

Quiet Skies Mid-Peninsula

**Consensus on Aircraft
Ground Noise
and Abatement Solutions**

Presented by:

Bill Evans
Quiet Skies Los Altos Hills

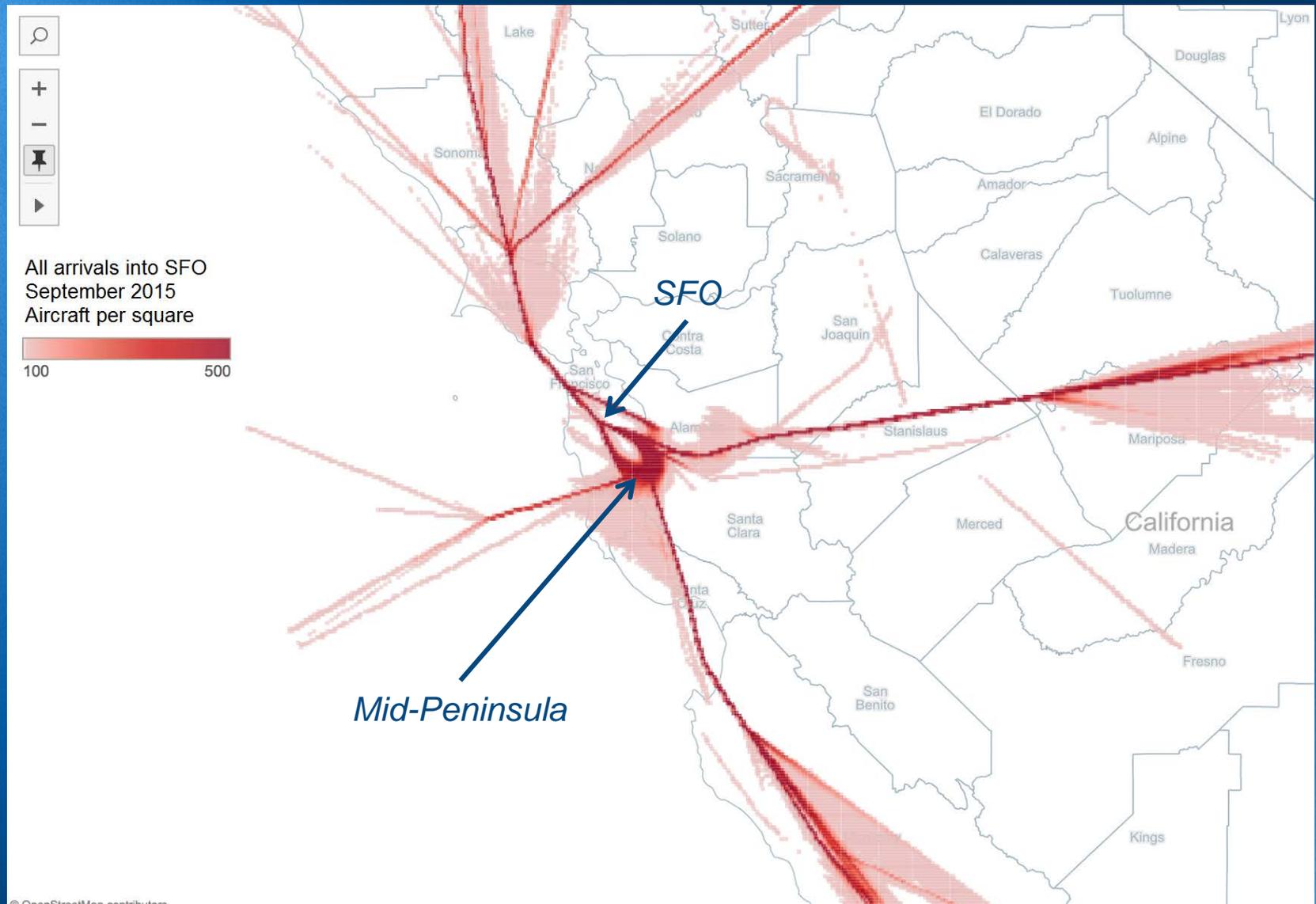
May 11, 2016



Agenda

- Quiet Skies Mid-Peninsula
- Goal
- Principles
- Remedies
- Solutions

Quiet Skies Mid-Peninsula



Quiet Skies Mid-Peninsula

