



Airspace Modernization Roadmap Status Update

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**Federal Aviation
Administration**

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AMR Strategy

Vision

FAA Priorities

COO/Network
Planner/Strategists

Strategic Goals

NAC

HQ Support & Focus Areas:

Inventory Optimization
Concept Advancement
Integration Commitments
Quantitative Data

Safety

Efficiency (Operational Excellence)

- Collaboration
- Use of Data/Analysis
- #1 Priority

Strategic
Initiatives

- Engage stakeholders
- Use of Data/Analysis
- Prioritize through SALTs

Airport Portfolios
Qualitative Data
Airspace Modernization Playbook

Airspace Modernization
Roadmap

Operators

Airport
Portfolio

Service
Area
Leadership
Team

2022

NSG 1 & 2

NSG 1 & 2/
Airspace/TBO

2025

NSG 1 & 2/
Airspace/TBO

NSG 1 & 2/
Airspace/TBO

2030+

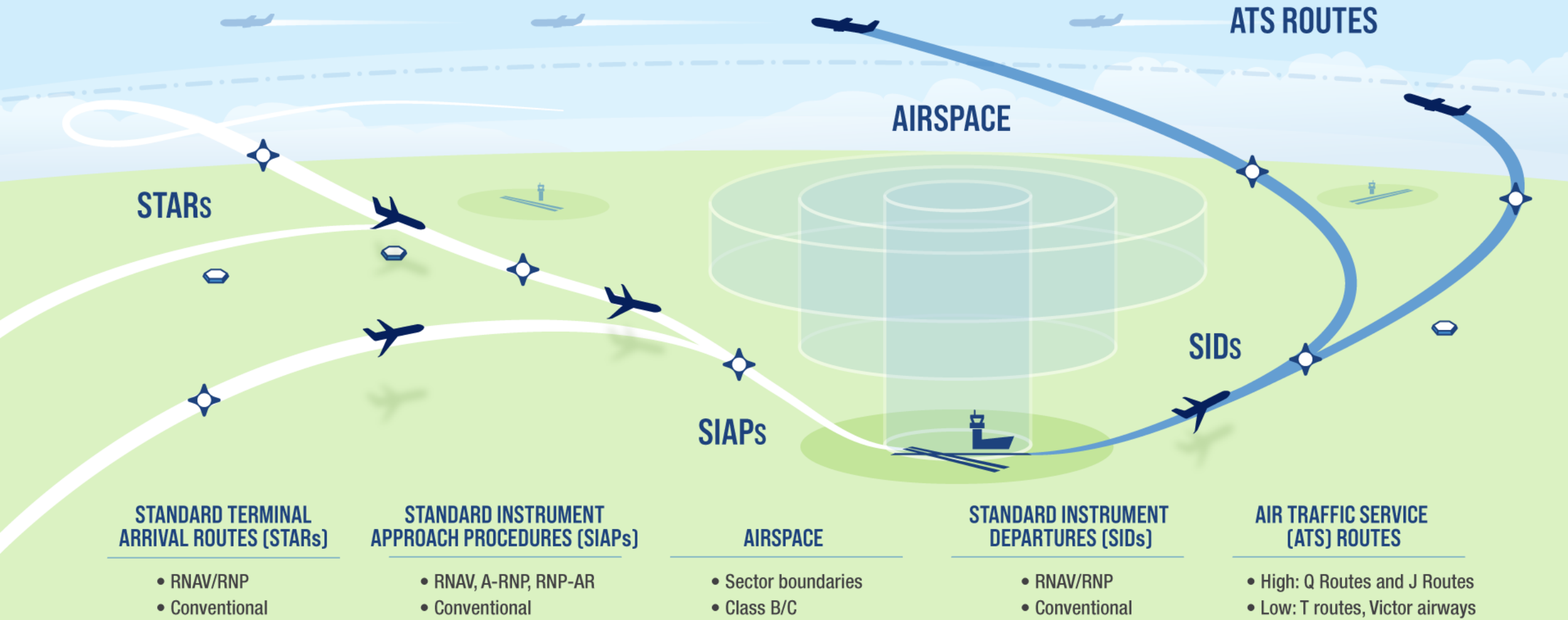
Service Center

Industry

Airspace Modernization – The New Way



Airspace Infrastructure Scope

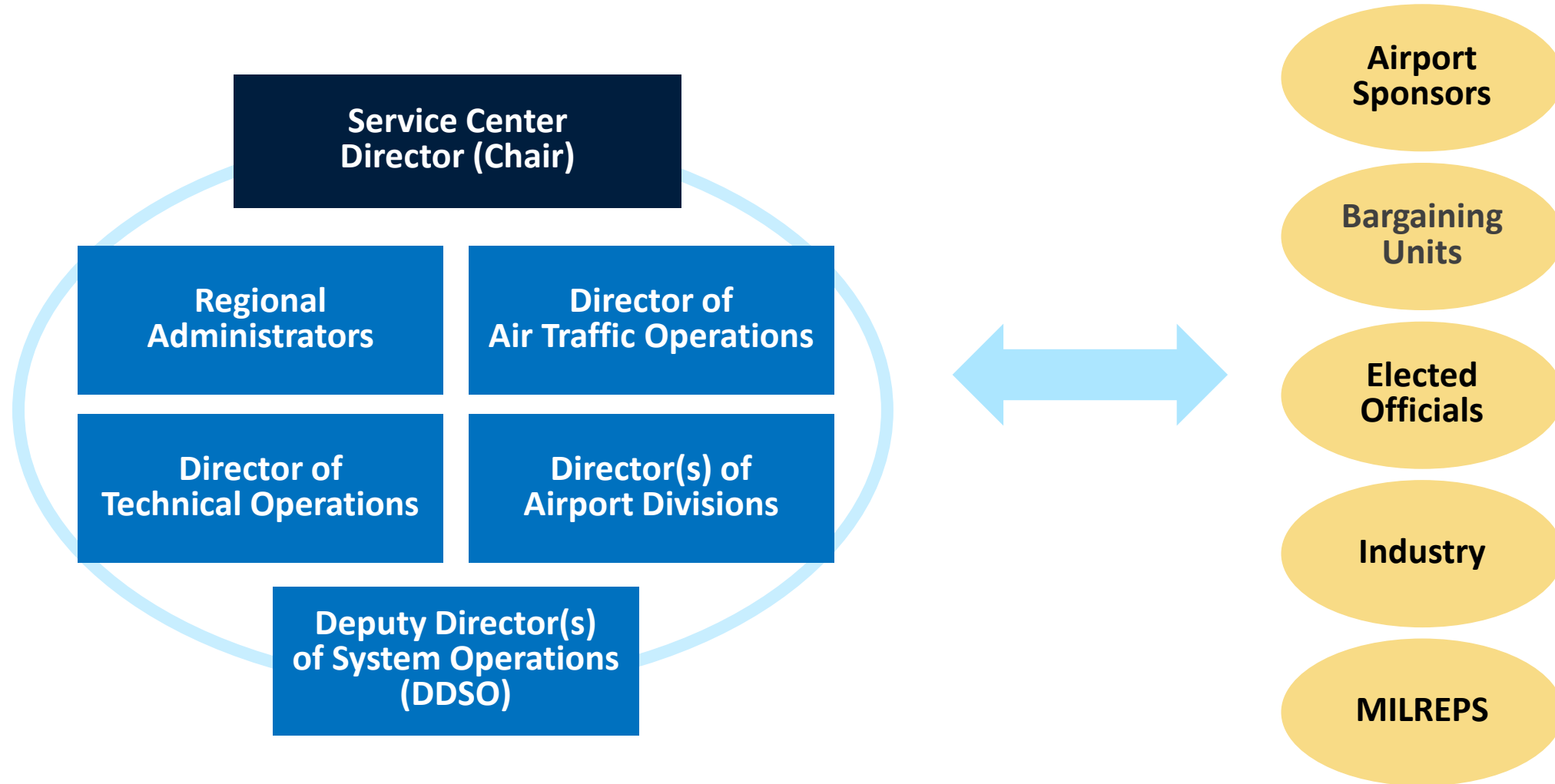


OTHER CAPABILITIES

Trajectory Based Operations (TBO) • Established on RNP (EoR) • Multiple Airport Route Separation (MARS)



Service Area Leadership Team (SALT)



Airspace Modernization Roadmap Update

Criteria

- **Quantitative Data**
 - Safety and Efficiency Metrics derived from:
 - ASAP, FOQA, ARIA, Track Data, Airport Operations, procedure efficiency
 - TBO Efficiency quantitative analysis is being incorporated into AMR
 - Tracks with industry identified metrics from prior NAC tasking, e.g. Time at Level Flight, Track mile efficiency, level off, PBN procedure usage, etc.
- **Qualitative information derived from:**
 - Airspace Complexity, ATC Facility, Community, Industry, Environmental, Legal, Readiness
 - Meetings with AJR and AJT; Incorporating NAS and TBO Efficiency qualitative assessment
 - Criteria will be revisited and revised subsequent to initial site selections

Airspace Portfolios (SharePoint site development)

- **Background** – Internal FAA firewall access SharePoint site developed to provide a secure place to store, organize, share, and access AMR information. The Airport Portfolio is the initial section being developed for the AMR SharePoint site.
- **SharePoint site accomplishments**
 - Developed comprehensive portfolio pages
 - Incorporated qualitative and quantitative scoring factors to aid SALTs decision process
 - Working on future enhancements to further improve storing and sharing AMR data
- **Future activities**
 - New pages and technology to improve interactive pages
- **SALT Site selection focus on NSG 1& 2 airports; incorporating en route airspace**
 - Two modernization site recommendations per Service Area
 - FAA leadership to review and approve

