# PHILADELPHIA 2026

AIRPORTS COUNCIL INTERNATIONAL – NORTH AMERICA
ANNUAL CONFERENCE AND EXHIBITION
SEPTEMBER 14 – 17, 2026

# SESSION 1.3 –
# AIRPORT FACILITY OPTIMIZATION: NEW PLANNING FRONTIERS


**Moderator**
**Chris DiPrima**
*Airport Planning Manager*
San Francisco Airport Commission

**Panelists**
**Belinda Hargrove**
*Managing Principal*
Transsolutions

**Chris Liese**
*Head of Market, North America*
Munich Airport International

**Darcy Zarubiak**
*Managing Director*
RoVolus


1:15 PM-2:00 PM | September 14, 2026

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# Accelerating Decisions with Non-Regulatory Models

ACI-NA – Annual Conference
September 14, 2026

The Journey of
Making a Decision

# Aspects of Making an Airport Facility Decision

- Objective (Purpose & Need)
- Financial Resources
- Feasibility
- Time
- Cost
- Constraints

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- Cost
- Constraints
  - Space
  - Geometry
  - Existing Facilities
  - Safety
  - Environment

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# Aspects of Making an Airport Facility Decision

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Establishing
Environmental
Constraints is Expensive

# Noise is a key Environmental Constraint

- Noise analysis requires modeling
- Noise modeling with FAA's required model (AEDT) can take a couple of weeks for a single scenario
- Noise modeling is pushed to the end of a decision because it is expensive and time consuming
- Alternative analysis during the decision-making process is handicapped because there aren't noise results available to understand the potential constraint
- Running noise modeling at the end simply validates choices rather than informing choices

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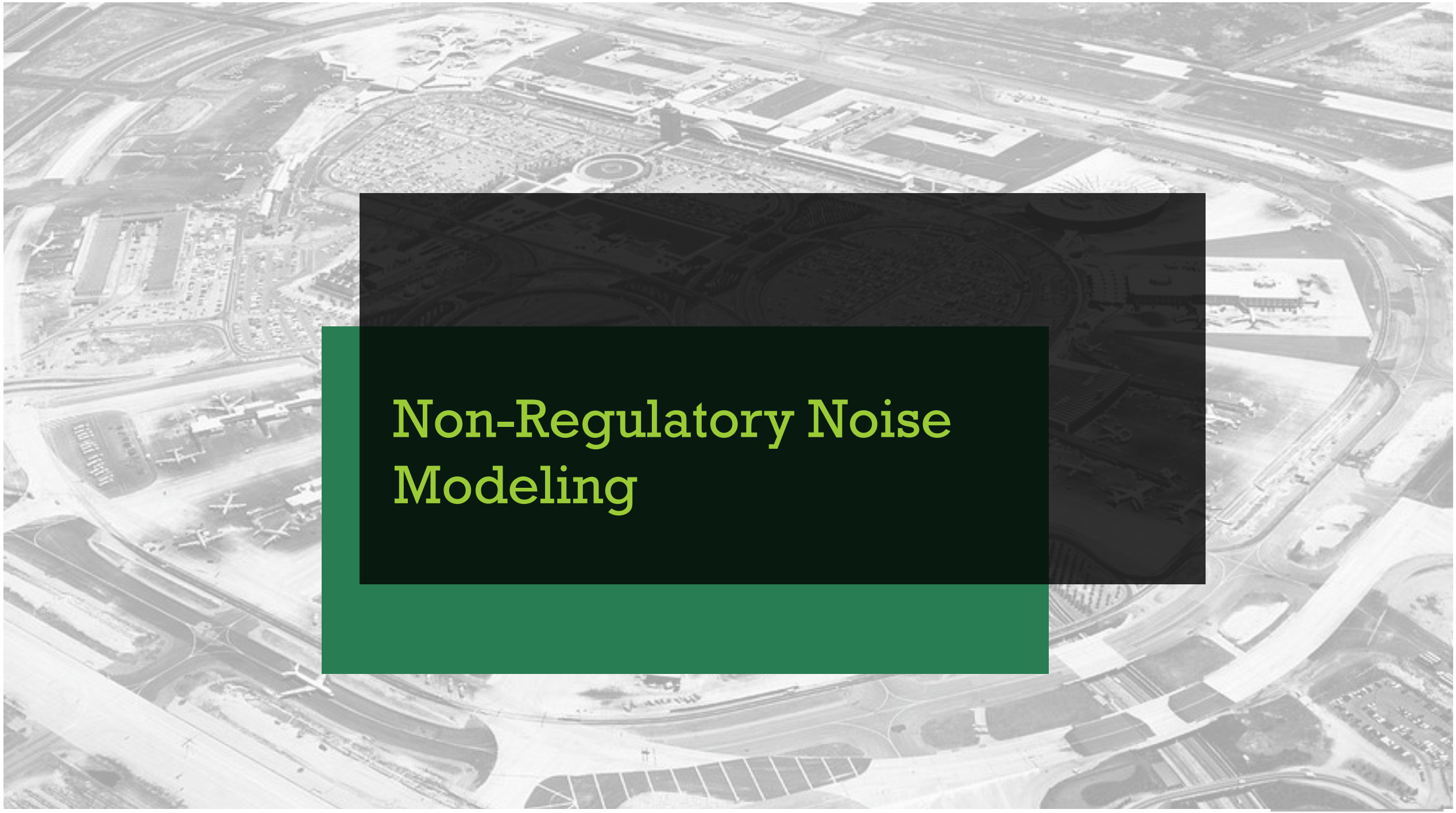


