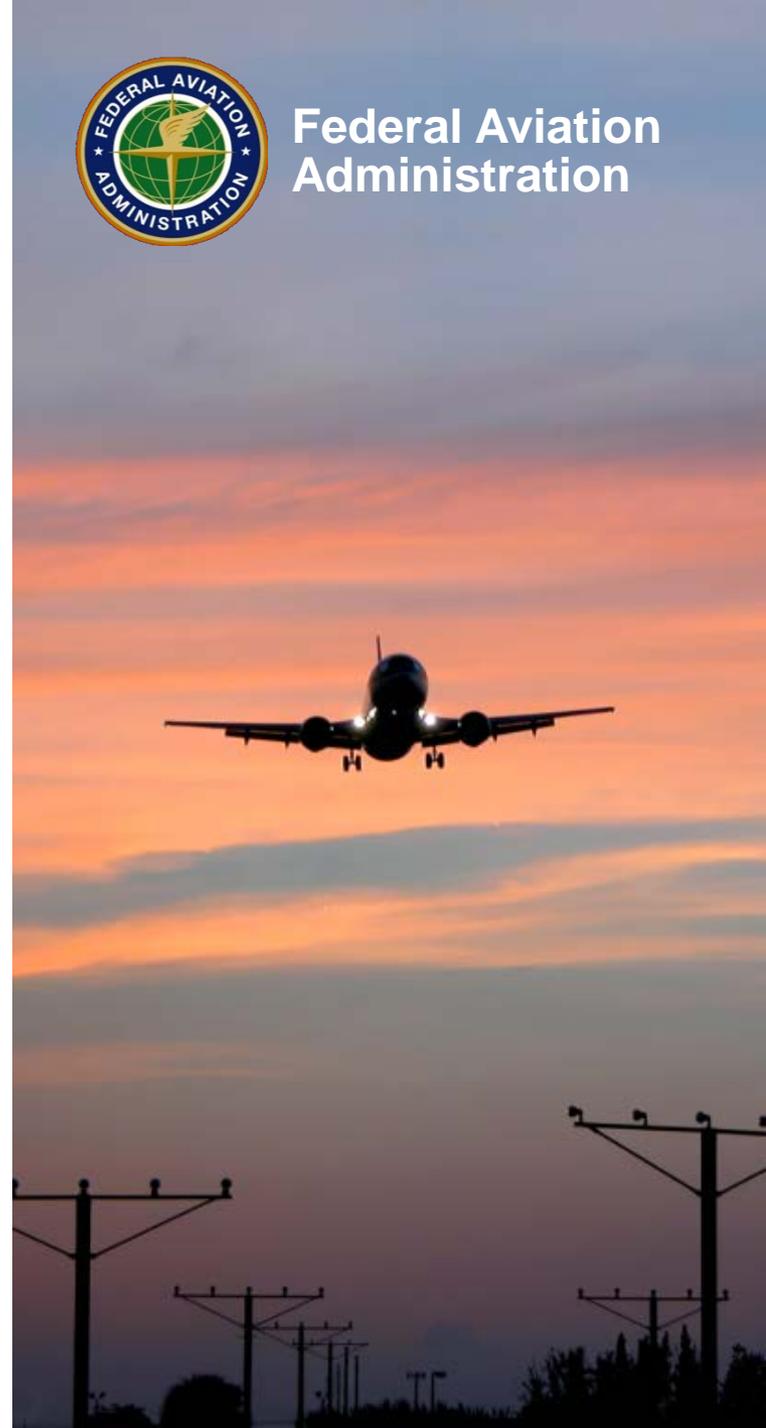
# External Consumer Access to FAA Data via SWIM

FAA Communications,  
Information & Network Programs  
Group (CINP)

October 8, 2015



Federal Aviation  
Administration



# Topics

- **SWIM Background**
- **Data Product Availability**
- **Becoming a SWIM Consumer**
- **FAA Documents for SWIM Consumers**



# SWIM Background and Benefits

- **Replaces unique interfaces with modern standards-based data exchange**
- **Provides stakeholders with access to FAA data without having to connect directly to individual systems**
- **Facilitates leveraging a single interface to receive multiple data products**
- **Establishes a single point of contact for FAA data**
- **Establishes Enterprise Help Desk for SWIM operational consumer calls**
- **More information provided at:**
  - <http://www.faa.gov/nextgen/swim>

# SWIM Data Product Availability (Current)

Access Agreement Portal at <http://data.faa.gov> to register and request access.

