

# Administrative Announcements

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**Note:** Only NAC Members, FAA Executive Participants, and Pre-Approved Presenters and Speakers will have panelist/video/speaking capabilities. All other participants will be view-only without speaking/video capabilities.

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- **When called upon to speak by the Chair:**
  - > Please announce your name and organization
  - > If using Zoom computer audio, click the Mute/Unmute button in the bottom left corner
  - > If using the phone line audio without a participant ID, dial \*6 to unmute, as well as your phone's mute button if enabled
  - > If using a phone line and entered a participant ID, click the Zoom Mute/Unmute button, dial \*6 to unmute your phone line, as well as your phone's mute button if enabled

In lieu of a roll call, all meeting participants will be captured in the meeting summary.

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**If you have any issues, please contact Antionette Johnson, via e-mail:** [Antionette.CTR.Johnson@faa.gov](mailto:Antionette.CTR.Johnson@faa.gov)





# NextGen Advisory Committee Meeting

March 21, 2024



## Opening of Meeting

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Chip Childs, NAC Chair  
President & CEO (SkyWest Airlines)



# Public Meeting Announcement

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NextGen Advisory Committee (NAC)

March 21, 2024



## NAC Chair Report

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Chip Childs, NAC Chair

President & CEO (SkyWest Airlines)

# Motion for NAC Approval

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- October 4, 2024 – NAC Meeting Summary Package Draft





## NAC Chair Report

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Chip Childs, NAC Chair

President & CEO (SkyWest Airlines)



## FAA Report

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Katie Thomson, Deputy Administrator & NAC Designated Federal Officer (FAA)





## NAC Subcommittee (SC) Chair Report

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Lee Brown, NAC SC Member (JetBlue Airways)

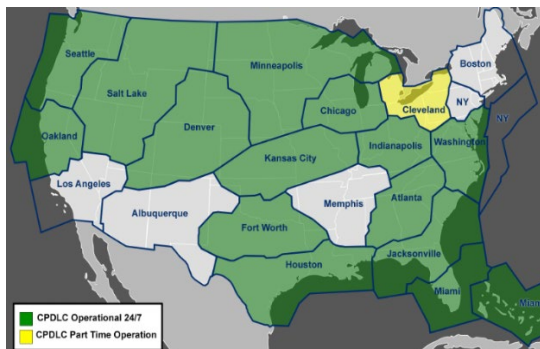
# NAC Subcommittee Overview and Topics

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- Highlights on capability milestones
  - NAC approval requested for NEC milestone adjustment
- Status of Joint Analysis Team (JAT) efforts on two taskings
  - > Task 19-3, Northeast Corridor Phase 2 Implementation
  - > Task 23-3, En Route Data Communications
- Continuation of readiness considerations for impending Terminal Flight Data Manager implementations
- Interim findings from Task 23-2, NAS Airspace Efficiencies

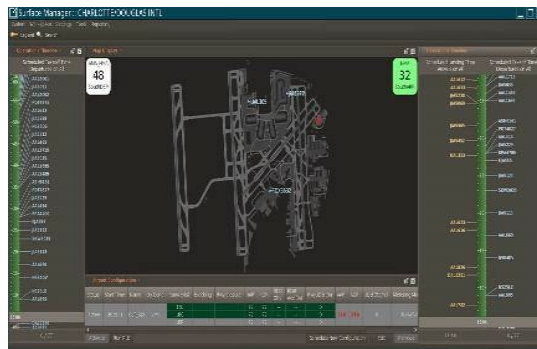
# NIWG Milestone Update and Status

## Data Communications



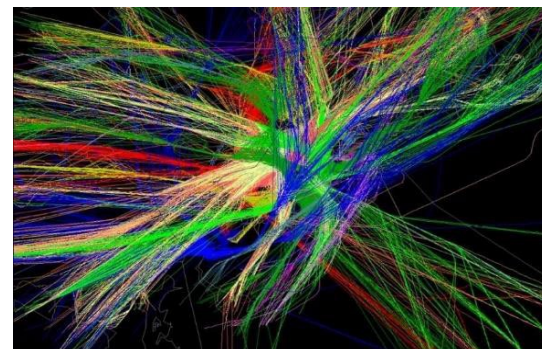
- Fifteen en route centers operational with Full Services increment 1
- Cleveland Center in now in 24/7 use
- Los Angeles Center planned for Q2 2024

## Surface and Data Sharing



- Electronic Flight Strips operational at seven sites; Charlotte and Los Angeles planned for May
- Charlotte surface metering initial operational capability planned for May

## Northeast Corridor and Performance Based Navigation



- Completed initial TBO commitment for Denver (previously briefed)
- Time-based flow management implementation in NEC adjusted by the FAA

# Motion for NAC Approval – Adjusted NEC/PBN Milestones

## Milestone as shared during October 2023 NAC

Type	Commitment/Milestone	Dates
Implementation	Implement arrival time-based metering for PHL and EWR	Q4 CY2024



## Revised Milestones

Type	Commitment/Milestone	Dates
Implementation	Implement arrival time-based metering for PHL <del>and EWR</del>	<del>Q4 CY2024</del> <b>Q4 CY2025</b>
<b>Implementation</b>	<b>Implement arrival time-based metering for EWR</b>	<b>Q4 CY2026</b>

# Motion for NAC Approval

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- Approve the revised implement arrival time-based metering for EWR milestone



## Joint Analysis Team Update

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Eric Silverman (American Airlines) & Alex Burnett (United Airlines)

