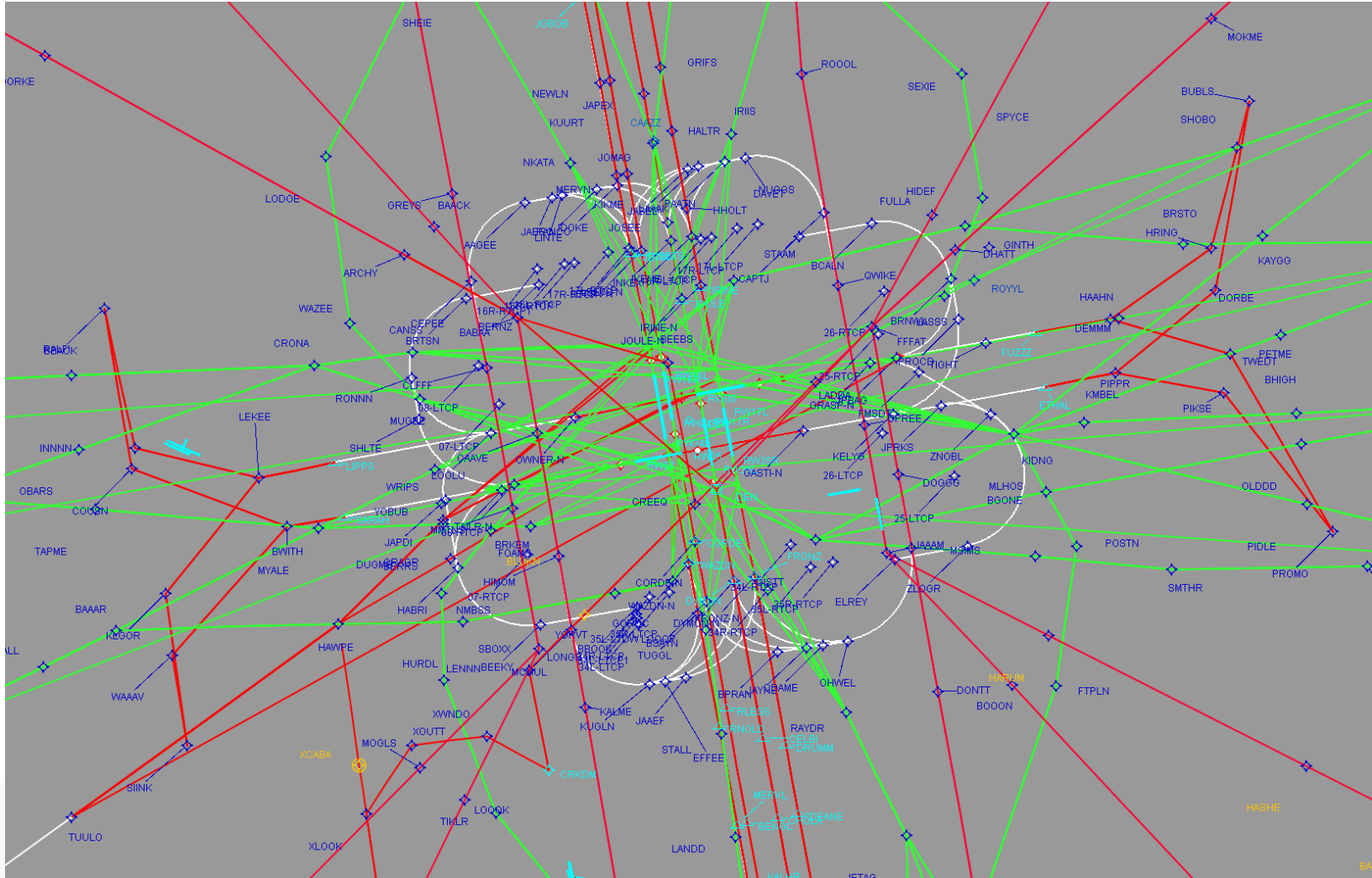




DENVER – A PBN SUCCESS STORY

MIKE MCKEE
NOISE ABATEMENT MANAGER
MARCH 4, 2019

DENVER NEXTGEN RNAV/RNP DESIGN

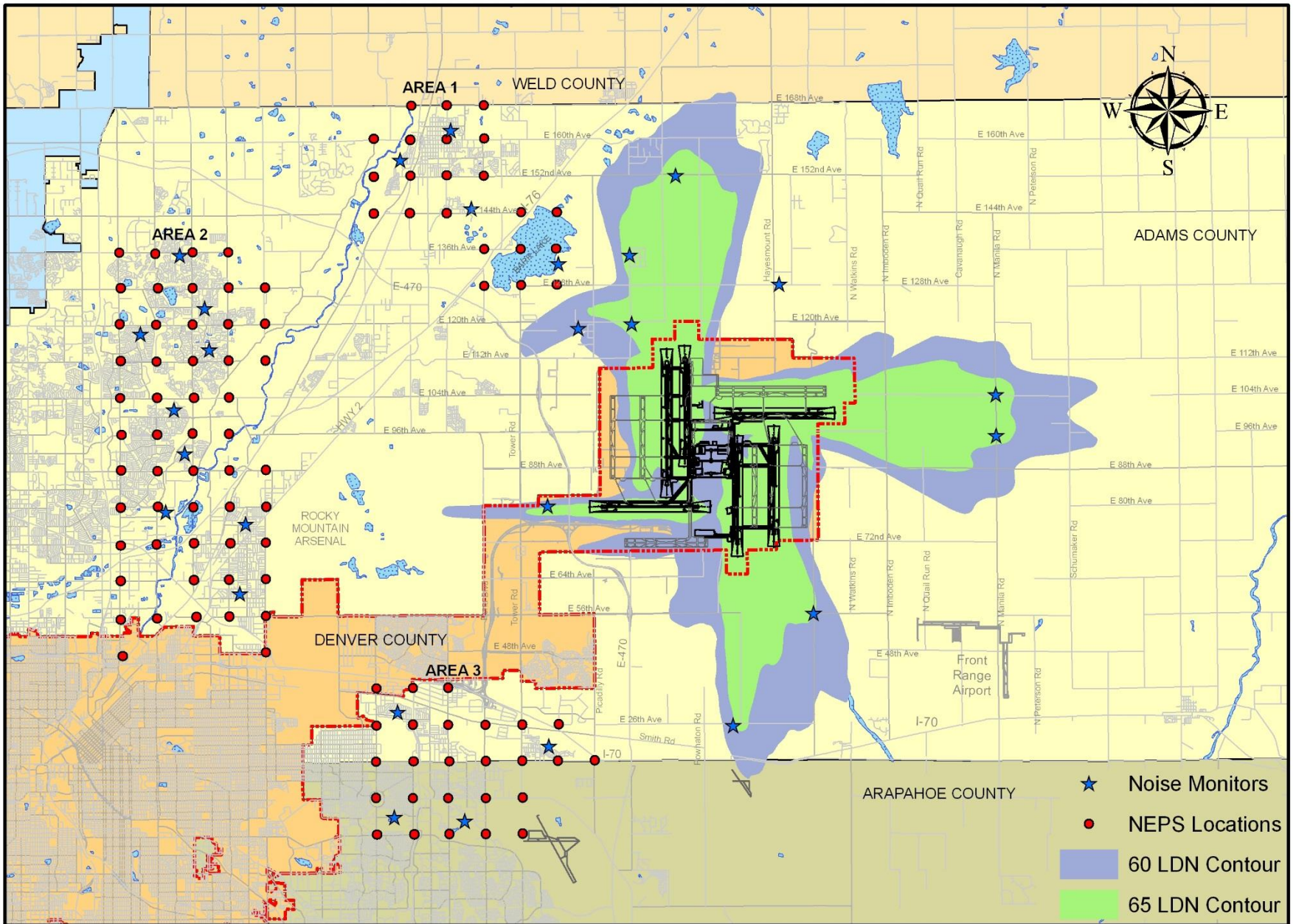


DENVER NEXTGEN WORKING GROUP

- Delta Airlines
- ExpressJet
- Frontier Airlines
- SkyWest Airlines
- Southwest Airlines
- United Airlines
- US Airways
- Arapahoe County Public Airport Authority – Centennial Airport
- City and County of Denver – Denver International Airport
- Colorado Division of Aeronautics, CDOT
- HMMH Inc.
- HNTB Corporation
- Jeppesen
- MITRE Corporation
- National Air Traffic Controllers Association (NATCA)
- FAA Denver Flight Standards Office
- FAA Performance-based Navigation Office – HQ
- FAA Aeronav Products – Oklahoma City
- FAA Western Service Center – Seattle
- FAA Traffic System Operations – HQ
- FAA Northwest Mountain Region Flight Standards Office – Seattle
- FAA Denver Control Tower
- FAA Denver Radar Approach Control
- FAA Denver Air Route Traffic Control Center - Longmont