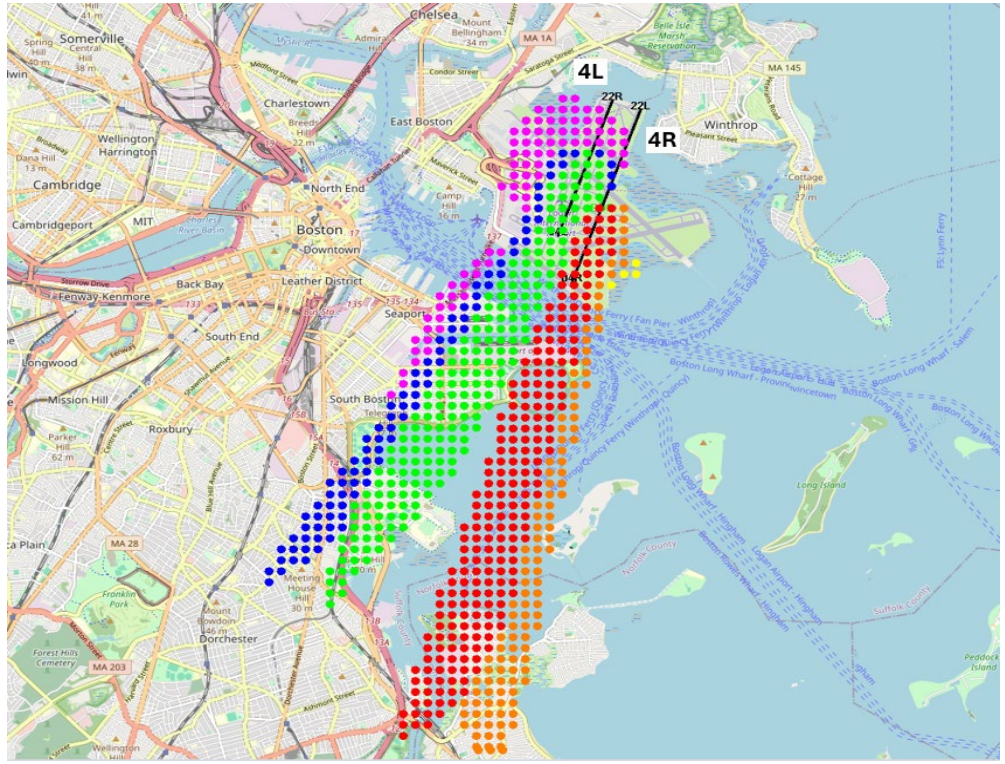
# Non-Regulatory Noise Modeling

# Non-Regulatory Approach

- **AEDT IS FAA'S REQUIRED MODEL FOR NOISE ANALYSIS.**
- RoVolus uses a nonregulatory model that produces noise results close to those produced by AEDT
- Data ingestion can be expedited
- Modeling time for scenarios with this non-regulatory model is often less than a couple of hours
- Output is not suitable for regulatory purposes, but can greatly inform the planning process and properly assess which scenarios should be subjected to analysis with the regulatory model