Dave Knorr (FAA) & Kathy Torrence (FAA)

# JAT Purpose-Past Work (Review):

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## Joint Analysis Team (JAT)

An FAA / industry collaboration forum established to reach a consensus on methodologies and results regarding NAS performance changes resulting from NextGen implementations

- Focused on measuring performance impacts in key metrics
  - Throughput
  - Block time, including variability
    - Taxi-out time
  - Arrival performance (A0)
  - Fuel burn
  - Gate departure delay
  - Completion Factor (added by NEC)

***Additional metrics and normalization  
applied as appropriate***



# JAT Purpose-Past Work (Review):

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- Sample JAT Past Evaluations:
  - North Texas Metroplex
  - Wake RECAT
  - Northeast Corridor-NEC Low Level Escape Routes
  - PHL SCIA
  - Data Comm Tower
  - EDC/IDAC
  - OPDs
  - EOR at DEN



# JAT NEC Phase 2 Tasking



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

Office of the Deputy Administrator

800 Independence Ave., S.W.  
Washington, D.C. 20591

December 19, 2019

Mr. Russell "Chip" Childs  
President and Chief Executive Officer, SkyWest, Inc.  
444 South River Road  
St. George, UT 84790

Dear Mr. Childs:

The Federal Aviation Administration (FAA) requests the NextGen Advisory Committee (NAC) continue the Joint Analysis Team (JAT), under a new task, focused on reaching industry consensus on the performance impacts and benefits resulting from Northeast Corridor (NEC) Phase 2 implementations.

## **Task 19-3: Northeast Corridor: Joint Analysis Team (JAT) Assessment of Phase 2 Improvements**

The NAC is asked to continue the JAT, to reach an industry consensus on the performance impacts and benefits in the NEC resulting from implementation of Phase 2 commitments.

- The JAT will present updated findings on a semiannual basis or approximately every other NAC meeting. These updates will continue until nine months after the last NEC milestone implementation.

Thank you for your leadership as Chairman, and for the valuable contributions of the entire committee toward successful implementation of NextGen.

If you have questions, please contact Pamela Whitley, Acting Assistant Administrator for NextGen, at [pamela.whitley@faa.gov](mailto:pamela.whitley@faa.gov).

Sincerely,

Daniel K. Elwell  
Deputy Administrator



# Current JAT Tasking ACR & Roadmap

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- Complexity of Atlantic Coast Routes (ACR):
  - Last significant phase of ACR implemented mid-spring 2023
  - ACR post implementation design meeting held earlier in fall with several issues identified
  - Challenge to measure benefit (or non benefit) given complexity/variables
  - FAA Focus on changes in throughput, demand, and new constraints
- Two Joint Industry/FAA Meetings held since January
  - Met with FAA ACR Leads to discuss purpose and Post Operational Design Review
  - FAA/MITRE briefed backup data regarding changes in Atlantic Coast demand/delays
  - Challenge how to attribute changes in demand, throughput, and delays to ACR?

# JAT “New” En Route Data Comm Tasking



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Office of the Deputy Administrator

800 Independence Ave., S.W.  
Washington, DC 20591

December 21, 2023

Mr. Russell “Chip” Childs  
President and Chief Executive Officer SkyWest, Inc.  
444 South River Road  
St. George, UT 84790

Dear Mr. Childs:

The Federal Aviation Administration (FAA) requests consensus advice from the NextGen Advisory Committee (NAC) to help measure the benefits of En Route Data Communications (Data Comm). The FAA requests the NAC to develop industry consensus on the benefit mechanisms, benefit methodologies, and quantified performance impacts from the implementation of En Route Data Comm.

## **Task 23-3: En Route Data Communications: Joint Analysis Team Assessment**

The NAC is asked to work with the Data Comm NextGen Integration Working Group to form a Joint Analysis Team (JAT) to reach an industry consensus on the operational benefits resulting from the implementation of En Route Data Comm.

The NAC advice should include the following:

- Identified benefit mechanisms of En Route Data Comm
- Identified data source(s) and data validation steps
- Description of the benefit methodologies of En Route Data Comm
- Quantified operational benefits of En Route Data Comm

The program scope for this tasking shall include the following:

- All Air Route Traffic Control Centers with active En Route Data Comm
- All relevant data source(s)

The FAA requests the JAT to provide an update at each of the NAC meetings through calendar year 2024, with the final report by the Fall 2024 meeting.



# Industry En Route Data Comm Meeting

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- Held meeting with Data Comm Team to introduce proposed method to arrive at quantitative value
  - Good initial brief by L3Harris team analyzing benefits
  - More work needed to explain data behind analysis and operational connection to distance savings
  - More discussion data needed linking on how time savings for both pilots and controllers translates to savings/efficiency
- Next meeting planned for late March/April
- Industry SME participation-confirm who from industry should be involved
  - Individual industry participation-pilots/dispatch
  - Possible controller feedback



# Terminal Flight Data Manager: Industry Readiness

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Doug Swol (FAA) & Scott Nagy (FAA)

Rob Goldman (Delta Air Lines) & Chris Oswald (ACI-NA)