- Residents of Six Cities in the Mid-Peninsula
 - East Palo Alto
 - **Los Altos (2015)**
 - Los Altos Hills
 - Menlo Park
 - **Palo Alto (2014)**
 - **Portola Valley (2011)**

January 25, 2016



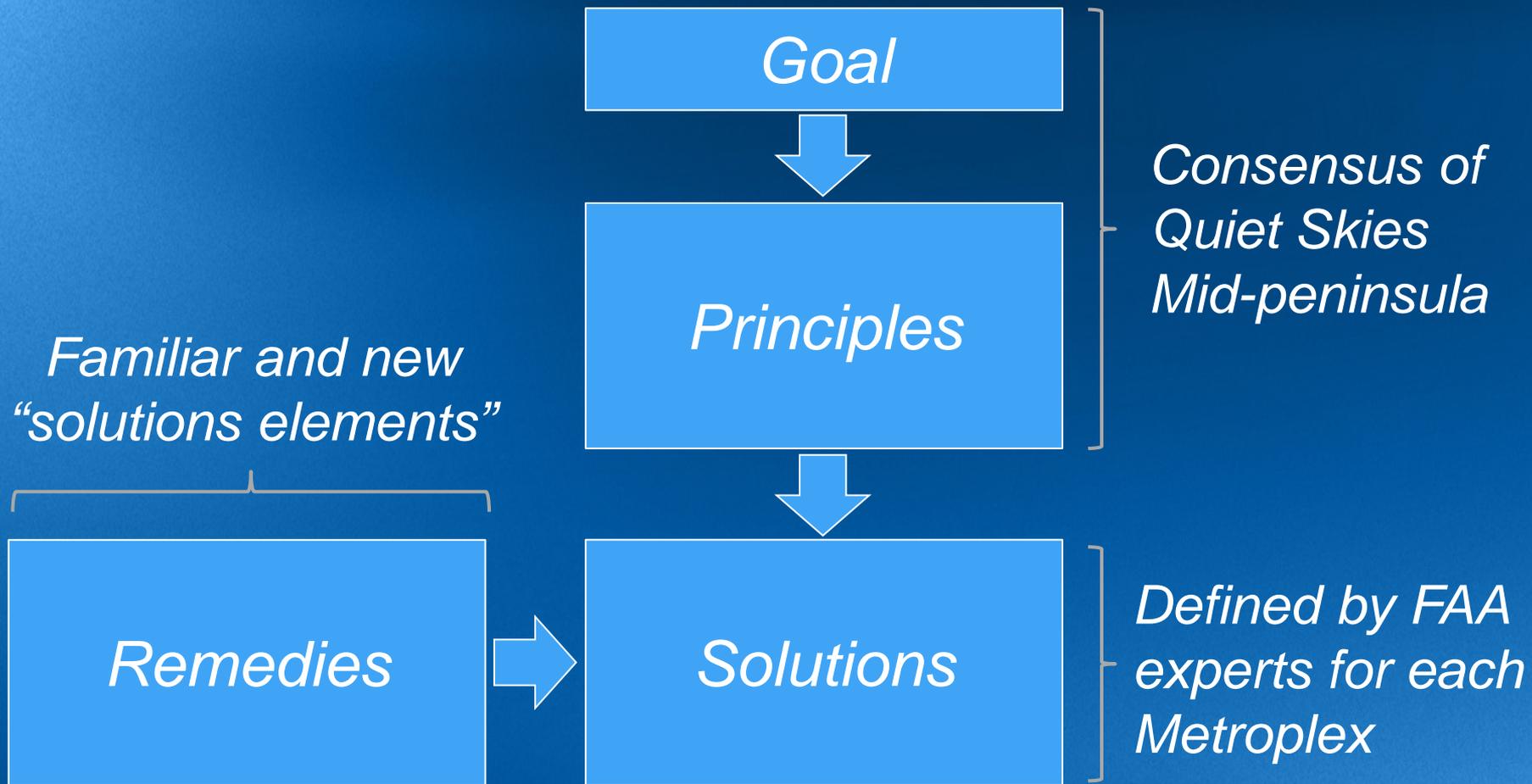
[...] We welcome one letter signed by each of your organizations stating for the record what you think the FAA can do to implement change. [...]