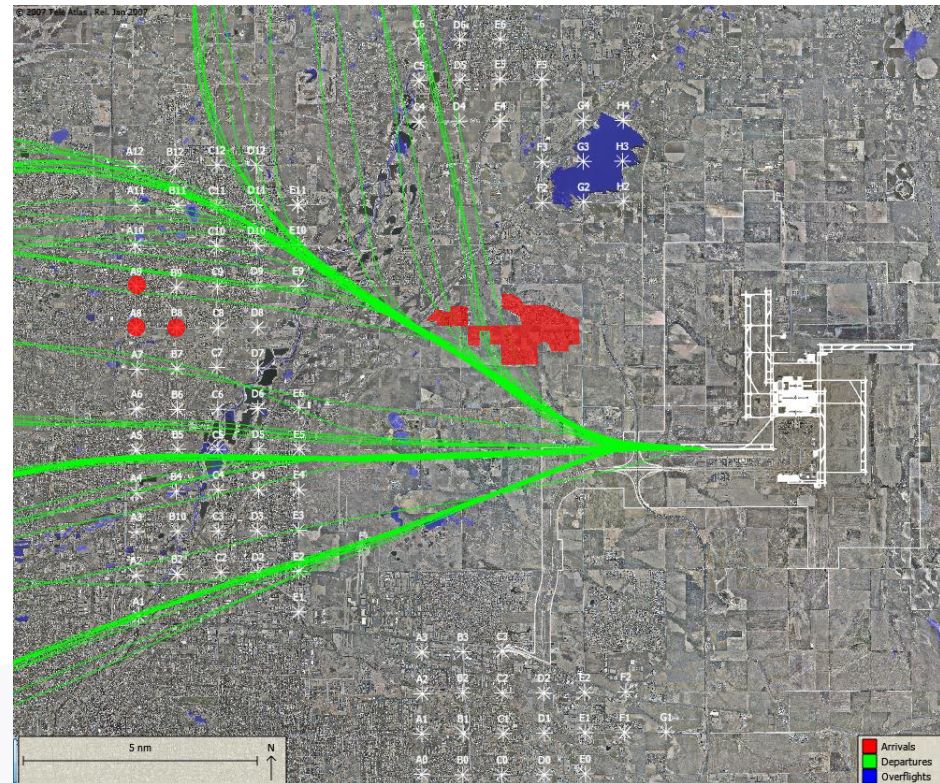
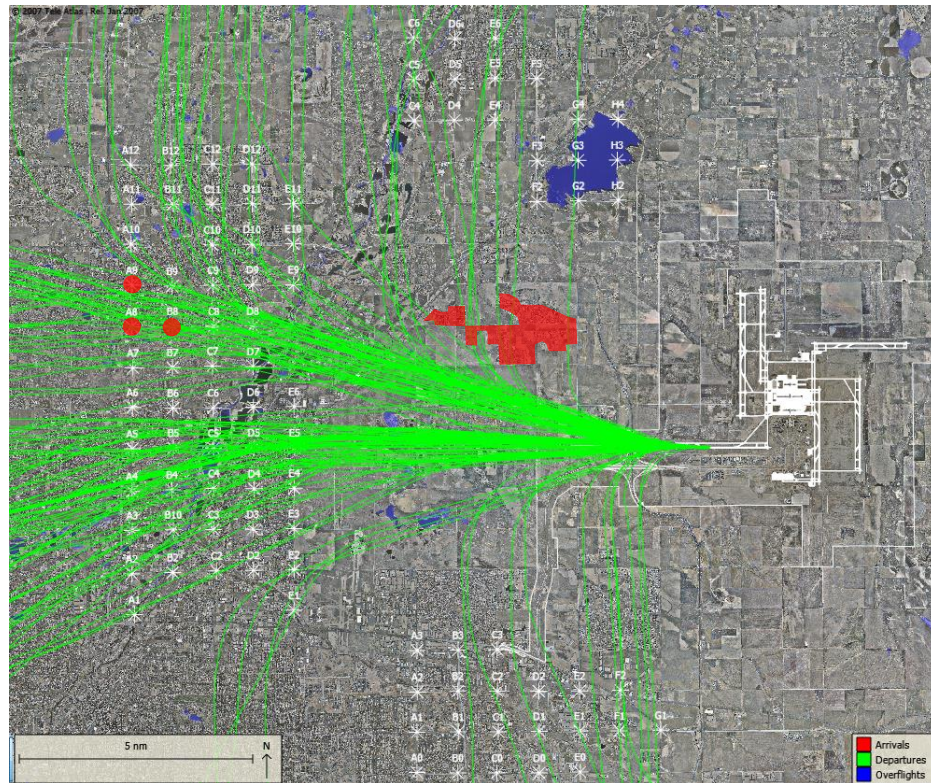
EARLY & CONTINUED COLLABORATION IS
THE KEY TO SUCCESS!