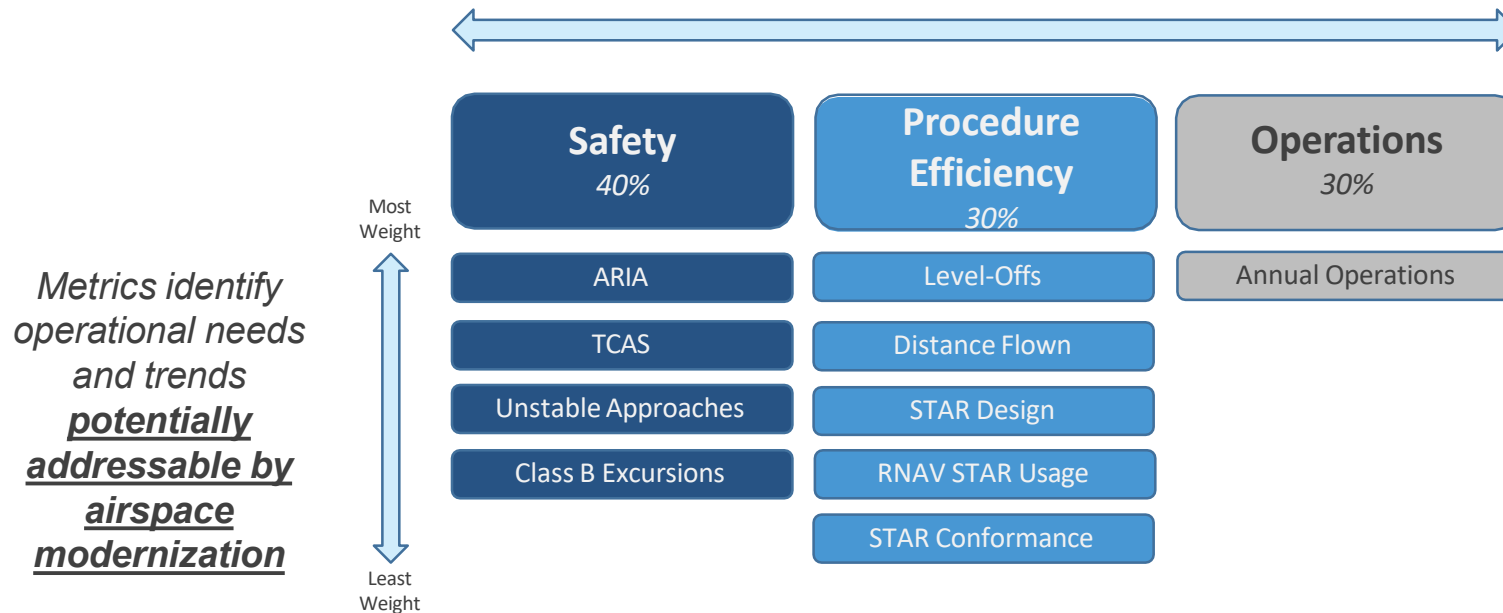


Phase 1: Quantitative Identification of Needs

Phase 1: Quantitative → Phase 2: Opportunity → Phase 3: Feasibility → Phase 4: Site Selection

Qualitative

Metric weights emphasize safety aligning with FAA mission and strategic objectives



Quantitative rankings provide a foundation—qualitative input is needed to fully determine opportunity and feasibility of airspace modernization projects

→ Service Area Top 5 Airport Groups

Eastern
Central
Western

Phase 2: Opportunity Assessment

Phase 1: Quantitative

→ Phase 2: Opportunity

→ Phase 3: Feasibility

→ Phase 4: Site Selection

Qualitative

Quantitative Metrics

Understand **operational factors** causing quantitative results

Identify **potential airspace changes** to address

High-Level Project Scope

Identify **other operational needs** not identified in quantitative

Opportunity Assessment Template

Opportunity Assessment: DCA										
The quantitative rankings provide an initial assessment of the operational needs at an airport. More investigation is needed to understand the operations that contribute to each quantitative metric and determine the opportunity for airspace redesign to address any needs. The opportunity assessments from this workbook will be used to adjust the scores from the quantitative to provide a refined estimate of opportunity for an airspace redesign project at each site.										
<div>Instructions:</div> <div>1. For each metric, collect more information and identify the specific operations that contribute to the quantitative rank shown, focusing more on the higher ranking metrics.</div> <div>2. Once contributing operations are identified, consider airspace/procedure changes that are needed to improve the safety or efficiency metrics.</div> <div>3. Document both the underlying causes and potential airspace/procedure solutions.</div> <div>4. Score the opportunity for airspace redesign, to address each metric and the operational needs it represents.</div>										