Producer	Description	NSRR Business Service Name	Data.faa.gov
ITWS	Integrated Terminal Weather System (ITWS) provides a variety of weather information in graphic and textual forms, such as windshear and microburst predictions, storm cell and lightning information, and terminal area winds aloft	SWIM ITWS Subscription	Integrated Terminal Weather
TFMS	Traffic Flow Management (TFMS) will provide Aircraft Situation Display (ASDI) data, which will include aircraft scheduling, routing, and positional information	TFMData: Flight Data	Traffic Flow Management Data
		TFMData: Flow Data	
STDDS	SWIM Terminal Data Distribution System (STDDS) provides surface movement data (ASDE-X), Runway Visual Range (RVR), and a variety of departure event data	Surface Movement Event (SMES)	Surface Movement Event
		Airport Data (APDS)	Airport Data
AIM FNS	Provides Notice to Airmen (NOTAMs)	FNS NOTAM Distribution	Digital Notice to Airmen (NOTAMs)
SFDPS	SWIM Flight Data Publication Service (SFDPS) will provide a variety of En Route flight data, such as flight plans, beacon codes, and handoff status. SFDPS will also disseminate data regarding airspaces, such as Sector configuration data, route status, Special Activity Airspace (SAA) status, and altimeter settings.	En Route Flight Data Publication	En Route Flight and Related Data
		En Route Airspace Data Publication	
		En Route Operational Data Publication	
		En Route General Message Publication	



# SWIM Data Product Availability (Future)

Products scheduled for consumption by external entities and listed on the Access Agreement Portal in 2016 or beyond.

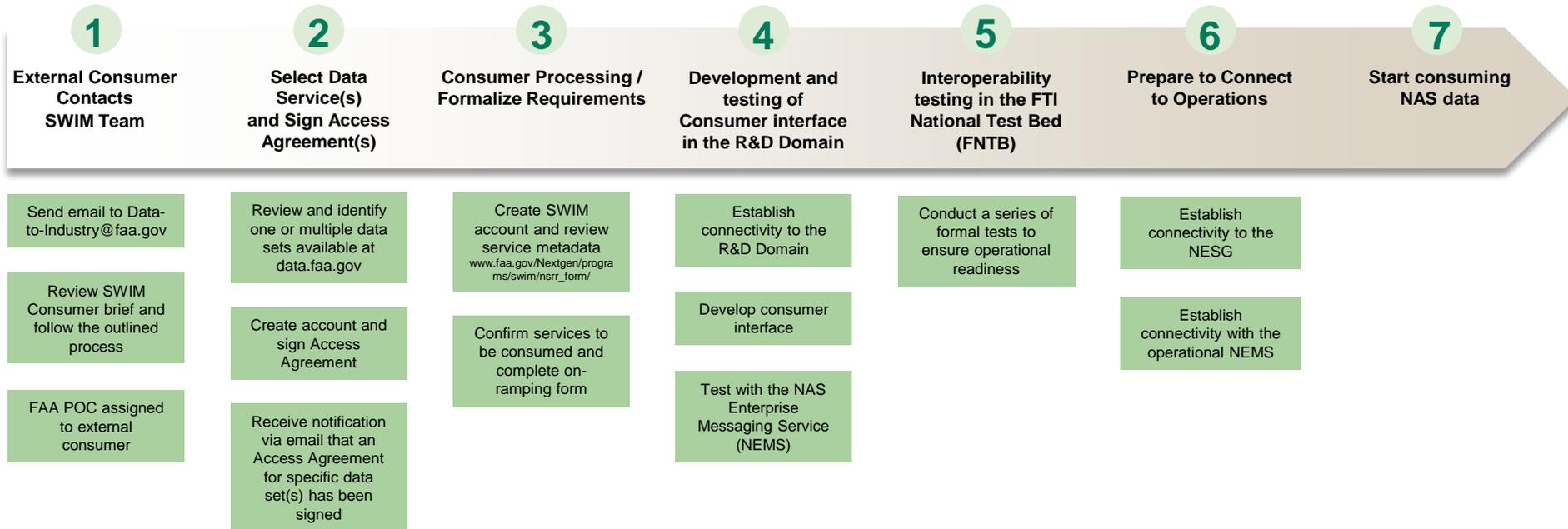
Producer	Description	NSRR Business Service Name
AIM-M Segment 2	AIMM Segment 2 (S2) will modernize the ingestion, integration, management, and distribution of aeronautical information (AI) by establishing the Aeronautical Common Services (ACS) and a one-stop-shop (OSS) customer portal. ACS and OSS will streamline dissemination and updates to Airport reference and configuration data, SAA/ SUA, FNS, and other types of AI information.	TBD
AIM SAA	Provides Airport reference and configuration data, including: definitions and schedule information for Special Activity Airspace (SAA), Temporary Flight Restriction (TFR), procedure (RNAV/RNP) data, and obstacles.	Get Static SAA
		SAA Operational Schedule
		SAA Schedule Notification
CSS-Wx	CSS-Wx will modernize, centralize and streamline distribution of weather within the NAS. CSS-Wx will replace with NEMS-based SOA Services existing data feeds from ITWS, CIWS, EWD, WMSCR, and WARP.	TBD