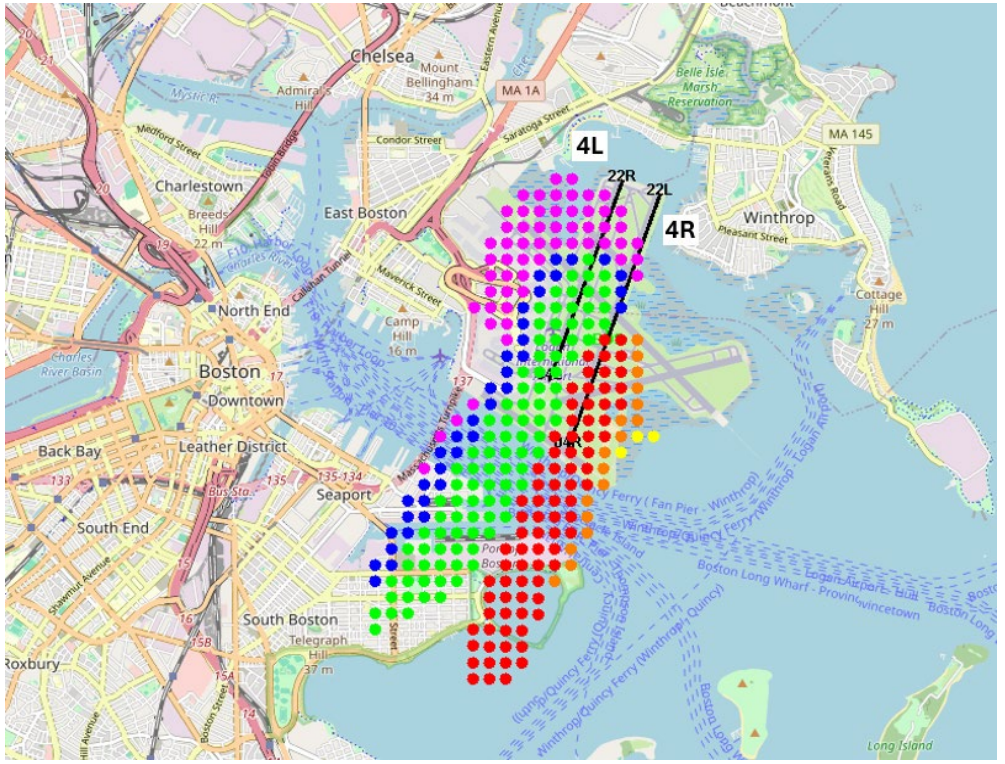
# Examples of Non-Regulatory Results

# Examples – Runway Use Change




Parallel Runway Route Change – Noise Impacts

Flights changed to arrive on runway 04R, instead of 04L with Procedure for 04R




Parallel Runway Route Change – Noise Impacts

Flights changed to arrive on runway 04R, instead of 04L

Only changed landing node instead of route

| | 65 dB or higher | 60–65 dB | 45–60 dB |
|---|---|---|---|
| Minimum change in DNL with Alternative | 1.5 dB | 3.0 dB | 5.0 dB |
| Impact | Significant | Slight to Moderate | Slight to Moderate |
| Noise Increases | | | |
| Noise Decreases | | | |