# Surface & Data Sharing – TFDM Update

## Key TFDM Achievements

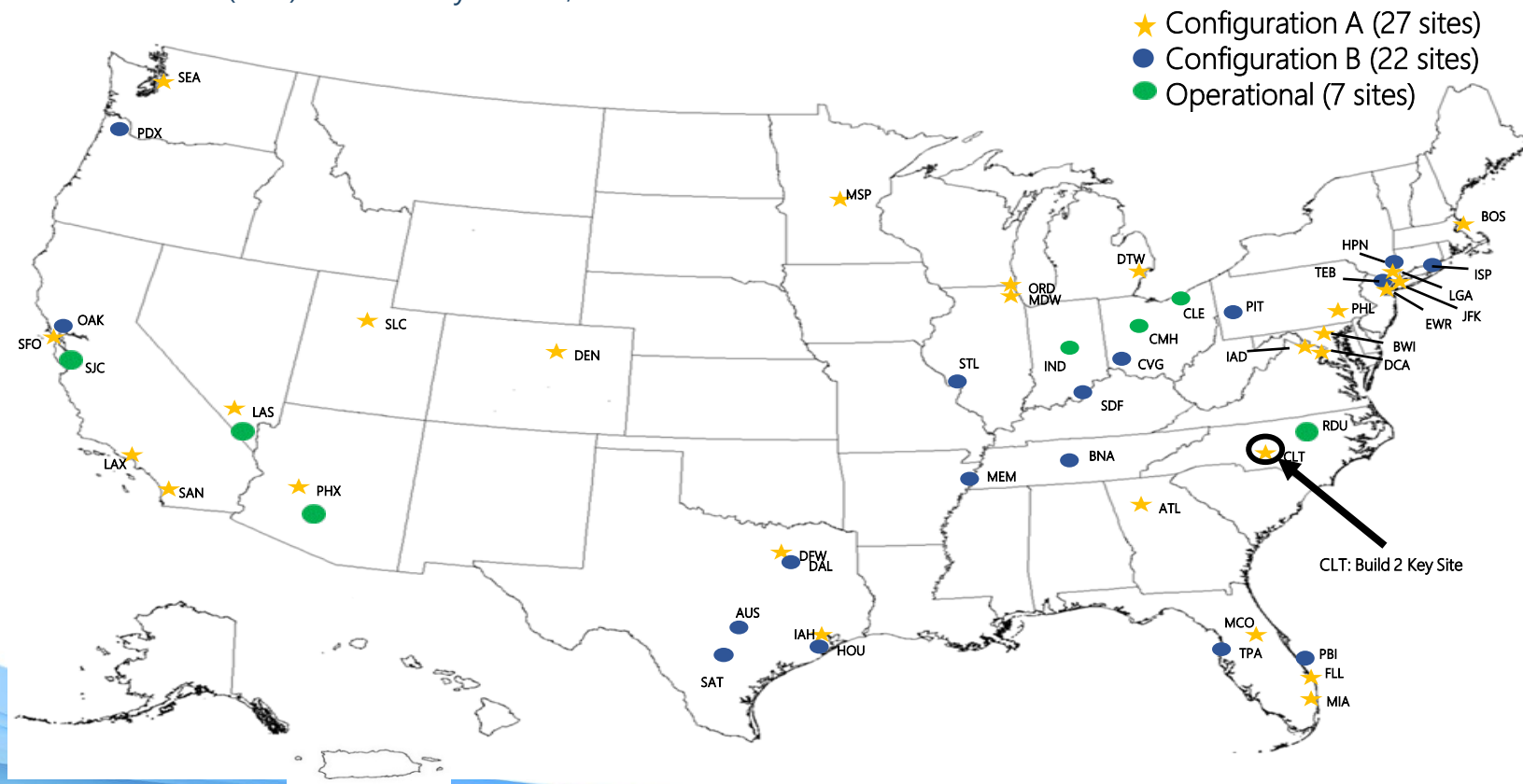
- 7<sup>th</sup> IOC at San Jose (SJC) achieved Feb 27, 2024
- Completed Collaborative Site Implementation

### Team Meetings:

- > Houston (IAH) - December 6-7, 2023
- > Miami (MIA) – January 24-25, 2024
- > Atlanta (ATL) – February 22-23, 2024

## Near Term Activities

- CLT Build 2 IOC date move March 25 to May 14, 2024
  - > Additional software patch needed
  - > Air traffic training started in January 2024
- LAX Build 1 IOC (9<sup>th</sup> site) on May 14, 2024