*Most gratefully,
Anna G. Eshoo & Sam Farr*

Factors that Impact Aircraft Noise

- Ground Track
- Altitude
- Throttle
 - Example: Maintain altitude on step-down arrival
- Brakes, Flaps, Ailerons, etc.
- Orientation
 - Example: Noise is worst behind engines
- Aircraft design
 - Example: Low bypass jet engines, underwing fuel vents

Solutions Process





Goal

**Reduce aircraft ground noise
to levels of 2006.**

**Grow capacity without
increasing ground noise.**

*FAA estimates that air traffic will
increase 50% within 20 years.*



Principles (Evaluation Criteria)

- Minimize aircraft ground noise
- Establish meaningful metrics for aircraft noise
- Make transparent the ATC change process
- Solutions must be neighborly

Principles (Evaluation Criteria)

- Minimize aircraft ground noise

Aeronautical Information Manual

5-4-2. Local Flow Traffic Management Program

*a. This program is a continuing effort by the FAA to **enhance safety, minimize the impact of aircraft noise** and **conserve aviation fuel**. The enhancement of safety and reduction of noise is achieved in this program by minimizing low altitude maneuvering [...]*

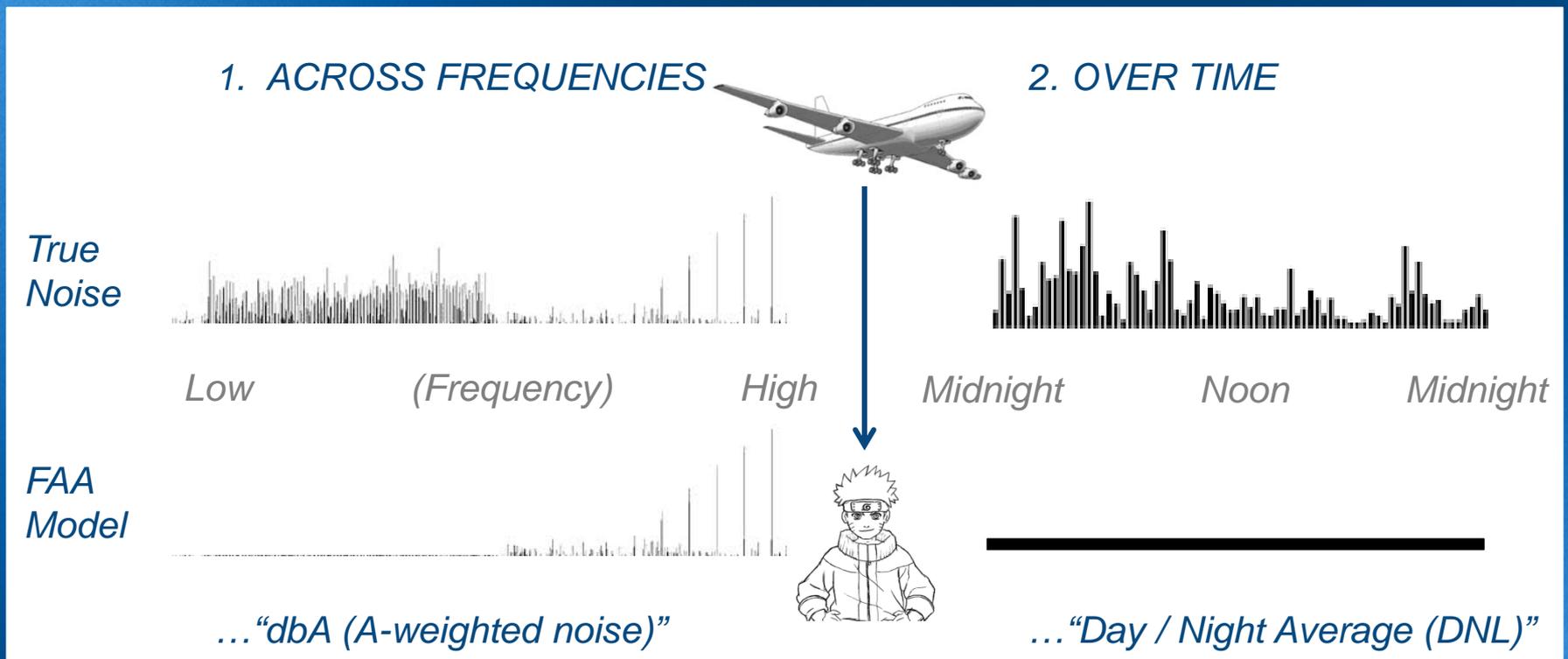
#1 Safety

#2 Noise

#3 Operational Efficiency

Principles (Evaluation Criteria)

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Principles (Evaluation Criteria)

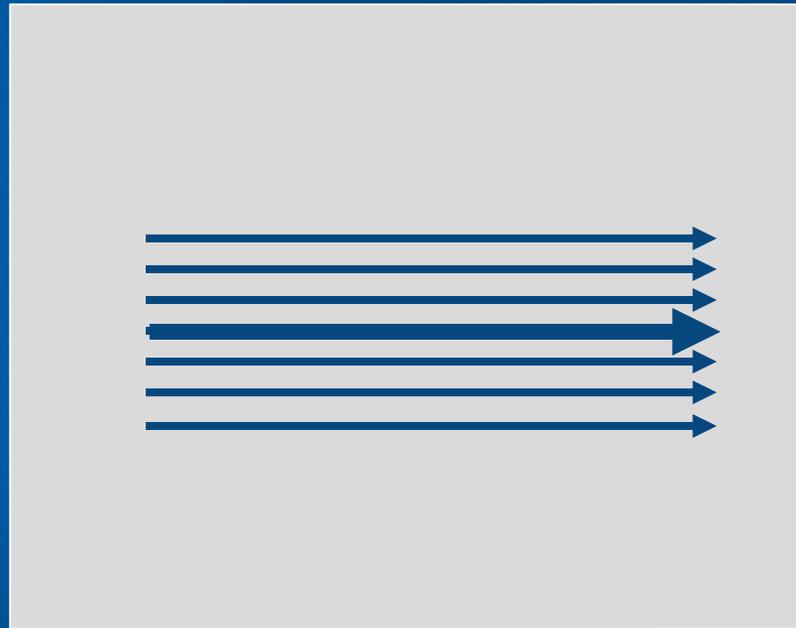
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MONSOON