	Unusable Approach	Class B Enclaves	TAS	ASIA	Level Flight	Distance Flown	STAR Compliance	BNVY STAR Usage	STAR Design Support for TBM	Other Opportunities (Safety, Efficiency, Access, etc.)
Quantitative Ranking	1	4	40	1	10	20	42	69	9	N/A
Feasibility Assessment	After more detailed investigation, how much opportunity is there to address operational needs through airspace redesign? Questions to consider: - Is the problem large in scale, impacting many operations and/or posing a significant challenge? - Is it likely that airspace redesign could address the problem? More affirmative answers to these questions indicate greater opportunity.									
Notes	Higher risk outside approach primarily used on RWY 18. Restricted airspace both opportunity to redesign approach. RWY 18 approach already exists. Planned RWY 18 approach for 2025.	Redesign of Class B airspace would address excessive that every priority for the TPOPS & REDM arrival to the VFR area of Class B airspace.	Not Evaluated	Redesign of Class B airspace including route changes would provide additional separation from helicopters which contribute to most ASIA events at DCA.	Level-offs on some arrival flows could be addressed but would require complex airspace changes.	Unlikely opportunity to reduce distance flown and changes would require substantial effort considering additional traffic.	Not Evaluated	Not Evaluated	Speed constraints could be relaxed for all STARs. STARs and LDPs could be relaxed but require more effort than STARs to increase at 4,000 or above and LDPs start around 2,500. The plan to remove altitude at DCA or may have limited impact on operations.	Other opportunities will be described in the final report and opportunities that are not covered by the quantitative metrics.