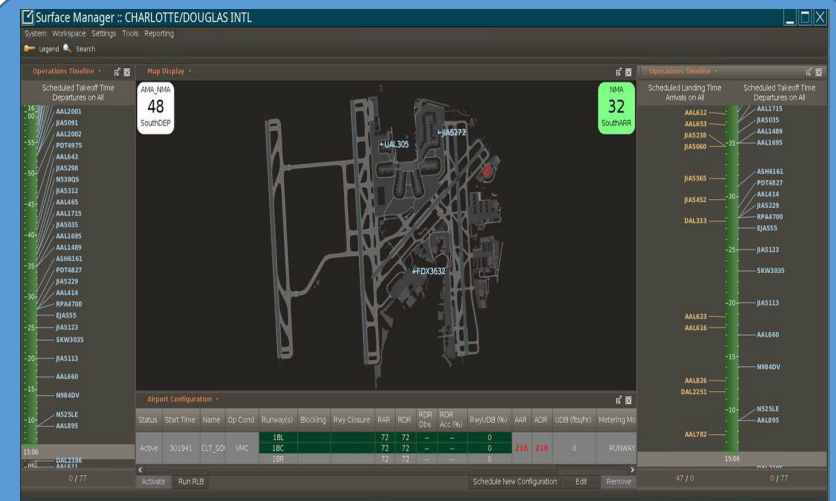




# Key TFDM Capabilities



**Electronic Flight Data and Electronic Flight Strips**  
(Build 1 Config B, Build 2 Config A or B)



**Surface Management and Metering**  
**Decision Support Tools for ATC**  
(Build 2 Config A Only – starts in 2024)

**Traffic Management**  
**Initiative (TMI)**  
**Integration**

*(Build 1 Config B,  
Enhanced in Build 2  
Config A or B)*



**Airport Configuration Management**  
(Build 1 Config B, Build 2 Config A or B)

**Data Sharing with**  
**Flight and Airport**  
**Operators**

*(Build 2 Config A and B)*



# Surface NAC Milestone Status

IMPLEMENTATION COMMITMENTS	New Date
TFDM program will achieve key site IOC for Build 1 at CLE	<b>Complete (10/24/2022)</b>
TFDM program will achieve the in-service decision (ISD) for Build 1 to allow additional TFDM system deployments into the NAS	<b>Complete (3/1/2023)</b>
TFDM program will achieve IOC at 3 additional sites	<b>Q4 CY2023 Complete (7/24/2023)</b>
TFDM program will achieve the key site IOC for Build 2 at CLT	<b>Q2 CY2024 On Track</b>
TFDM program will achieve ISD for Build 2 to allow additional deployments of the full TFDM capabilities into the NAS	<b>Q4 CY2024 On Track</b>
TFDM program will achieve IOC at 5 additional sites	<b>Q4 CY2025 On Track</b>



# FAA Industry Readiness Assessment

	IOC Date	10/2023 Readiness Level	3/2024 Readiness Level
CLT	5/2024	Medium	High*
PHX	12/2024	Very Low	Low
LAS	2/2025	Very Low	Very Low
SEA	3/2025	Low	Low
LAX	4/2025	Low	Low
SFO	5/2025	Low	Low
IAH	6/2025	Low	Low
MDW	7/2025	Very Low	Low
MIA	10/2025	Low	Low
BOS	3/2026	Very Low	Low
ATL	4/2026	Low	Medium
SLC	7/2026	Low	Low
SAN	8/2026	Very Low	Low
DEN	9/2026	Low	Low
DFW	10/2026	Low	Low

Readiness Level Legend		High	Medium	Low	Very Low
(a)	Sufficient Surface Data	>90%	>80%	>= 60%	<60%
(b)	Accurate Surface Data	Accurate	Accurate	Inaccurate	Inaccurate
(c)	SWIM On-Ramping	Complete	In Progress	Not Started	Not Started
(d)	Surface Tools	Ready	In Progress	In Progress/ Not Ready	Not Ready

Assessments based on FAA SWIM data analysis, CSIT discussions and surveys

	High	Medium	Low	Very Low
Target to Achieve Each Level	~2 months before IOC	~6 months before IOC	~ 12 months before IOC	N/A

\*CLT: On-Ramping complete, testing of SWIM services and surface tools in progress. Surface Work Group in Progress.



# Industry Efforts to Address TFDM Readiness

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- Working Group Focus is on surface metering (e.g., Configuration A, Build 2)
  - > Requires timely flight-level data from flight operators
  - > Some airports or terminal operators will have roles in facilitating data exchange and possibly operational decision making (e.g., managing flight substitutions for non-CDM carriers)
  - > Will change traditional roles of key stakeholders in real-time surface management and departure scheduling
  - > Also requires carrier and airport investments in enabling technology, stakeholder engagement, and new policies & procedures
- Perspective is important
  - > TFDM will provide substantive benefits outside of surface metering
  - > Even with ideal implementation, there shouldn't be an expectation of 100% of surface metering benefits on Day 1
  - > Benefits will improve incrementally as air traffic controllers, flight operators, and ramp controllers gain experience with metering capabilities
  - > "Success will breed success"

# Key Implementation Elements—Stakeholder Perspectives

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Stakeholder  
engagement

Roles &  
responsibilities

Enabling  
technologies

Policies &  
procedures

# What's Next

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- Surface/Data Sharing NIWG meeting monthly
- Planning deep dives into the four implementation elements as well as early implementation site experiences to date
- Goal is to identify both "Day 1" expectations for surface metering (Configuration A) sites and the likely progression at these sites to steady-state operations
- Additional goal is to identify systemic implementation issues that could impact long-term benefit expectations



## NAC Task 23-2: NAS Airspace Efficiencies Update

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Lee Brown (JetBlue Airways) & Ron Renk (United Airlines)

Greg Schwab (FAA), Chris Southerland (FAA) & Wendy O'Connor (FAA)

# NAC Task 23-2: NAS Airspace Efficiencies

The FAA requests NAC advice on ways to achieve greater airspace efficiencies as we collaboratively attempt to reduce reliance on and divest from legacy systems and procedures and move to a reliance on a more modernized NAS.