Move Our Noise Somewhere Over Our Neighbors

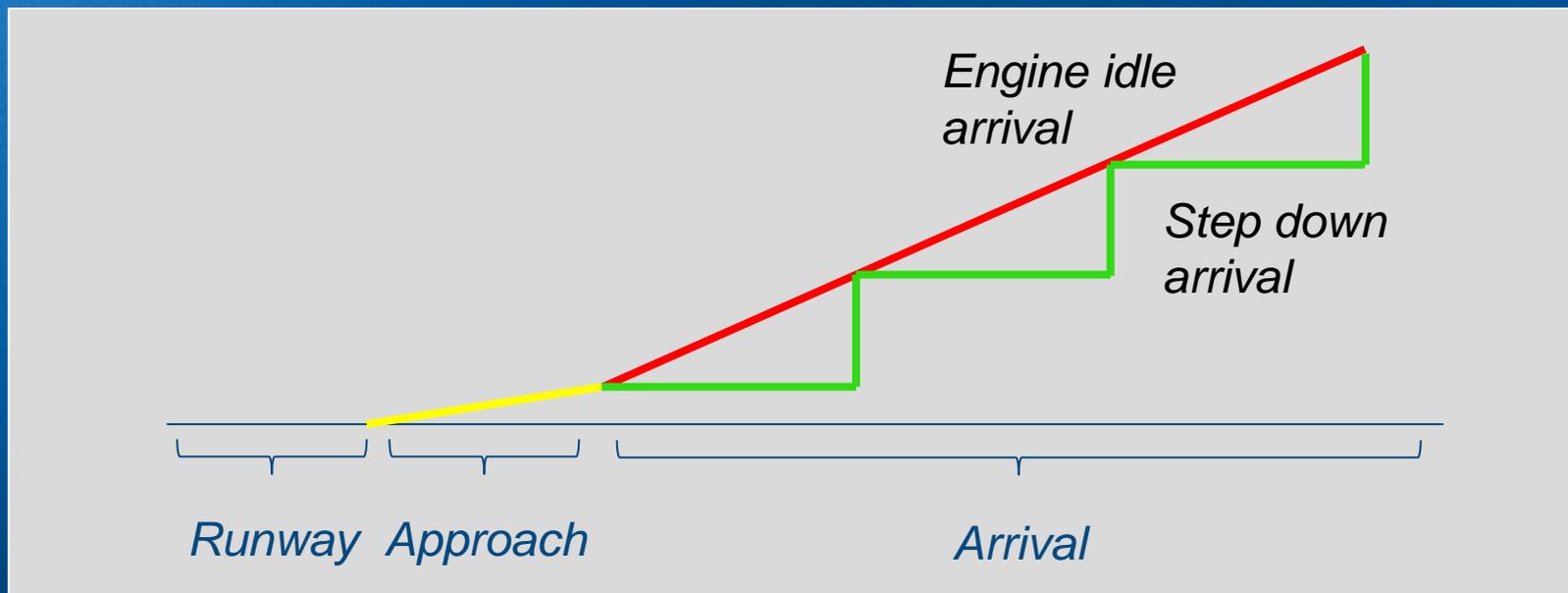
Remedies (Solution Elements)

- Avoid densely populated areas
 - Examples: Keep flights over bay, ocean, etc.
- Disperse flights



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- Adopt “engine idle” arrivals
- Limit night arrivals to non-residential overflights
- Minimize vectoring of aircraft



Remedies (Solution Elements)

- Avoid densely populated areas
 - Examples: Keep flights over bay, ocean, etc.
- Disperse flights
- Adopt “engine idle” arrivals
- Limit night arrivals to non-residential overflights
- Minimize vectoring of aircraft
- Retrofit Airbus aircraft with vortex generators
- Restrict aircraft numbers (requiring larger aircraft)

Remedies (Solution Elements)

- Retrofit Airbus aircraft with vortex generators (detail)





Solutions

- Should integrate “Remedies” as possible
- Should be
designed,
simulated,
measured,
and enforced
by the FAA
- Should be evaluated according to our “Principles”



Conclusion

- Goal
 - Objectives relevant to all metroplexes
- Principles
 - Used to evaluate prospective solutions
- Remedies
 - Elements of Solutions
- Solutions
 - Designed by FAA Experts

Thank you

Bill Evans

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www.quietskieslosaltoshills.org