Phase 3: Feasibility Assessment

Phase 1: Quantitative → Phase 2: Opportunity → Phase 3: Feasibility → Phase 4: Site Selection

Qualitative

Capture **factors that may impact the ability** to make airspace changes at a site

Potential Considerations

- ATC Buy-In
- Industry Interest
- Airspace Complexity
- Community Concerns
- Environmental
- Legal
- Readiness

Feasibility Assessment Template

Categories and Descriptions	Select Impediment Level	Description (Required)
ATC Facility ATC Facility interest in/ buy-in for new projects; facility staffing levels/SME availability High = little desire for proposed projects from ATC Facility; lack of facility interest, or lack of staffing availability could significantly impact FAA ability to pursue proposed project Medium = moderate interest from the facility in new projects, moderate staffing availability Low = Great interest in/strong desire for new projects, and/or high staffing availability which would increase FAA ability to pursue proposed project	<div style="text-align: center;"> <input type="range"/> </div> <div style="display: flex; justify-content: space-between;"> Low High </div>	High level of interest. No known staffing issues.
Industry Industry expressed needs, proposed work (whether in IFP gateway or not), industry interest in/desire for changes High = industry is uniformly against proposed changes Medium = some portions of industry but not all have expressed interest in the proposed changes/project Low = industry is uniformly in favor of proposed changes / project	<div style="text-align: center;"> <input type="range"/> </div> <div style="display: flex; justify-content: space-between;"> Low High </div>	There is no expressed industry desire for or against the changes outside of those included in the PBN Ad-Hoc requests.
Airspace Complexity Special Use Airspace, nearby facilities, Letter of Agreement (LOAs), traffic conflicts with nearby airports High = there are SUAs, adjacent facility airspace/operations, or specific LOAs that would have a severe, negative impact on FAA ability to pursue proposed project Medium = there may be some SUA, adjacent facility airspace/operations, or specific LOAs with minor impact on FAA ability to pursue proposed project Low = there is no anticipated impacts from SUA, adjacent facility airspace/operations, or LOAs that would impede proposed project	<div style="text-align: center;"> <input type="range"/> </div> <div style="display: flex; justify-content: space-between;"> Low High </div>	P16 limits updates to DCA approaches. Multiple airports within tight airspace, but airspace is owned by one facility.
Community High = high opposition from community to proposed changes; changes occur in areas where communities or politicians have had a high degree of interest or opposition to previous airport or FAA activities, or in areas with mandatory noise abatement restrictions or procedures; Medium = moderate community engagement; changes occur in areas with some history of noise complaints or public/political opposition; proposed changes are unlikely to impact the specific communities that have voiced opposition in the past Low = changes occur in an area with no history of noise sensitivity or public/political opposition; community engagement in general is minimal or no changes occur over noise-sensitive areas	<div style="text-align: center;"> <input type="range"/> </div> <div style="display: flex; justify-content: space-between;"> Low High </div>	Many vocal communities surrounding the airport with government influence.