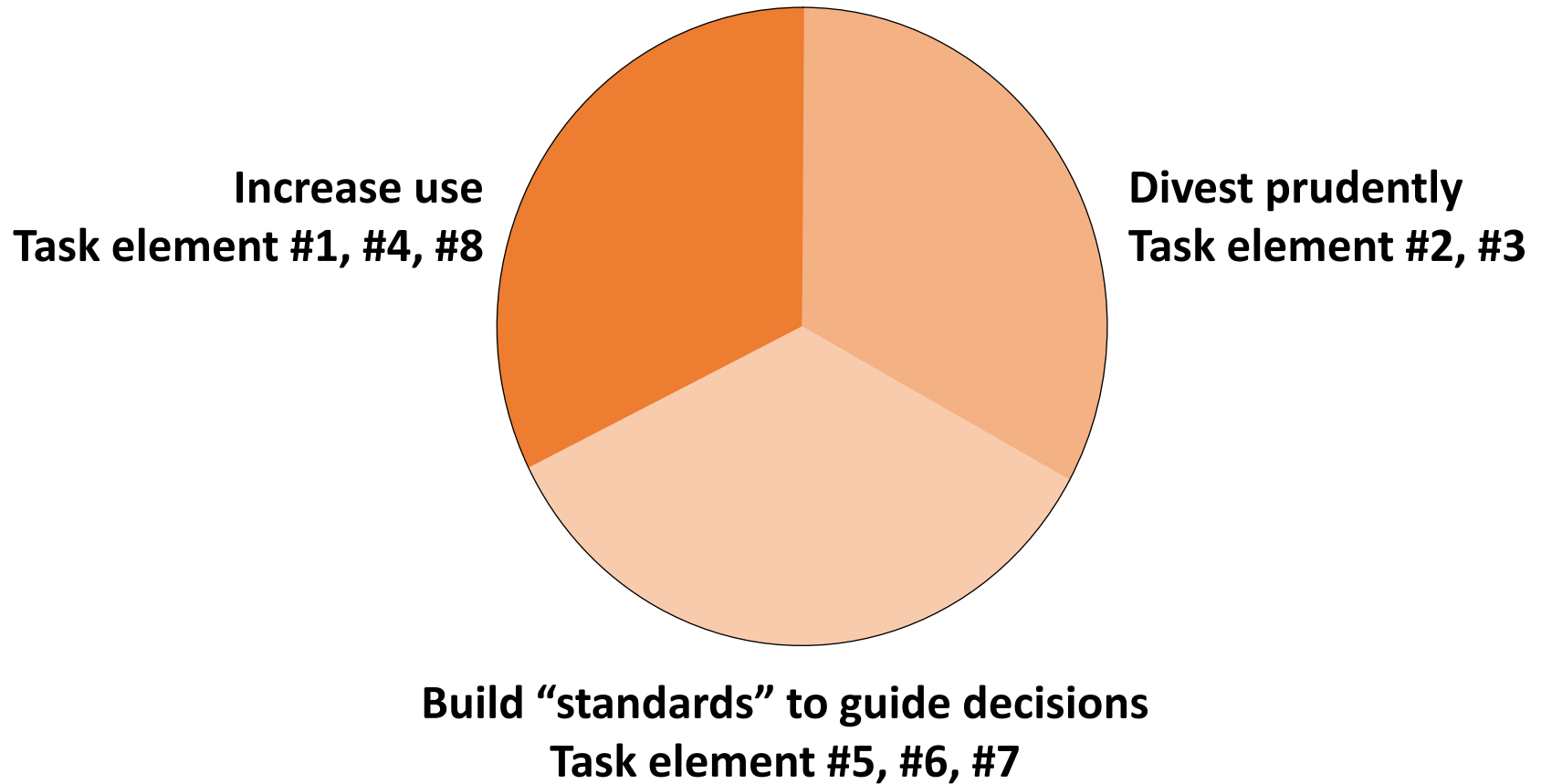
## **The FAA offers the following suggestions as a way to begin the efficiency discussions:**

1. Within the scope of current FAA automation capabilities, **explore opportunities for increased utilization of existing** Performance Based Navigation (PBN) **procedures**.
2. Identify opportunities for industry to leverage efficiencies gained from their avionics and dispatch systems investments while simultaneously allowing the FAA to divest from legacy NAS elements that do not contribute to those efficiencies.
3. Identify opportunities for the FAA to **remove existing and infrequently used Instrument Flight Procedures (IFPs)**.
4. Identify opportunities to potentially **modify existing IFPs/Standard Instrument Departure Procedures (SIDs)/Standard Terminal Arrival Procedures (STARs)** to gain overall airspace efficiencies.
5. Identify a recommended baseline PBN and non-PBN IFP infrastructure to provide the **minimum service level and airport access** for both non-Global Positioning System/Area Navigation equipped aircraft and aircraft with advanced avionics for each Navigation Services Group Airport Category (1-5).
6. Identify any trends in **IFP/SID/STAR inventory suggestions that might be used as a national standard**.
7. Explore opportunities for even greater efficiencies with the use of Advanced Required Navigation Performance (A-RNP) as is being pursued by the Performance Based Operations Aviation Rulemaking Committee.
8. Work with the NAC Subcommittee Minimum Capabilities List (MCL) Team to capitalize on any cross- cutting issues that might support both taskings and industry achieving MCL-level of equipage.