# SWIM Data Product Availability (Future)

Products scheduled to be available for consumption by external entities and listed on the Access Agreement Portal in 2016 or beyond.

Producer	Description	NSRR Business Service Name
STARS/ STDDS	Disseminate Standard Terminal Automation Replacement System (STARS) data via the NEMS	Terminal Automation Information Service (TAIS)
TBFM	Time Based Flow Management (TBFM) will provide a variety of aircraft metering information, airport configuration and adaptation data.	TBFM Metering Publication
TFDM	Terminal Flight Data Manager (TFDM) will provide a variety of Airport information, Surface and flight data, and flow information	TBD
WMSCR	The Weather Message Switching Center Replacement System (WMSCR) collects, processes, stores, and disseminates textual aviation weather products such as PIREPs and Altimeter data.	Publish PIREP
		Publish Altimeter Setting
		WMSCR Report Retrieval Service

# External Consumer On-ramping Process



Note 1: Existing NEMS users may skip to the FNTB or Operations stage

Note 2: AIM FNS NOTAM Distribution consumers will not connect to R&D domain in Step 5, see AIM Section at end of this briefing

# Step1: Process Kick-off

- **Send an email to [Data-To-Industry@faa.gov](mailto:Data-To-Industry@faa.gov) as soon as possible**
  - Upon receipt of email, FAA will assign a POC to address questions and escalate issues
- **Tips to Consumers**
  - Sending the email is a critical step in the process
  - Reach out to the FAA POC with questions
    - Your POC will review steps and timelines associated with on-ramping

# Step 2: Data Catalog and Access Agreement

- **NAS Data Release Group**

- The NAS Data Release Group evaluates all applicable NAS Data Release requests for the FAA to determine if they are eligible for approval by the NAS Data Management Director. The FAA may only release NAS data to external organizations identified in an approved Access Agreement

- **Create an account at [data.faa.gov](https://data.faa.gov) and sign Access Agreement**