DEN NOISE EXPOSURE PERFORMANCE STANDARDS (NEPS)



IMPROVED IGA COMPLIANCE



Airlines' Anticipated Savings

Per Flight

RNP vs ILS Simos

Data Collected In Simulators

RNP Z 34L vs. ILS 34R

UAL Efficiency Gained RNP Z 34L

Fuel: 700 lbs saved

Time: 9 minutes saved



RNP Z 34L vs. ILS 34R



FFT Efficiency Gained RNP Z 34L

Fuel: 940 lbs saved

Time: 10 minutes saved



SWA Efficiency Gained RNP Z 34L

Fuel: 800 lbs saved

Time: 10 minutes saved



Rocky Mountain Metropolitan Airport

Downtown Denver

Buckley AFB

Centennial Airport

Parker

The Pinery

Front Range Airport

UAL789
141 26

UAL812
113 28

UAL1774
062 17

UAL2214
079 22

UAL2413
090 21

UAL382
111 21

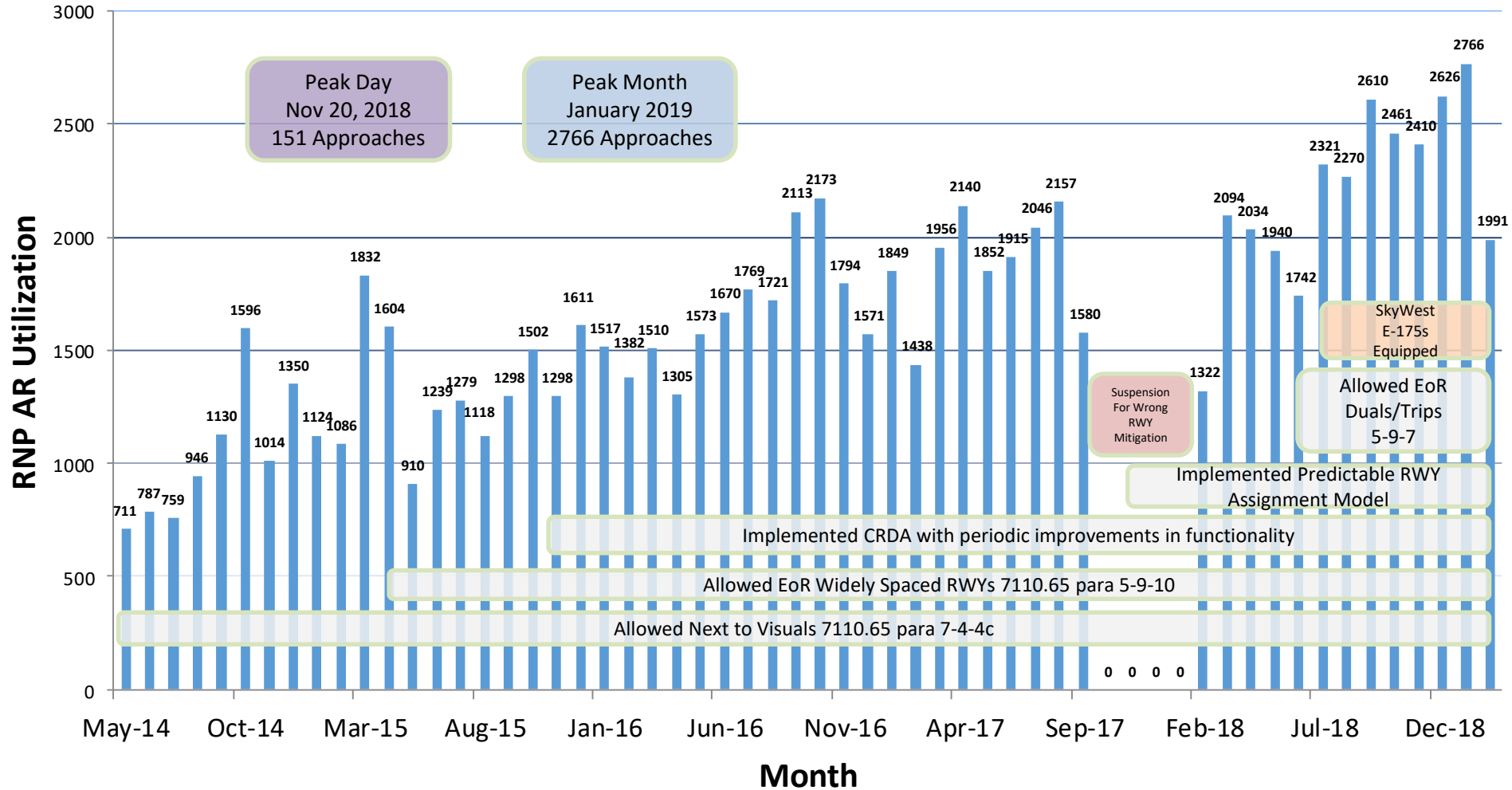
UAL301
100 21

SKW5281
131 24

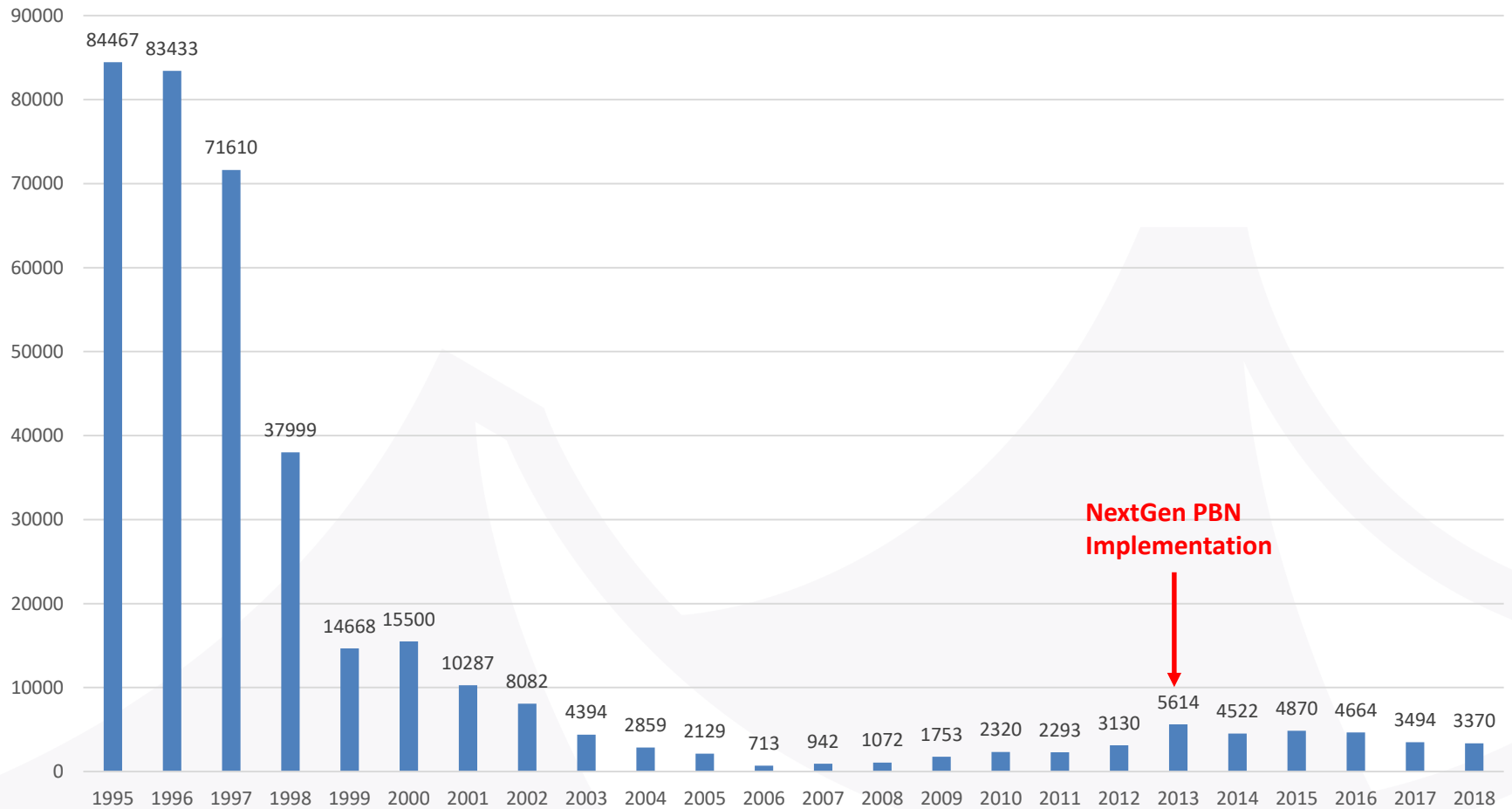
SKW5676
130 28

1852
0 33

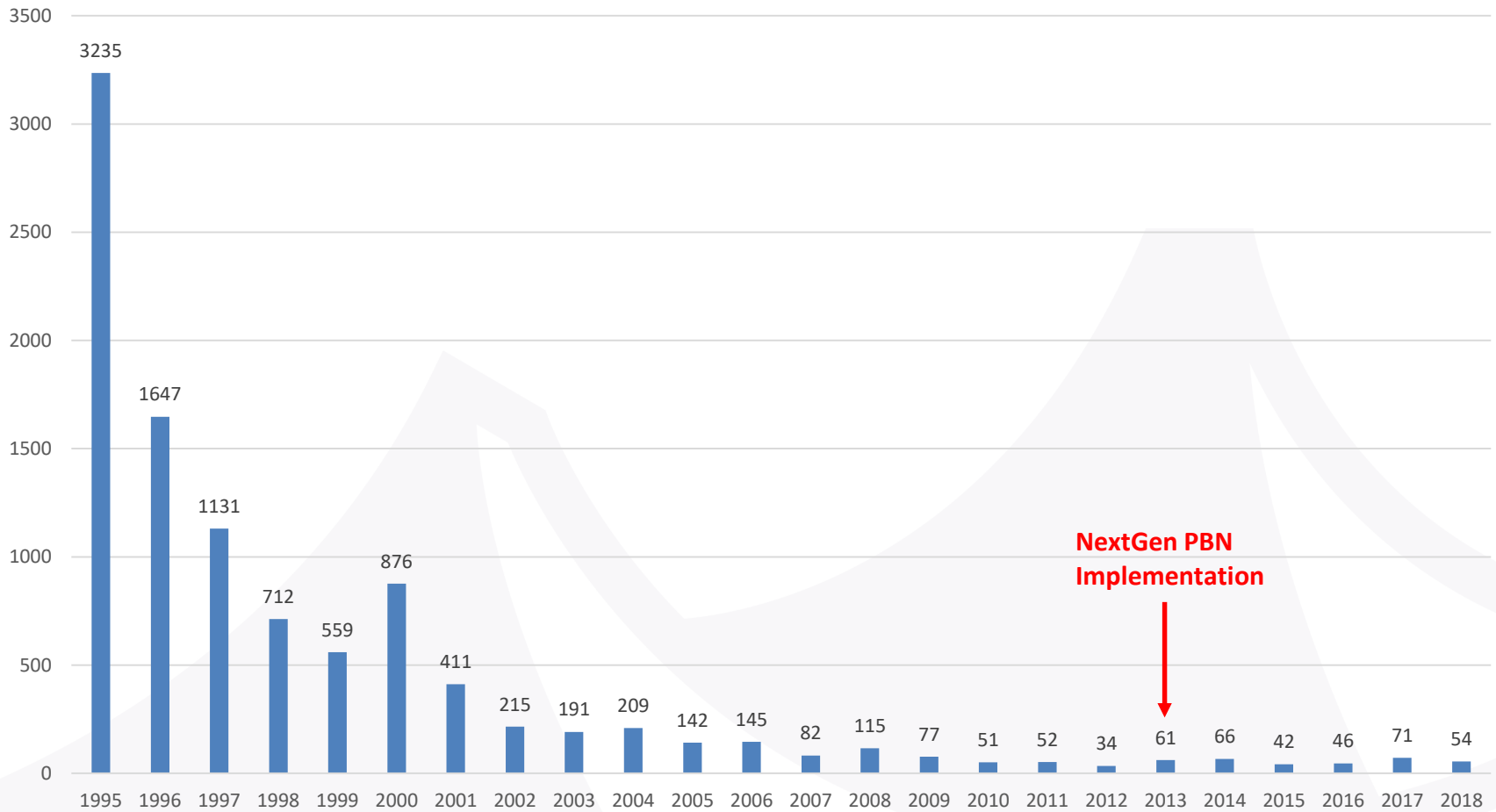
KDEN Monthly RNP AR Utilization



Annual Noise Complaints Received



Annual # of Households Registering At Least One Complaint





DENVER INTERNATIONAL AIRPORT

DEN