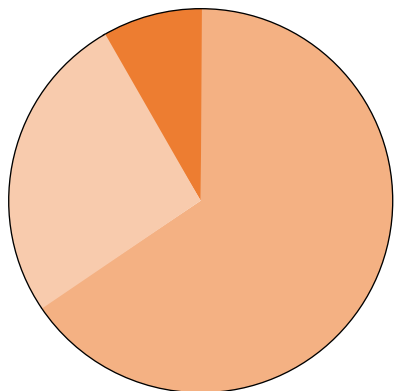


# Approaching the Tasking Elements

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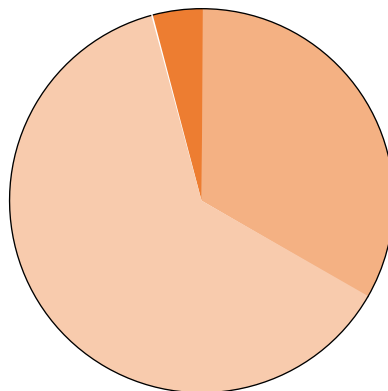


# How the work has progressed



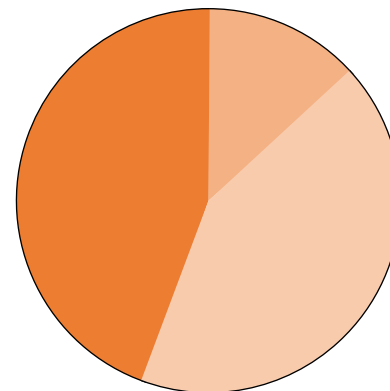
Mar 2023 – Aug 2023

- Intro to IOAA data
- Focused on review process using FLL case study, helped inform all parts of the tasking



Sep 2023 – Jan 2024

- Finished up FLL case study and developed interim findings
- Preliminary look at service levels
- Leadership discussion on related FAA efforts (i.e., IFP streamlining)



Feb 2024 – Jul 2024

- Align closer with IFP Streamlining efforts
- Flesh out Minimum Service Level definitions
- Highlight specific locations for utilization



# Why Define Minimum Service Levels?

- To assist the FAA's review of an airport, we defined Minimum Service Levels based on airport Navigation Service Group (NSG) as defined in the FAA PBN Roadmap.

NSG 1 - Low visibility (<200' HAT), redundancy (spaced-based/ground-based, DEP/ARR runway), arrivals, departures

NSG 2 - Low visibility (<=200' HAT), redundancy (spaced-based/ground-based, DEP/ARR runway), arrivals, departures

NSG 3 - CAT I mins, redundancy (spaced-based/ground-based, DEP/ARR runway), arrivals/departures where needed

NSG 4 - Instrument approaches to ensure runway access, procedures to meet operational needs of primary airport users.

NSG 5 - Instrument approaches (where users equipped) to ensure runway access, procedures to meet operational needs of primary airport users. Consideration for equipment should be given to ensure any approaches available are useable by airport users.

# Minimum Service Level

Category	Percent with ILS Appr	Percent with RNAV (GPS) Appr	Percent with RNAV (RNP) Appr	Percent with VOR Appr	Percent with NDB Appr	Percent with RNAV SID	Percent with RNAV STAR	Percent with CONV SID	Percent with CONV STAR
NSG 1 - Low visibility (<200' HAT), redundancy (spaced-based/ground-based, DEP/ARR runway), arrivals, departures	100%	100%	100%	20%	0%	87%	100%	100%	93%
NSG 2 - Low visibility (<=200' HAT), redundancy (spaced-based/ground-based, DEP/ARR runway), arrivals, departures	100%	100%	85%	32%	5%	76%	88%	90%	78%
NSG 3 - CAT I mins, redundancy (spaced-based/ground-based, DEP/ARR runway), arrivals/departures where needed	86%	98%	16%	63%	6%	12%	10%	27%	9%
NSG 4 - Instrument approaches to ensure runway access, procedures to meet operational needs of primary airport users.	57%	97%	2%	42%	8%	19%	26%	19%	25%
NSG 5 - Instrument approaches (where users equipped) to ensure runway access, Approaches to meet operational needs of primary airport users. Consideration for equipage should given to ensure any approaches available are useable by airport users.	6%	75%	0%	19%	4%	2%	2%	1%	2%

# Minimum Service Level

Category
NSG 1 - Low visibility (<200' HAT), redundancy (spaced-based/ground-based, DEP/ARR runway), arrivals, departures
NSG 2 - Low visibility (<=200' HAT), redundancy (spaced-based/ground-based, DEP/ARR runway), arrivals, departures
NSG 3 - CAT I mins, redundancy (spaced-based/ground-based, DEP/ARR runway), arrivals/departures where needed
NSG 4 - Instrument approaches to ensure runway access, procedures to meet operational needs of primary airport users.
NSG 5 - Instrument approaches (where users equipped) to ensure runway access, Approaches to meet operational needs of primary airport users. Consideration for equipage should given to ensure any approaches available are useable by airport users.

Considerations when something looks ripe to retire:

ILS's shouldn't be retired if:

- Considering aircraft equipage, it is the only vertically guided approach
- Provides significant reduction in approach minima (Ceiling or Visibility)
- Resiliency for GPS jamming/spoofing
- Training (flight school)

RNAV (RNP) shouldn't be retired if:

- Contains a curved Radius to Fix (RF) segment
- Provides significant reduction in approach minima (Ceiling or Visibility) versus RNAV (GPS)
- Part of a NextGen program (EoR, MARS, Fuel/Noise/Time efficiency)
- Airport Access (only public approach type that works)
- Resiliency for ILS outage and no RNAV (GPS)

RNAV (GPS) shouldn't be retired if:

- Considering aircraft equipage, it is the only vertically guided approach
- Resiliency for ILS outage
- Training (flight school)