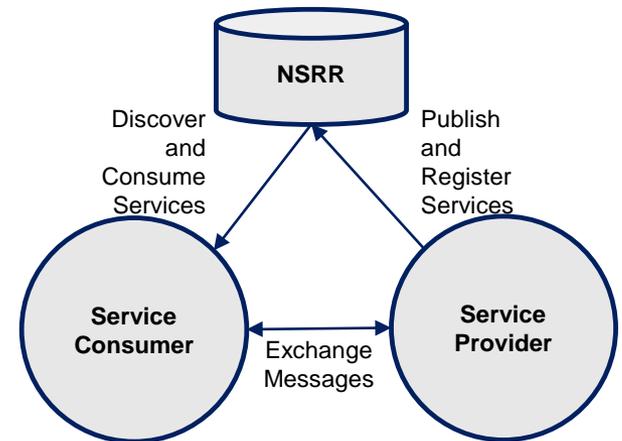
- All NAS data available for external distribution is cataloged in [data.faa.gov](https://data.faa.gov)

- **Tips to Consumers**

- You will receive an email with your signed copy of the Access Agreement
  - Keep this Access Agreement copy for your records

# Step 3: Service Requirements

- **NAS Service Registry/Repository (NSRR)**
  - Purpose: The NAS Registry and Repository (NSRR) contains the “read-me-first” documents needed to develop Consumer interfaces (e.g. Web Service Description Documents (WSDD), JMS description Documents (JMSDD), WSDLs, XML schemas, etc).
- **FAA POC works with consumer to complete on-ramping form**
- **Tips to Consumers**
  - Prior to client development, review NSRR for supporting product documentation
  - Allow 2 business days for account creation
    - [http://www.faa.gov/nextgen/programs/swim/nsrr\\_form/](http://www.faa.gov/nextgen/programs/swim/nsrr_form/)
  - SWIM Governance Policies at link:
    - <http://www.faa.gov/nextgen/programs/swim/governance/standards/>



# Steps 4-6: Establish Connectivity

- **Review the “*FTI NBPS User Guide*” Document**
  - Understand Section 4 - connection options and availability
  - Understand Section 5 - External End-User Security Responsibilities
  - Understand Section 7 - VPN Technical Requirements
- **Provide the following information to FAA POC**
  - IP Addresses
    - External IP Address of VPN Concentrator
    - IP Addresses of systems that will be accessing the FAA
- **FAA POC provides information for connectivity**
- **Tips to Consumers**
  - Identify critical staff (Network administrator and Security administrator)
    - VPN experience
    - Understanding of consumer network, IP addressing, and change management
    - Understanding of any existing connectivity to the FAA
  - Configure VPN prior to VPN Technical Call
    - Verify internal network routing
    - Configure or update encryption domain
  - Map entire subnets for the NEMS servers rather than unique IP addresses

# Step 4: Client Development in the Dev Test Environment

- **First time External Consumers connect to Dev Test Environment**
- **Start client development in parallel with establishing connectivity to Dev Test Environment**
- **Tips to Consumers**
  - Review the NEMS User Guide
    - Determine JMS Client Type as early as possible
    - Understand Basic and Enhanced capabilities of NEMS
  - Identify critical staff to facilitate development
    - Identify experienced Java Message Service (JMS) Developer
  - Review the SWIM Jump start kit
  - To avoid client development process, consider licensing JMS client from third party

# Step 5: FAA FTI National Test Bed (FNTB)

- **External Consumers are required to connect to the FNTB**
  - Establish connectivity to the FNTB Domain
  - Perform FNTB consumer qualification testing with the FNTB NEMS environment
    - Required prior to deploying in the operational NAS environment
  - FNTB qualification ensures that consumer has connectivity and is able to receive messages via NEMS
  - Determine if your desired operational connectivity approach requires additional testing in the FNTB
  - Perform failover tests

Note: Consumers with FNTB verified JMS clients will not need re-verification for additional JMS services.

