Overview of Departure Procedures to Consider for Noise Abatement

Briefing to the Fly Quiet Committee of the O'Hare Noise Compatibility Commission

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Overview

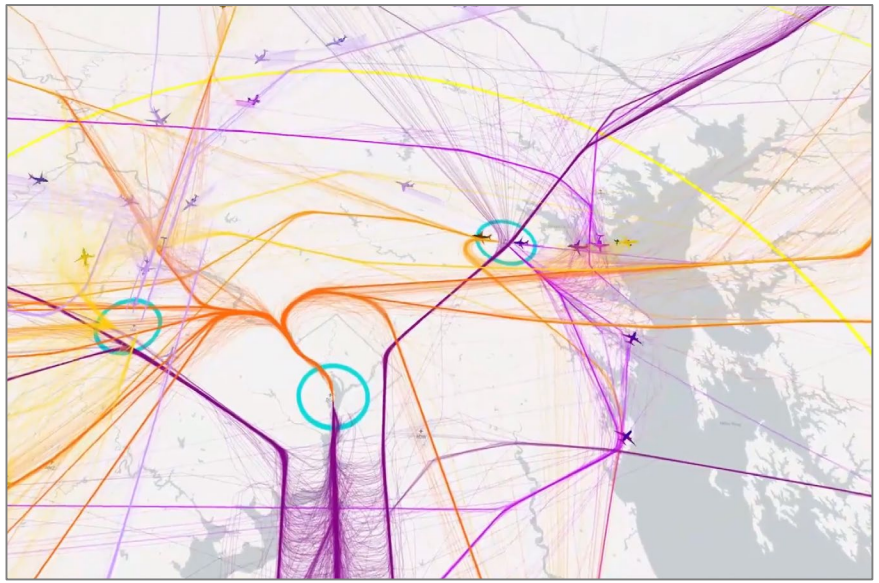
- Airspace System and Procedure Development
- Options for Departure Procedures
- Summary

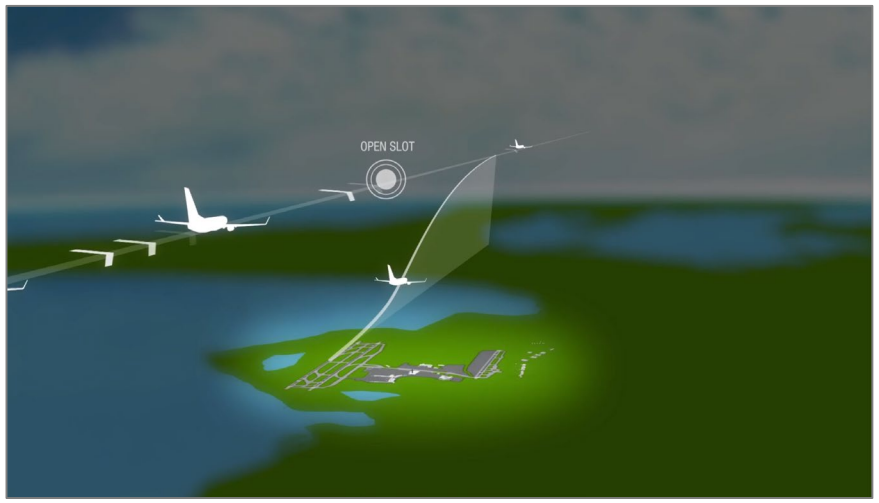
Modernization of the National Airspace System

- Reducing complexity
- Increasing safety and efficiency
- De-conflicting operations between airports
- Ensuring that our operations keep pace with changes in equipment and the users of the system

What is a Flight Procedure?

- Similar to a network of highways, from airport to airport
- Avoids obstacles and terrain
- Segregates air traffic
- Provides safe passage through the skies