# Increasing utilization of what we have

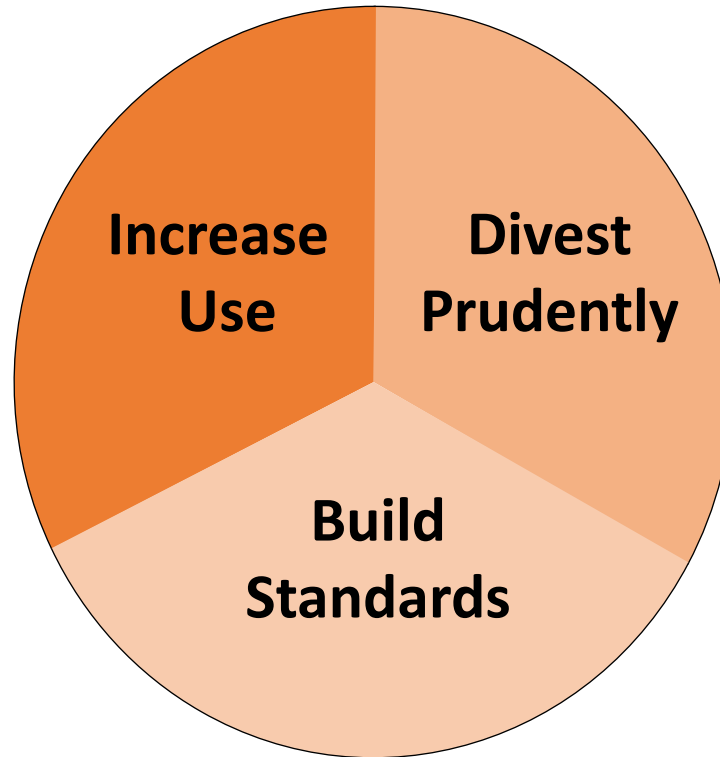
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- Increased utilization ties to investment and equipage
- Several previous taskings have resulted in findings and recommendations around increased utilization and other opportunities, examples include:
  - > PBN NIWG – Barriers to EoR
  - > NEC NIWG - RNP, EoR and MARS priorities
  - > PBN Clarification – RNP, EoR and MARS priorities
  - > Enhanced Air Traffic Services – A-RNP and EoR
- How do we increase utilization? Through more awareness and measurement?
  - > Can use tools and data that have been introduced as part of this tasking
  - > Pick a few sites to look at - start to look at sites that have been identified in previous tasking

# Next Steps

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Identify sites for  
Required  
Navigation  
Performance  
(RNP) utilization  
tracking and  
regular reporting



Obtain Instrument  
Flight Procedures  
(IFP) streamlining  
updates and  
briefings to full  
workgroup

Complete additional case studies to  
inform streamlining alignment and  
Minimum Service Level (MSL) definition



## Review of Action Items & Other Business

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Kimberly Noonan, NAC Committee Manager (FAA)



## Closing Comments & Adjourn

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Chip Childs, NAC Chair

President & CEO (SkyWest Airlines)



## TFDM Back Up



# TFDM Waterfall (2022-2024)

ATCT - Configuration - Functionality Deployed	ATCT	TRACON	SERV AREA	IOC
ATCT 5 (CLE) Key Site - Config B - Build 1	CLE	CLE	NC	10/24/2022
<b>2023</b>				
<b>Build 1.5 ISD</b>				
ATCT 4 (IND) - Config B - Build 1	IND	IND	NC	4/24/2023
ATCT 1 (PHX) - Config A - Build 1	PHX	P50	SW	6/5/2023
ATCT 3 (RDU) - Config B - Build 1	RDU	RDU	SE	7/24/2023
ATCT 20 (CMH) - Config B - Build 1	CMH	CMH	NC	9/11/2023
ATCT 26 (LAS) - Config A - Build 1	LAS	L30	SW	10/23/2023
<b>2024</b>				
ATCT 19 (SJC) - Config B - Build 1	SJC	NCT	NW	2/27/2024
ATCT 8 (CLT) - Build 2 Key Site - Config A - Build 2 SW (incl Build 1 functions)	CLT	CLT	SE	5/14/2024
ATCT 6 (LAX) - Config A - Build 1	LAX	SCT	SW	5/14/2024
ATCT 30 (TPA) - Config B - Build 1	TPA	TPA	SE	7/23/2024
<b>Build 2.2 ISD</b>				9/30/2024
<i>ATCT 5 (CLE) Key Site - Config B - Full TFDM SW, Adapt Build 2 func.</i>	<i>CLE</i>	<i>CLE</i>	<i>NC</i>	<i>10/22/2024</i>
<i>ATCT 4 (IND) - Config B - Full TFDM SW, Adapt Build 2 func.</i>	<i>IND</i>	<i>IND</i>	<i>NC</i>	<i>11/18/2024</i>
<i>ATCT 1 (PHX) - Config A - Full TFDM SW, Adapt Build 2 func.</i>	<i>PHX</i>	<i>P50</i>	<i>SW</i>	<i>12/9/2024</i>