# Step 6 and 7: Prepare for Operations and On-Going Support

- **Preparing for Cutover**
  - FAA POC will coordinate your connection and cutover, including status checks, contact information for subject matter experts
- **After transition to Operational Environment**
  - The Network Enterprise Management Center (NEMC) will serve as the SWIM helpdesk for Consumers that have been cut-over to Production
  - NEMC Contact Information:
    - 855-FAA-NEMC (855-322-6362)
    - Use option 3 for Enterprise Services
    - 24/7/365



# FAA Documents and Links

SWIM Background

<http://www.faa.gov/nextgen/swim>

Access Agreement Portal

<http://data.faa.gov>

NSRR Account Request Form

[http://www.faa.gov/nextgen/programs/swim/nsrr\\_form/](http://www.faa.gov/nextgen/programs/swim/nsrr_form/)

SWIM Jumpstart Kit v4.3

[http://www.faa.gov/nextgen/programs/swim/documentation/media/swim\\_standards/JumpstartR4.zip](http://www.faa.gov/nextgen/programs/swim/documentation/media/swim_standards/JumpstartR4.zip)

FTI NBPS User Guide Volume II- For Non-NAS Users

[http://www.faa.gov/nextgen/programs/swim/documentation/media/user-guide/FTI\\_NBPS\\_User\\_Guide.pdf](http://www.faa.gov/nextgen/programs/swim/documentation/media/user-guide/FTI_NBPS_User_Guide.pdf)

SWIM NEMS User Guide

[http://www.faa.gov/nextgen/programs/swim/documentation/media/user-guide/SWIM\\_NEMS\\_User\\_Guide.pdf](http://www.faa.gov/nextgen/programs/swim/documentation/media/user-guide/SWIM_NEMS_User_Guide.pdf)

VPN Technical Requirements (excerpt from FTI NBPS User Guide Volume II- For Non-NAS Users)

[http://www.faa.gov/nextgen/programs/swim/documentation/media/user-guide/VPN\\_Technical\\_Requirements.pdf](http://www.faa.gov/nextgen/programs/swim/documentation/media/user-guide/VPN_Technical_Requirements.pdf)

Consumer On-Ramping Form

[http://www.faa.gov/nextgen/programs/swim/documentation/media/user-guide/External\\_Consumer\\_On-Ramping\\_Form\\_Template.xls](http://www.faa.gov/nextgen/programs/swim/documentation/media/user-guide/External_Consumer_On-Ramping_Form_Template.xls)

# Pre-Operational Deployment Key Contacts

- Your organization will be provided both a primary and backup POC upon entry into the external consumer on-ramping process

Mailbox: [Data-To-Industry@faa.gov](mailto:Data-To-Industry@faa.gov)