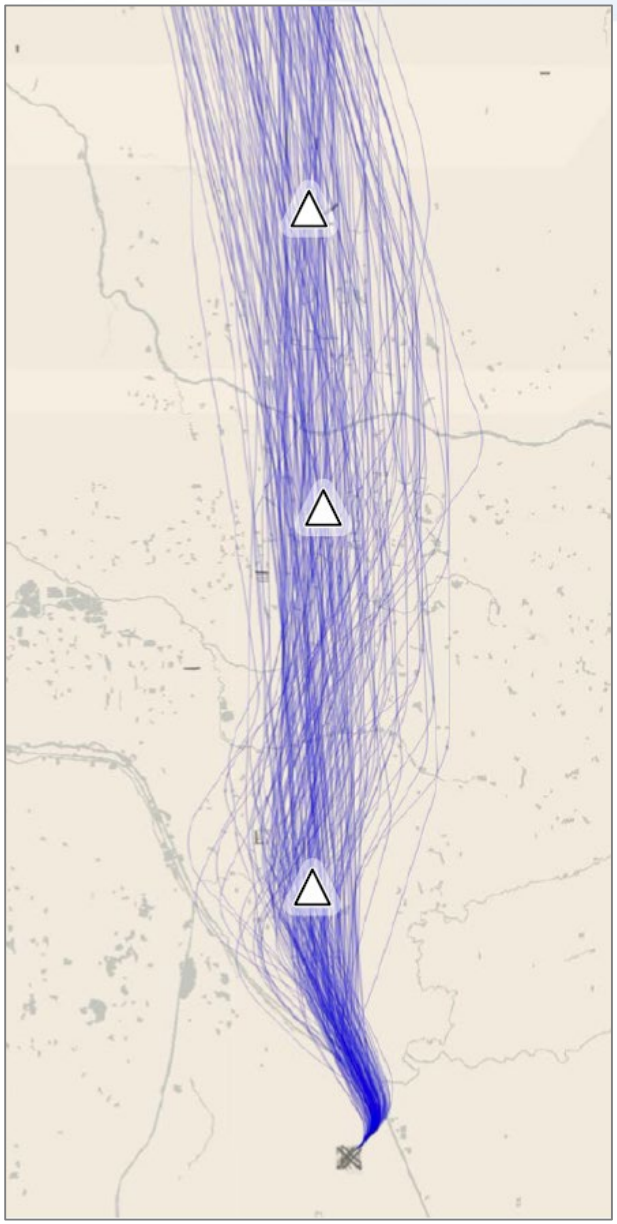
Departure Procedures

- In general, there are four types of departure procedures:
  - Conventional
  - Open Standard Instrument Departure (SID)
  - Area Navigation (RNAV) Off the Ground
  - RNAV Vector SID
- Not all of these types may be feasible for operations at ORD

The current ORD Fly Quiet Program uses conventional departure procedures

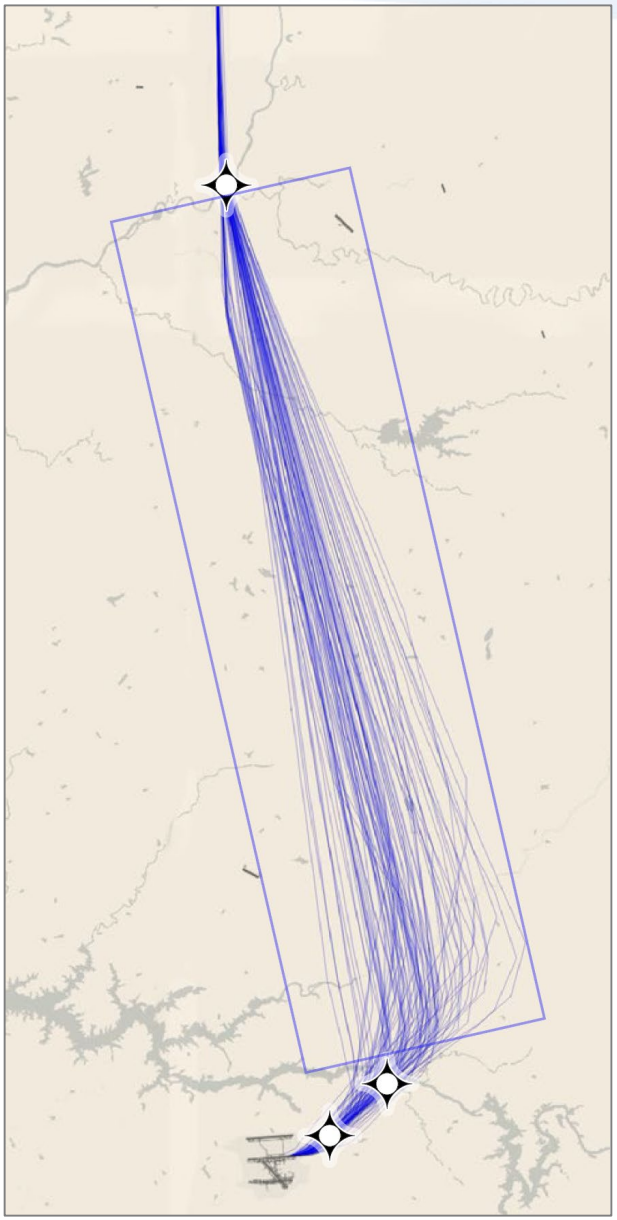
Conventional Departure

- Uses ground-based navigational aids and controller guidance
- Less flight path precision than Performance Based Navigation (PBN)
- Flights are given headings upon departure