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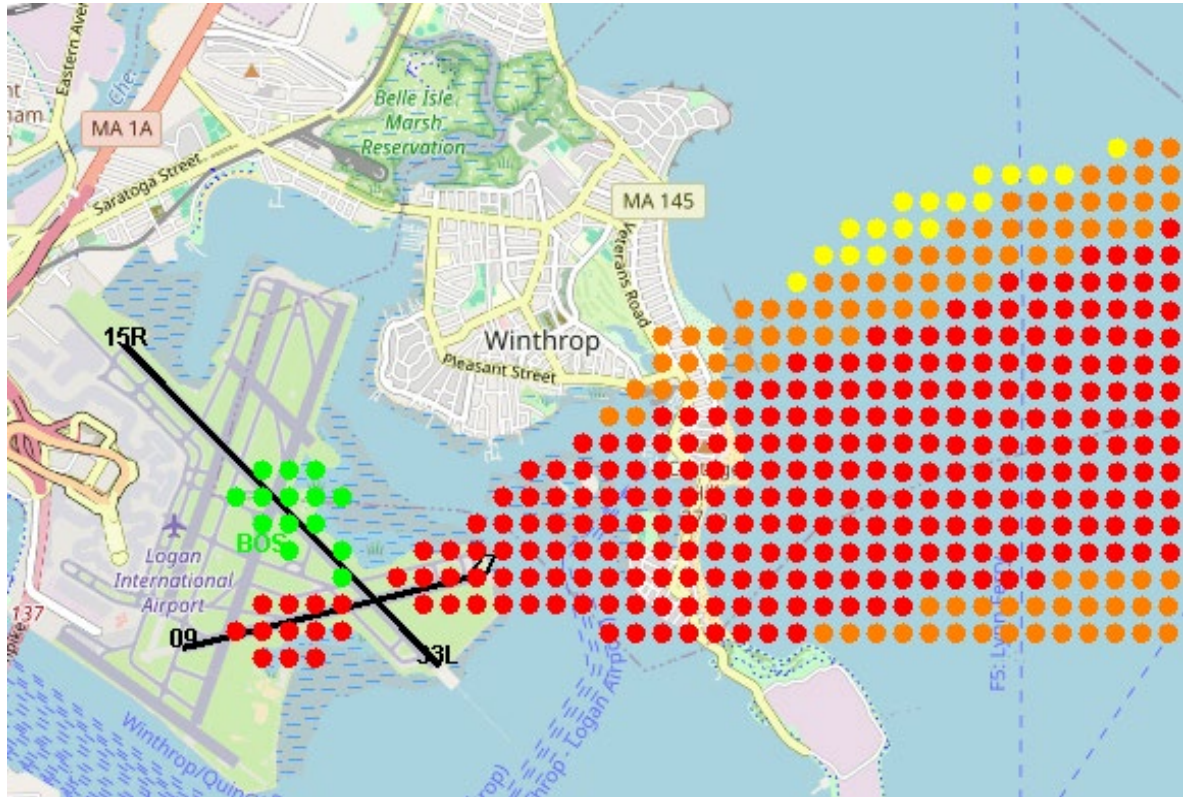
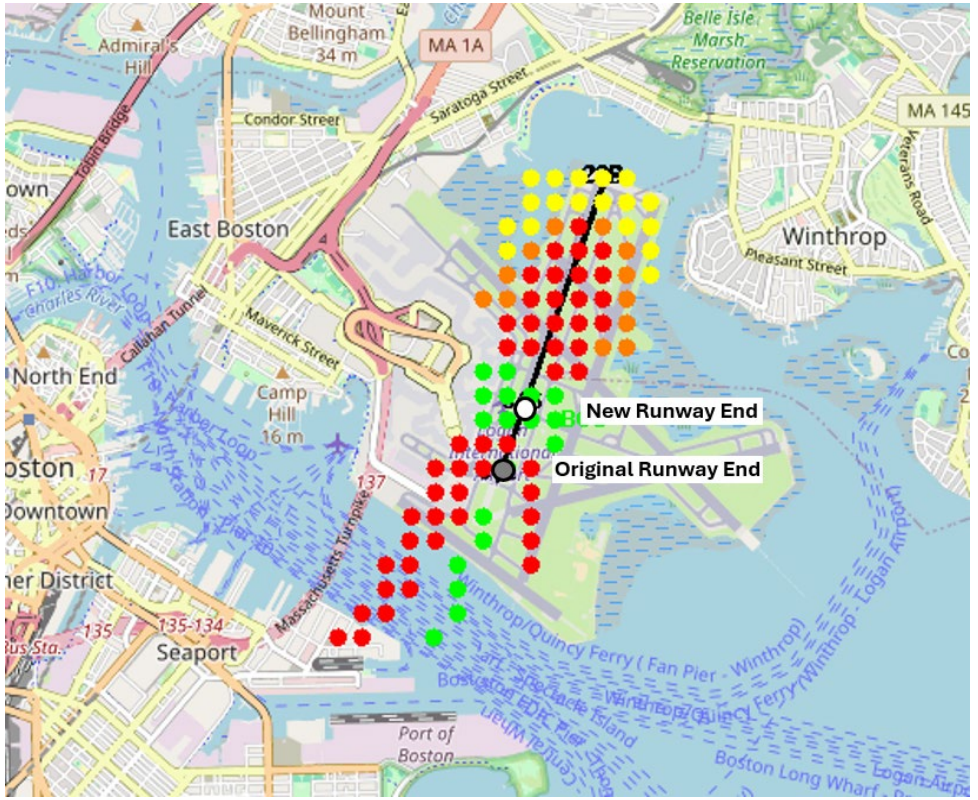
# Examples – Move Large Aircraft to Alternate Runway Displaced Threshold




