



CLT ACR – Strategic Framework

Presentation to ACR – 12/19/18

CLT ACR – Strategic Framework

1. Accessed/Analyzed Sources of Ideas/Opportunities
 - Existing/known CLT noise initiatives
 - Currently recommended ACR solutions
 - Benchmarking opportunities from other airports
 - Root Cause (Fishbone) Analysis
2. Identified Major Categories and Causes of Noise
3. Organized into a Noise Improvement Matrix
4. Next steps

Existing and Known CLT Initiatives

- The City of Charlotte has created a noise disclosure overlay based on the 1996 65 DNL contours.
- CLT has soundproofed over 1000 homes, six churches and three schools in accordance with our Part 150 program.
- Over 400 properties have been purchased for noise abatement reasons.
- Run-up restrictions during night hours
- CLT is phasing out physical noise monitors in preference to 'virtual monitors', utilizing a similar system to the FAA Aviation Environmental Design Tool (AEDT), the official contour generating system.
- CLT ACR established June 2017

ACR-Related Solutions (in varied stages of analysis or implementation)

- Modify 283 AA Airbus aircraft with the vortex generators
- Make voluntary curfew request
- Move downwind arrival path - Alternating Rails
- Return the CAATT Waypoint to Pre-Metroplex location
- Implement RNP CDA using Terminal Spacing and Sequencing – TSAS; Increasing use of OPD
- Modify South Departure Procedure: turns, headings, altitudes
- Altitude-based turns on South Departures; this analysis also addresses multiple RNAV paths, different headings, etc.
- Assess Existing Departure Profiles
- Slow departure speeds
- CLT Noise Website; ACR involvement

Benchmarking Opportunities

1. Quieter airplanes

- Phase out of loudest aircraft and introduction of quietest equipment
- Fitting all A320s with quiet technology (vortex generators)

2. Quieter approaches

- Minimize landing gear noise
- Implement continuous descent approach (CDA) or steeper approaches

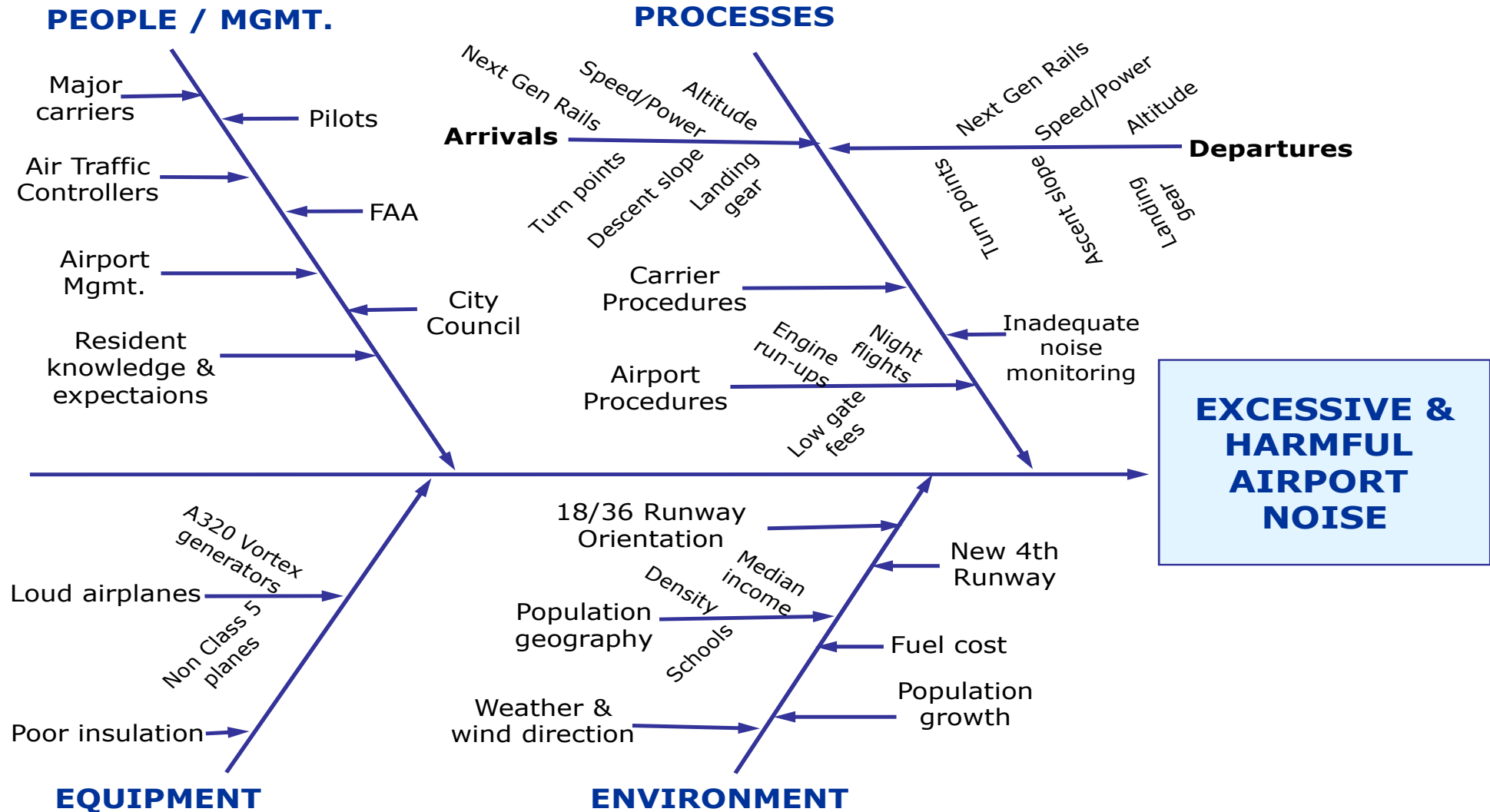
3. Quieter departures

- Implement DOT rules on departure distance/height ratios (NPR) to 4,000'
- Tracking of NRP performance compliance
- Altitude based turns on South departures
- Dispersion/multiple RNAV paths

Benchmarking Opportunities

4. Night flight restrictions
 - Noise quotas, seasonal limits, landing fees
5. Create/expand noise monitoring network
 - Increase locations and reporting
 - Include noise sensitive locations like schools
6. Expand noise metrics beyond Dba thresholds
 - Measure frequency and duration
7. Proactive public description of all noise management practices by CLT
 - Website marketing

FACTORS IMPACTING CLT AIRPORT NOISE



Next Steps in ACR Strategic Approach

- Review the Noise Improvement Matrix
 - ✓ Is it complete based on what we know today?
 - ✓ Is it accurate?
 - ✓ How do we address “empty” cells?
 - ✓ What is the best overall use of this Strategic Framework?
 - ✓ What is the best Next Step?
- Determine Next Steps