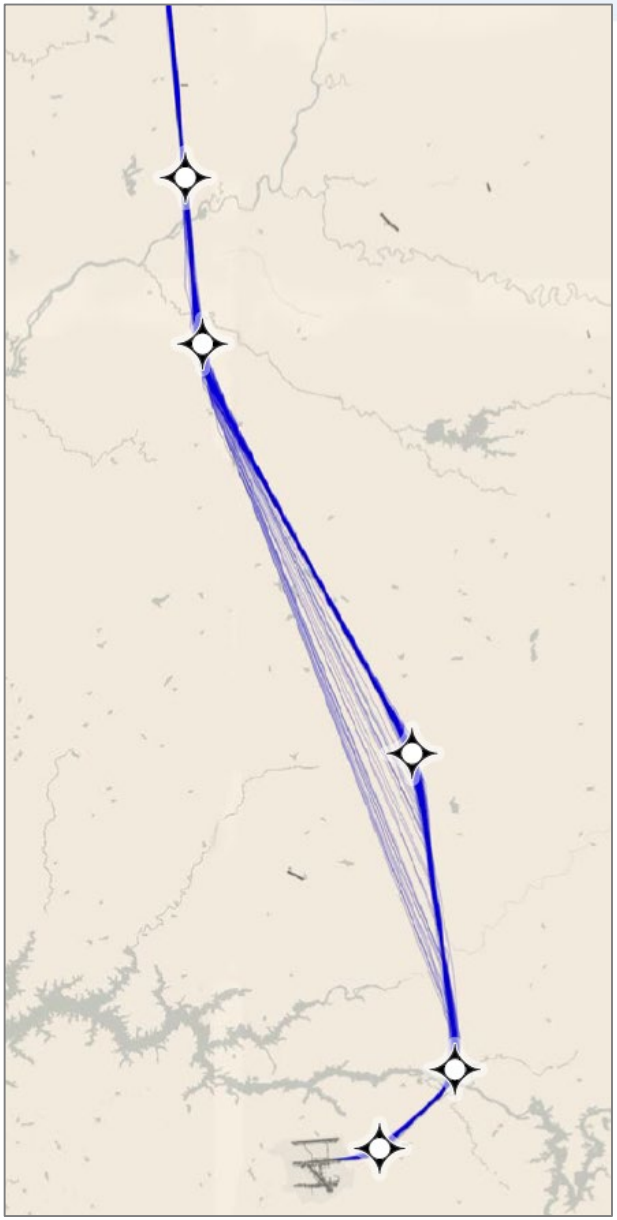
Open SID

- Uses an initial RNAV track
- Uses controller guidance for a portion of the flight path (dispersed area)
- The paths become concentrated farther away from the airport



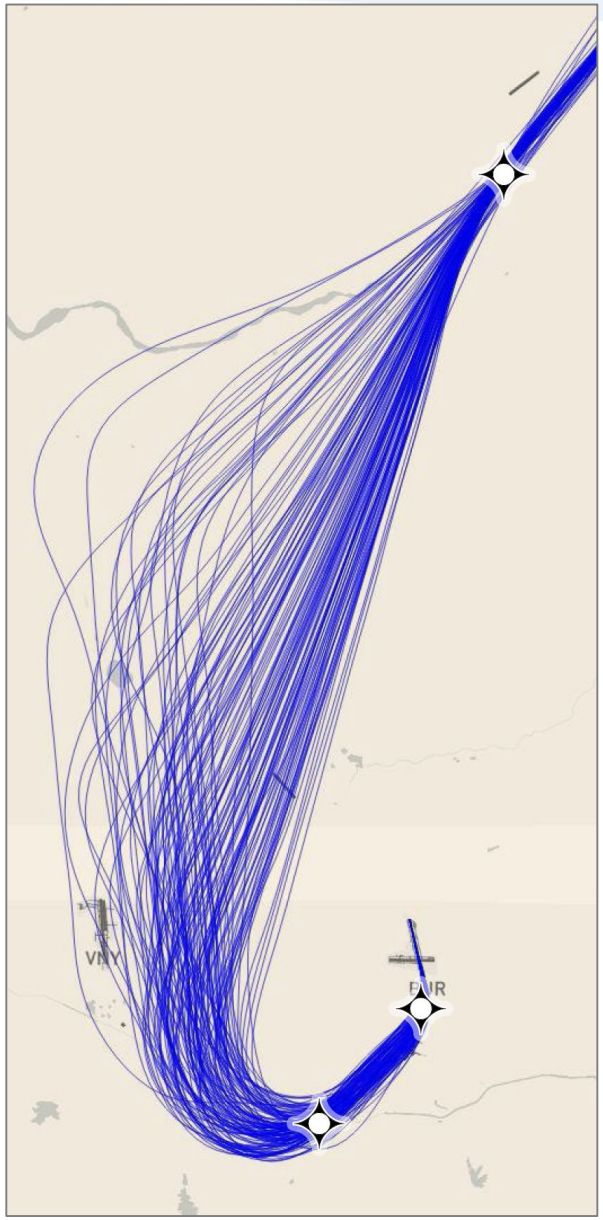
RNAV Off the Ground

- A very precise navigation path
- Aircraft may skip a waypoint along the procedure with controller direction