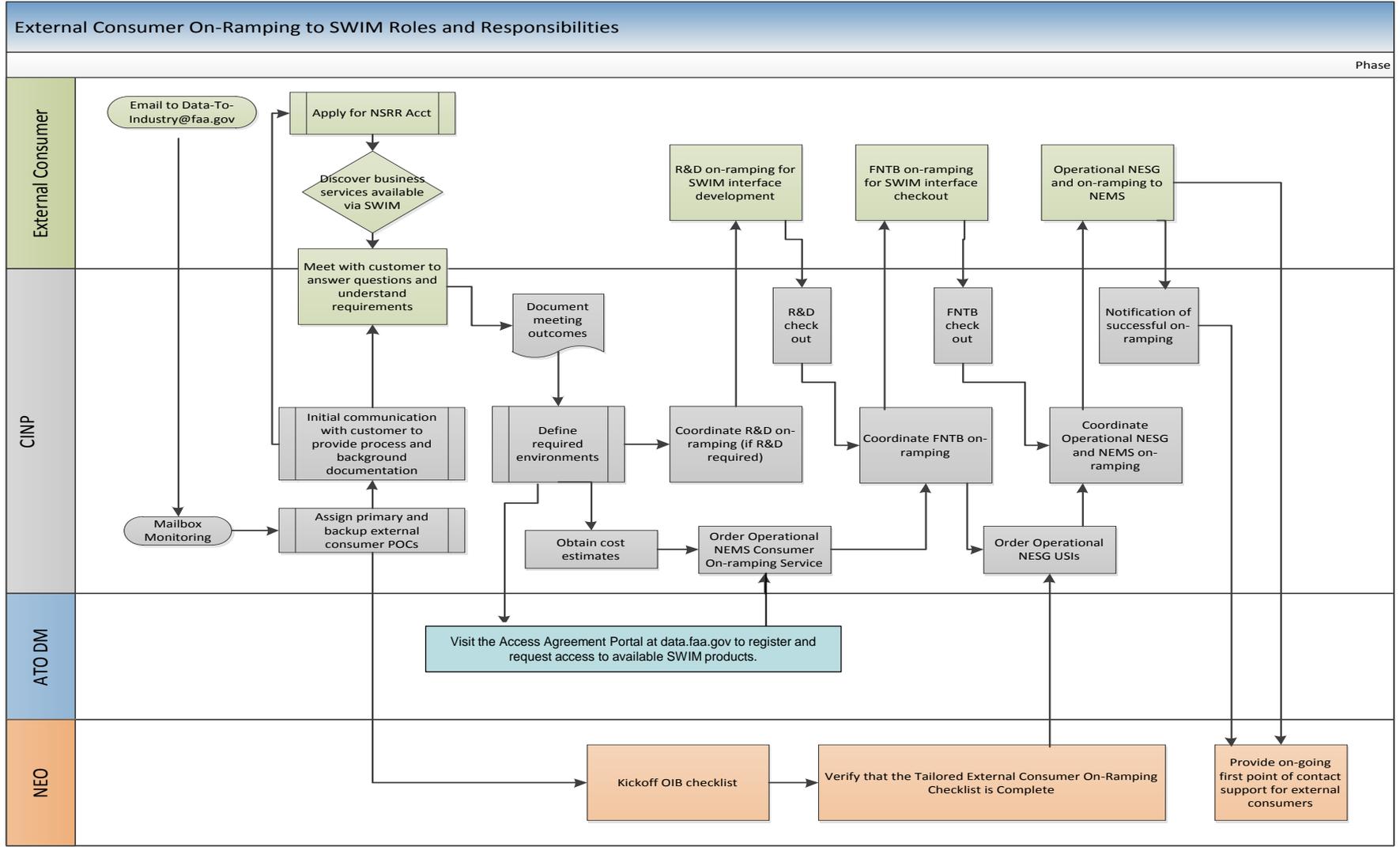
- Alex Prikhodko [Alexander.ctr.prikhodko@faa.gov](mailto:Alexander.ctr.prikhodko@faa.gov)
- Brandon Wang [Brandon.ctr.wang@faa.gov](mailto:Brandon.ctr.wang@faa.gov)
- David Wickes [David.ctr.wickes@faa.gov](mailto:David.ctr.wickes@faa.gov)
- Wendy Swartz [Wendy.ctr.swartz@faa.gov](mailto:Wendy.ctr.swartz@faa.gov)
- Rob Johnson [Robert.ctr.johnson@faa.gov](mailto:Robert.ctr.johnson@faa.gov)
- Michelle Sreedharan [Michelle.ctr.sreedharan@faa.gov](mailto:Michelle.ctr.sreedharan@faa.gov)

# AIM FNS NOTAM Distribution

- **Process Flow for AIM FNS NOTAM Distribution**
  - Please review the entirety of this package
    - All steps and sections are relevant with the exception of R&D
  - To start client development, follow the directions provided at <http://notamdemo.aim.nas.faa.gov/ndshome/#WelcomeNews>
    - Use the “Contact Us” link on the above homepage for assistance during client development
  - You may choose to have your SWIM on-ramping kick-off call prior to, during, or after completion of client development
  - To schedule your kick-off call and have a SWIM On-Ramping POC assigned (if one has not already been assigned), please send an email to [Data-To-Industry@faa.gov](mailto:Data-To-Industry@faa.gov) and include
    - Company Name
    - Data products requested
    - Company Points of Contact



# External Consumer On-Ramping Process



# Schedule – 90 days



# Thank you for joining us!

Please take this short survey to let us know how we're doing...

<https://www.surveymonkey.com/r/JGTNVZK>

# Questions