Narrow Body Restriction on 15R – Wide Bodies Move to 09




Displaced Threshold Runway 04L – Noise Impacts

| | 65 dB or higher | 60–65 dB | 45–60 dB |
|---|---|---|---|
| Minimum change in DNL with Alternative | 1.5 dB | 3.0 dB | 5.0 dB |
| Impact | Significant | Slight to Moderate | Slight to Moderate |
| Noise Increases | | | |
| Noise Decreases | | | |

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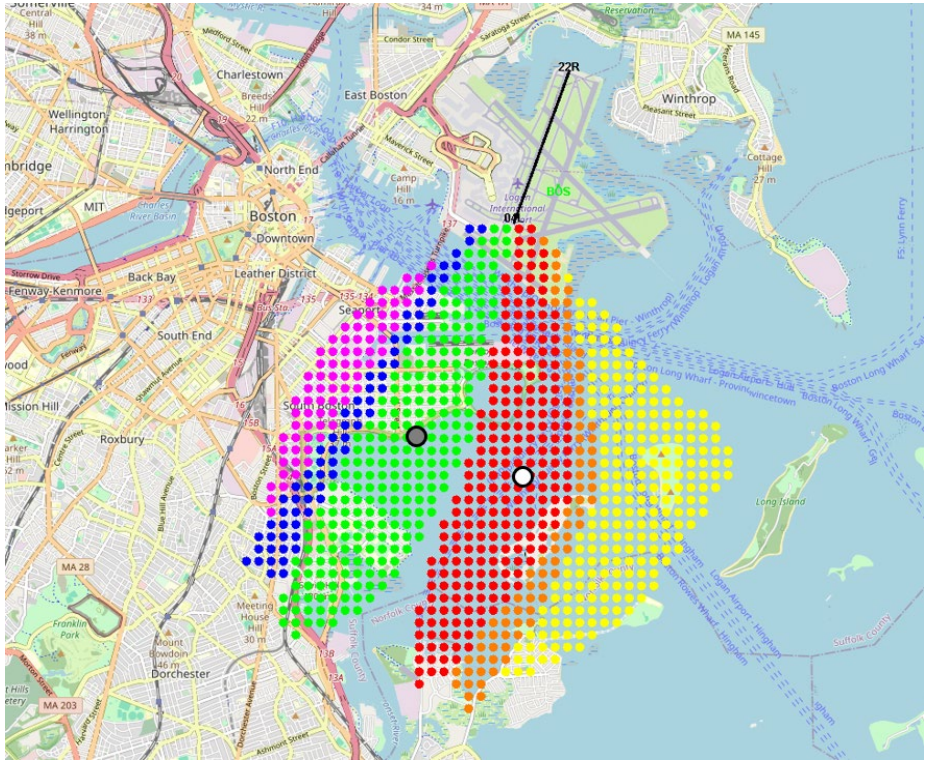
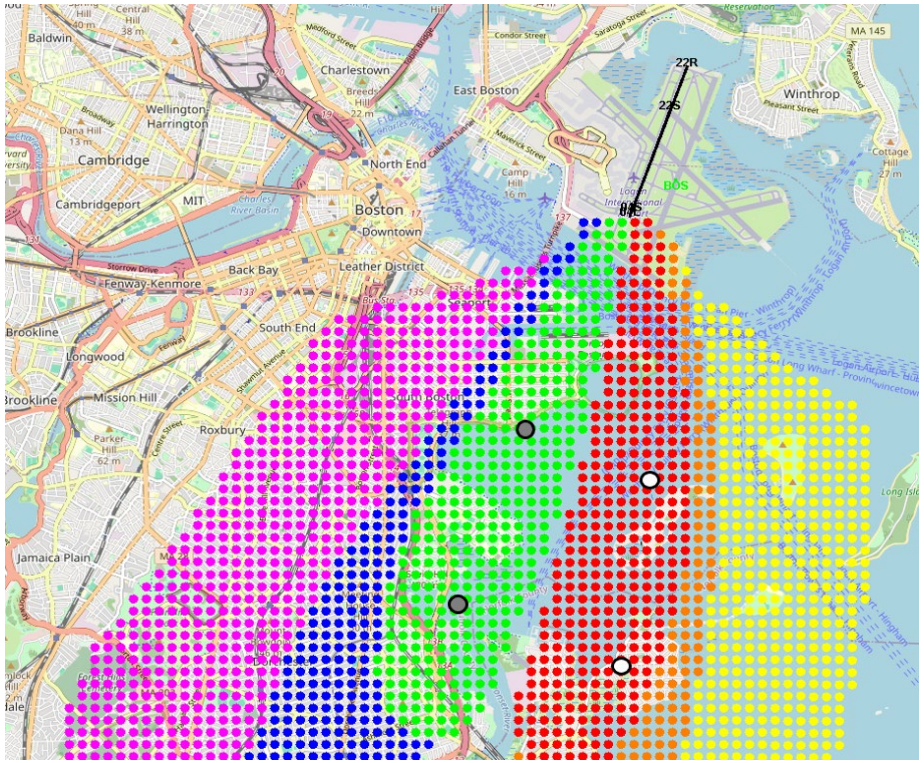
# Examples – Change Waypoint(s)