RNAV Vector SID

- Air Traffic directs aircraft to depart via a directional heading
- Aircraft join the RNAV procedure further from the airport



Developing a New Procedure

A new flight procedure must consider:

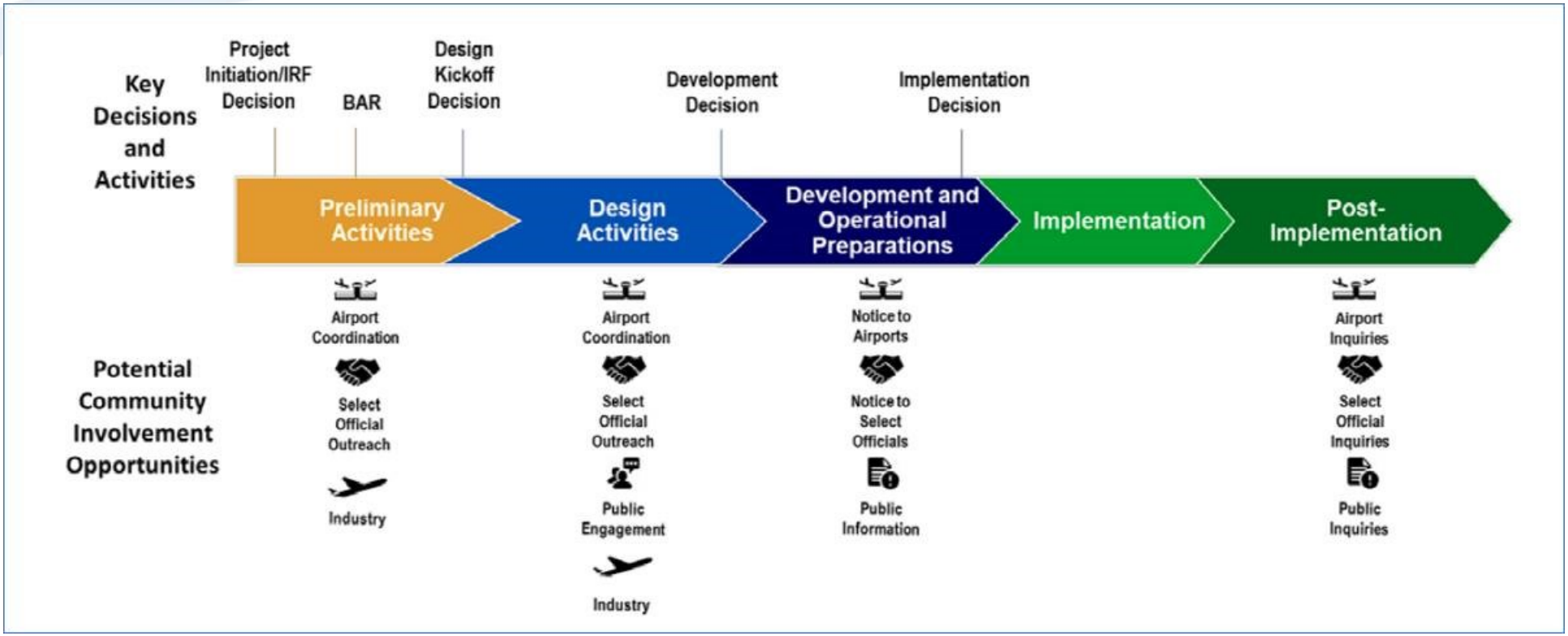
- Safety
- Feasibility
- Airspace complexity
- Efficiency
- Environmental
- Public Engagement

Safety Management System (SMS)

The Air Traffic Organization (ATO) Safety Management System (SMS) is an integrated collection of principles, policies, processes, procedures, and programs used to identify, analyze, assess, manage, and monitor safety risk in the provision of air traffic management and communication, navigation, and surveillance services.

- Safety Policy
- Safety Promotion
- Safety Assurance
- Built upon International Civil Aviation Organization (ICAO) guidance.

Design and Implementation Process



A well-defined multi-step process which can take a number of years to complete depending on complexity and the level of environmental review

Summary

- Any new procedure must be feasible technically, operationally, and approved for environmental impact
- With the development of new procedures the FAA looks for opportunities to incorporate requests from the Airport and Airport sponsored Roundtables
- Of the available options, not all may be feasible specifically at ORD