Completed Site
Site Step Up from B1 to B2

# TFDM Waterfall (2025-2026)

ATCT - Configuration - Functionality Deployed	ATCT	TRACON	SERV AREA	IOC
<b>2025</b>				
ATCT 26 (LAS) - Config A - Full TFDM SW, Adapt Build 2 func.	LAS	L30	SW	2/17/2025
ATCT 29 (SEA) - Config A - Full TFDM SW	SEA	S46	NW	3/18/2025
ATCT 6 (LAX) - Config A - Full TFDM SW, Adapt Build 2 func.	LAX	SCT	SW	4/12/2025
ATCT 15 (SFO) - Config A - Full TFDM SW	SFO	NCT	NW	4/29/2025
ATCT 3 (RDU) - Config B - Full TFDM SW, Adapt Build 2 func.	RDU	RDU	SE	5/12/2025
ATCT 16 (IAH) - Config A - Full TFDM SW	IAH	I90	SC	6/3/2025
ATCT 20 (CMH) - Config B - Full TFDM SW, Adapt Build 2 func.	CMH	CMH	NC	6/23/2025
ATCT 34 (MDW) - Config A - Full TFDM SW	MDW	C90	NC	7/15/2025
ATCT 19 (SJC) - Config B - Full TFDM SW, Adapt Build 2 func.	SJC	NCT	NW	8/4/2025
ATCT 28 (OAK) - Config B - Full TFDM SW	OAK	NCT	NW	8/26/2025
ATCT 30 (TPA) - Config B - Full TFDM SW, Adapt Build 2 func.	TPA	TPA	SE	9/15/2025
ATCT 35 (MIA) - Config A - Full TFDM SW	MIA	MIA	SE	10/28/2025
<b>2026</b>				
ATCT 38 (BOS) - Config A - Full TFDM SW	BOS	A90	NE	3/3/2026
ATCT XX (AUS) - Config B - Full TFDM SW	AUS	AUS	SC	3/31/2026
ATCT 17 (ATL) - Config A - Full TFDM SW	ATL	A80	SE	4/28/2026
ATCT 21 (HOU) - Config B - Full TFDM SW	HOU	I90	SC	6/2/2026
ATCT 42 (SLC) - Config A - Full TFDM SW	SLC	S56	NW	7/7/2026
ATCT 31 (SAN) - Config A - Full TFDM SW	SAN	SCT	SW	8/4/2026
ATCT 40 (CVG) - Config B - Full TFDM SW	CVG	CVG	SE	9/1/2026
ATCT 33 (DEN) - Config A - Full TFDM SW	DEN	D01	NW	9/29/2026
ATCT 37 (DFW - 3 ATCTs) - Config A - Full TFDM SW	DFW	D10	SC	10/27/2026

Completed Site

Site Step Up from B1 to B2



# TFDM Waterfall (2027-2028)

ATCT - Configuration - Functionality Deployed	ATCT	TRACON	SERV AREA	IOC
<b>2027</b>				
ATCT 47 (DAL) - Config B - Full TFDM SW	DAL	D10	SC	3/2/2027
ATCT 39 (MSP) - Config A - Full TFDM SW	MSP	M98	NC	3/30/2027
ATCT 49 (SDF) - Config B - Full TFDM SW	SDF	SDF	SE	4/27/2027
ATCT 27 (ORD - 3 ATCTs) - Config A - Full TFDM SW	ORD	C90	NC	6/8/2027
ATCT 48 (BNA) - Config B - Full TFDM SW	BNA	BNA	SE	7/6/2027
ATCT 41 (IAD) - Config A - Full TFDM SW	IAD	PCT	NE	8/3/2027
ATCT 54 (MEM) - Config B - Full TFDM SW	MEM	M03	SE	8/31/2027
ATCT 43 (FLL) - Config A - Full TFDM SW	FLL	MIA	SE	9/28/2027
ATCT 32 (MCO) - Config A - Full TFDM SW	MCO	F11	SE	10/26/2027
<b>2028</b>				
ATCT 56 (SAT) - Config B - Full TFDM SW	SAT	SAT	SC	2/29/2028
ATCT 45 (DTW) - Config A - Full TFDM SW	DTW	D21	NC	3/28/2028
ATCT 24 (ISP) - Config B+ - Full TFDM SW (+ TFDM/DSP Interface)	ISP	N90	NE	4/25/2028
ATCT 46 (BWI) - Config A - Full TFDM SW	BWI	PCT	NE	5/23/2028
ATCT 62 (PBI) - Config B - Full TFDM SW	PBI	PBI	SE	6/20/2028
ATCT 50 (DCA) - Config A - Full TFDM SW	DCA	PCT	NE	7/18/2028
ATCT 65 (PDX) - Config B - Full TFDM SW	PDX	P80	NW	8/22/2028
ATCT 7 (PHL) - Config A - Full TFDM SW (+ TFDM/DSP Interface)	PHL	PHL	NE	9/26/2028
ATCT 11 (EWR) - Config A - Full TFDM SW (+ TFDM/DSP Interface)	EWR	N90	NE	10/24/2028

# TFDM Waterfall (2029)

ATCT - Configuration - Functionality Deployed	ATCT	TRACON	SERV AREA	IOC
<b>2029</b>				
ATCT 13 (LGA) - Config A - Full TFDM SW (+ TFDM/DSP Interface)	LGA	N90	NE	2/27/2029
ATCT 18 (TEB) - Config B+ - Full TFDM SW (+ TFDM/DSP Interface)	TEB	N90	NE	3/27/2029
ATCT 12 (JFK) - Config A - Full TFDM SW (+ TFDM/DSP Interface)	JFK	N90	NE	4/24/2029
ATCT 23 (HPN) - Config B+ - Full TFDM SW (+ TFDM/DSP Interface)	HPN	N90	NE	5/22/2029
ATCT 66 (PIT) - Config B - Full TFDM SW	PIT	PIT	NE	6/19/2029
ATCT 67 (STL) - Config B - Full TFDM SW	STL	T75	SC	7/17/2029