## Move Single Node

Node moved to the east.
Original Node Location
New Node Location

| | 65 dB or higher | 60–65 dB | 45–60 dB |
|---|---|---|---|
| Minimum change in DNL with Alternative | 1.5 dB | 3.0 dB | 5.0 dB |
| Impact | Significant | Slight to Moderate | Slight to Moderate |
| Noise Increases | | | |
| Noise Decreases | | | |

## Move Two Nodes

Nodes moved to the east.
Original Node Locations
New Node Locations

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# Questions

**Darcy Zarubiak, P.E., REM**

**RoVolus**

**214 551-7651**

**darcy@rovolus.com**

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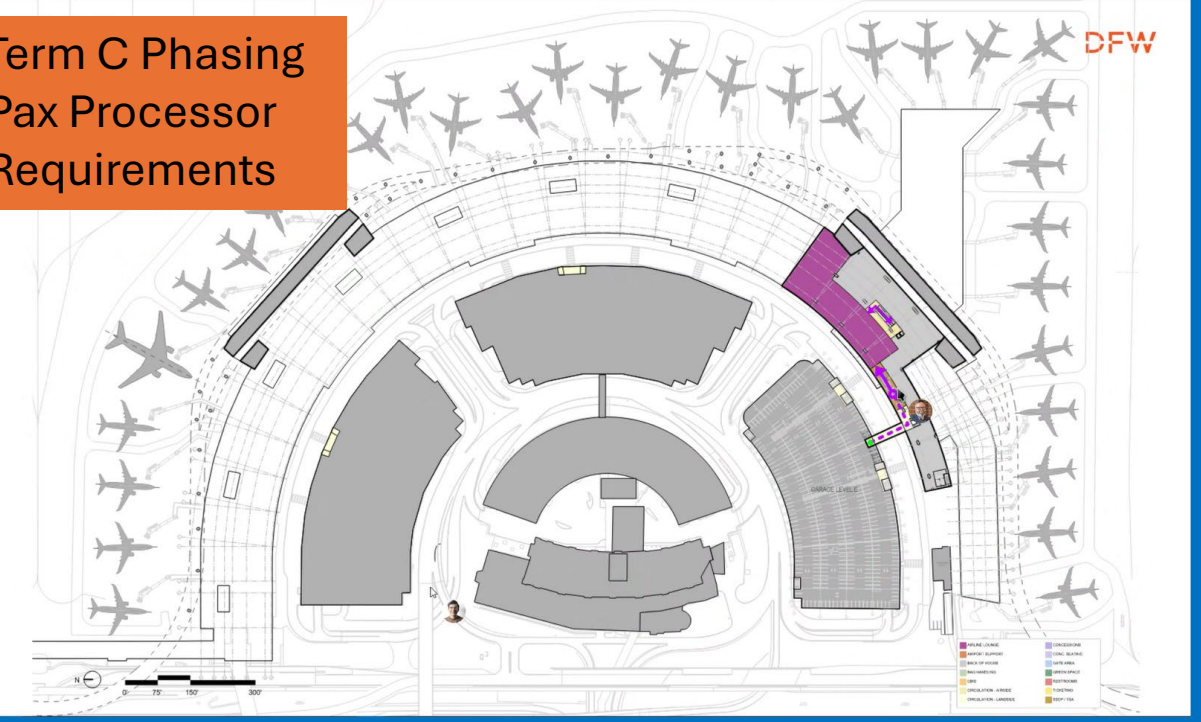
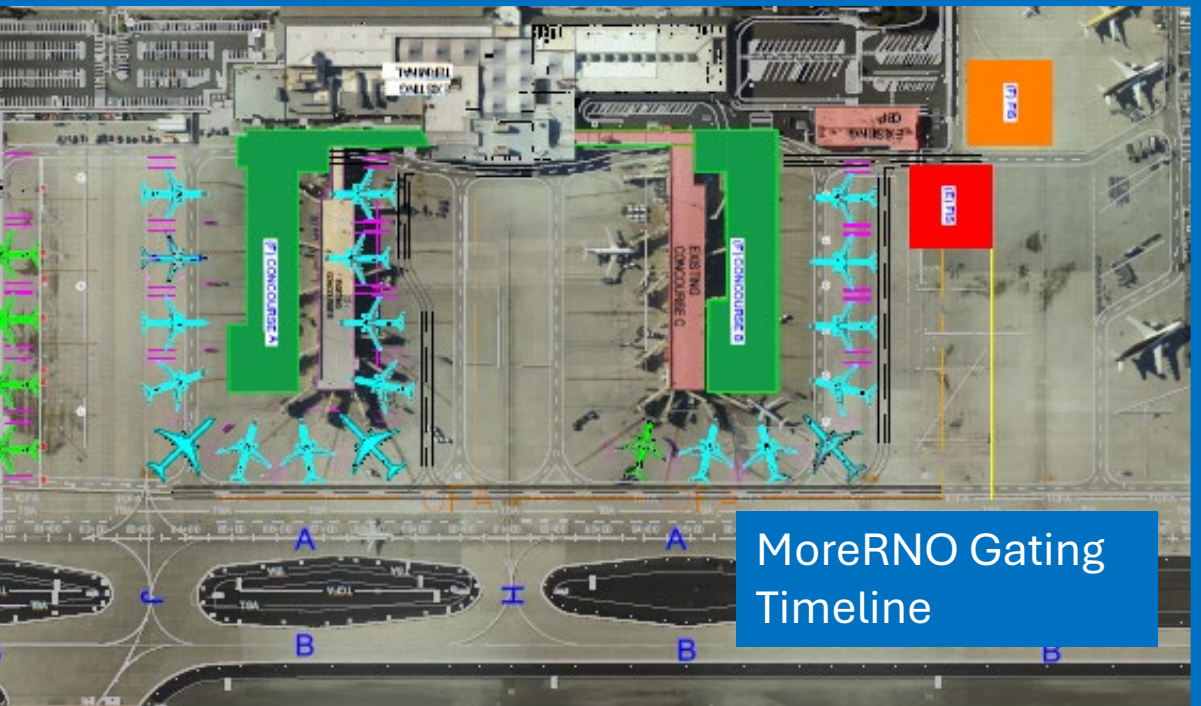
Term C Phasing
Pax Processor
Requirements