Phase 4: Site Selection

Phase 1: Quantitative

→ Phase 2: Opportunity

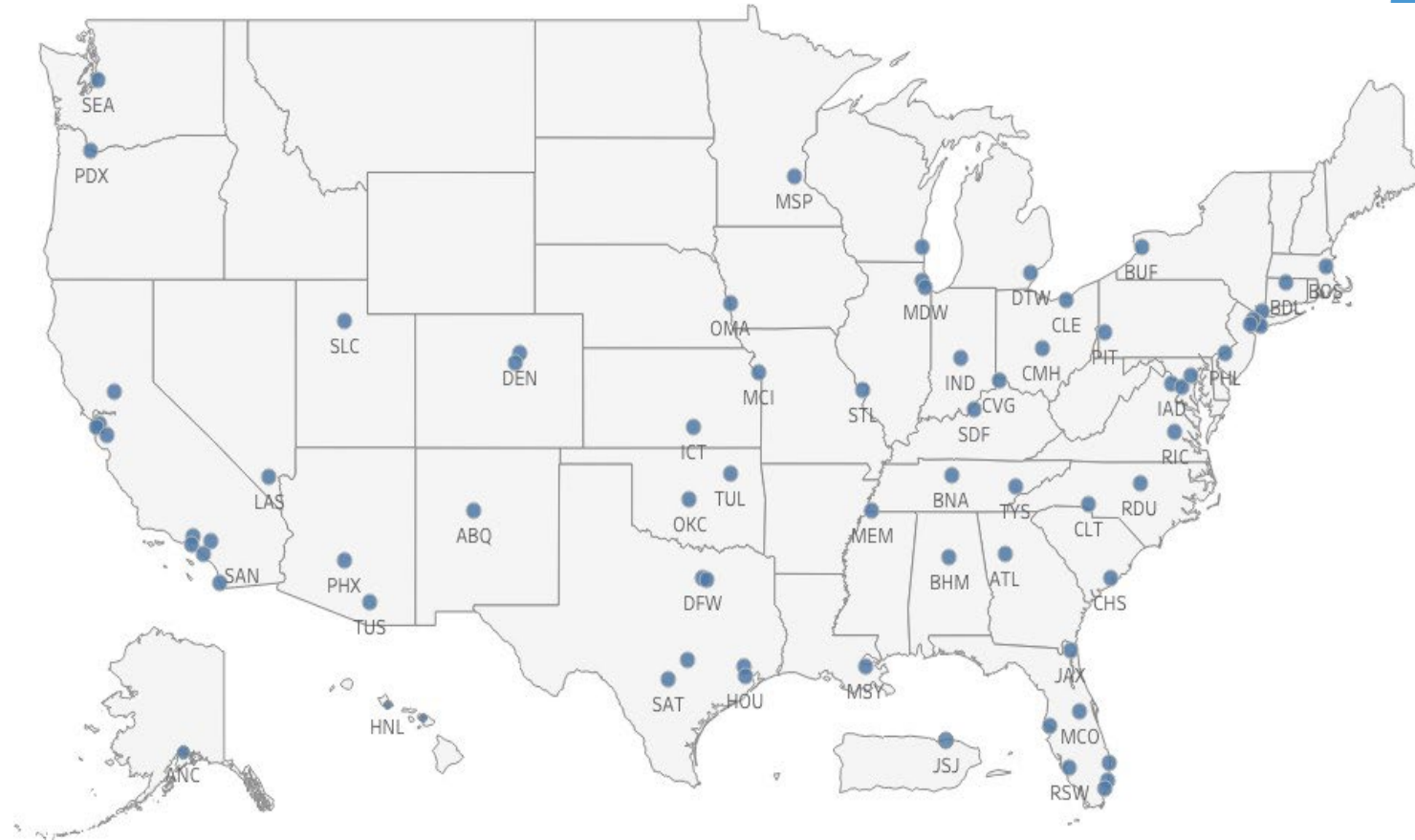
→ Phase 3: Feasibility

→ Phase 4: Site Selection

Qualitative

Quantitative and qualitative inputs are considered ***in combination*** for site recommendations

Schedule-related factors are also considered



Discussion