PHL Taxiway
Reconstruction




MoreRNO Gating
Timeline

IAH Terminal B
Roadway

MUNICH AIRPORT CONTROL CENTER (MACC 360) INITIATIVE

# Currently Underway at Munich Airport: Consolidating 19 Control Centers Into One by 2028

## 1 The shift

From Silos to: **One team, one plan**

From Intuition to: **Data-driven decisions**

From Firefighting to: **Proactive steering**

From Local fixes to: **End-to-end ownership**

## 2 How it works

**Plan**
Match demand and capacity before the day starts

**Execute**
Steer live operations from one shared picture

**Recover**
Get back to plan faster after every disruption

## 3 What it delivers (Estimates)

**19 → 1** control centers

**10-15%** lower operating cost

**+5%** spend per passenger

## Roadmap to go-live

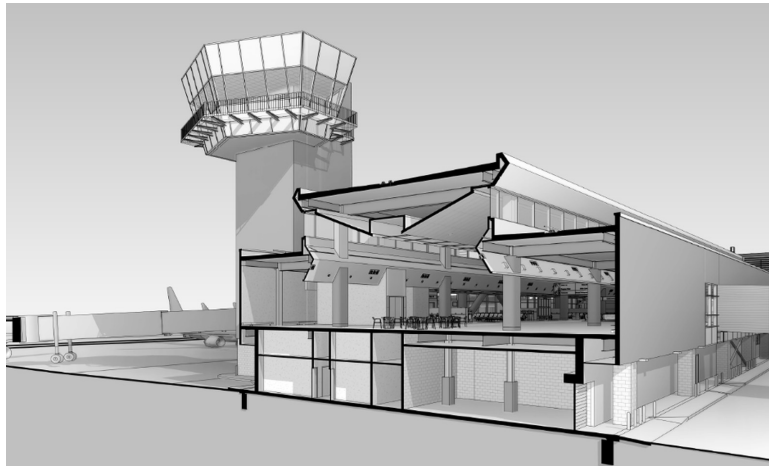
**Project Setup & Stakeholder Coordination**
Status quo and benchmarking – done

**Concept, room and IT**
Operating model and facility – underway

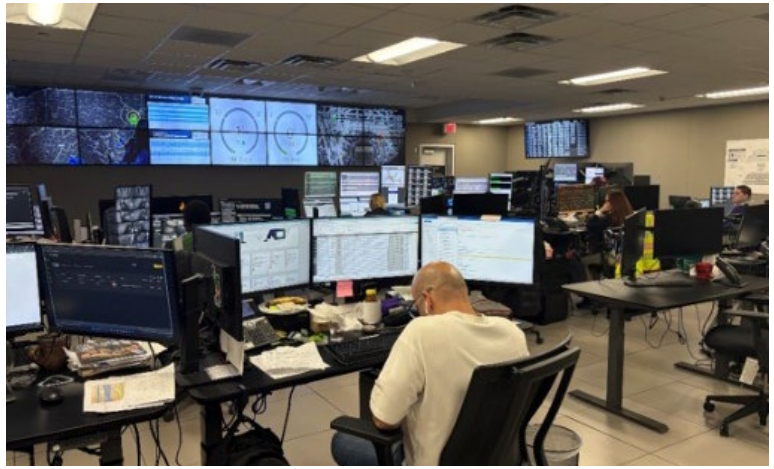
**MACC 360 live in 2028**
Training and go-live

NEWARK LIBERTY INTL. AIRPORT, TERMINAL A – INTEGRATED TERMINAL OPERATIONS CONTROL CENTER (ITOCC)

# From a Planned New Ramp Tower to One Integrated Control Room For All Stakeholders at EWR's Terminal A



**Original Plan (Replaced by ITOCC)**
A new ramp control tower



**Inside the ITOCC**
Airlines, terminal operator, others in one room

**Virtual Apron Control Room**
Apron control without a tower

### One room, three functions

**TOC:** Terminal-wide coordination

**VACR:** All aircraft movements on the apron

**Situation Room:** Leadership when it counts

### What optimizing the facility delivered

**-95%**
Cost versus the planned tower

**33**
Gates controlled

**4 + 1**
Workstations run the whole apron

**Scalable**
Add cameras, not concrete

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