

Quiet Skies Mid-Peninsula

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

Presented by:

Bill Evans
Quiet Skies Los Altos Hills

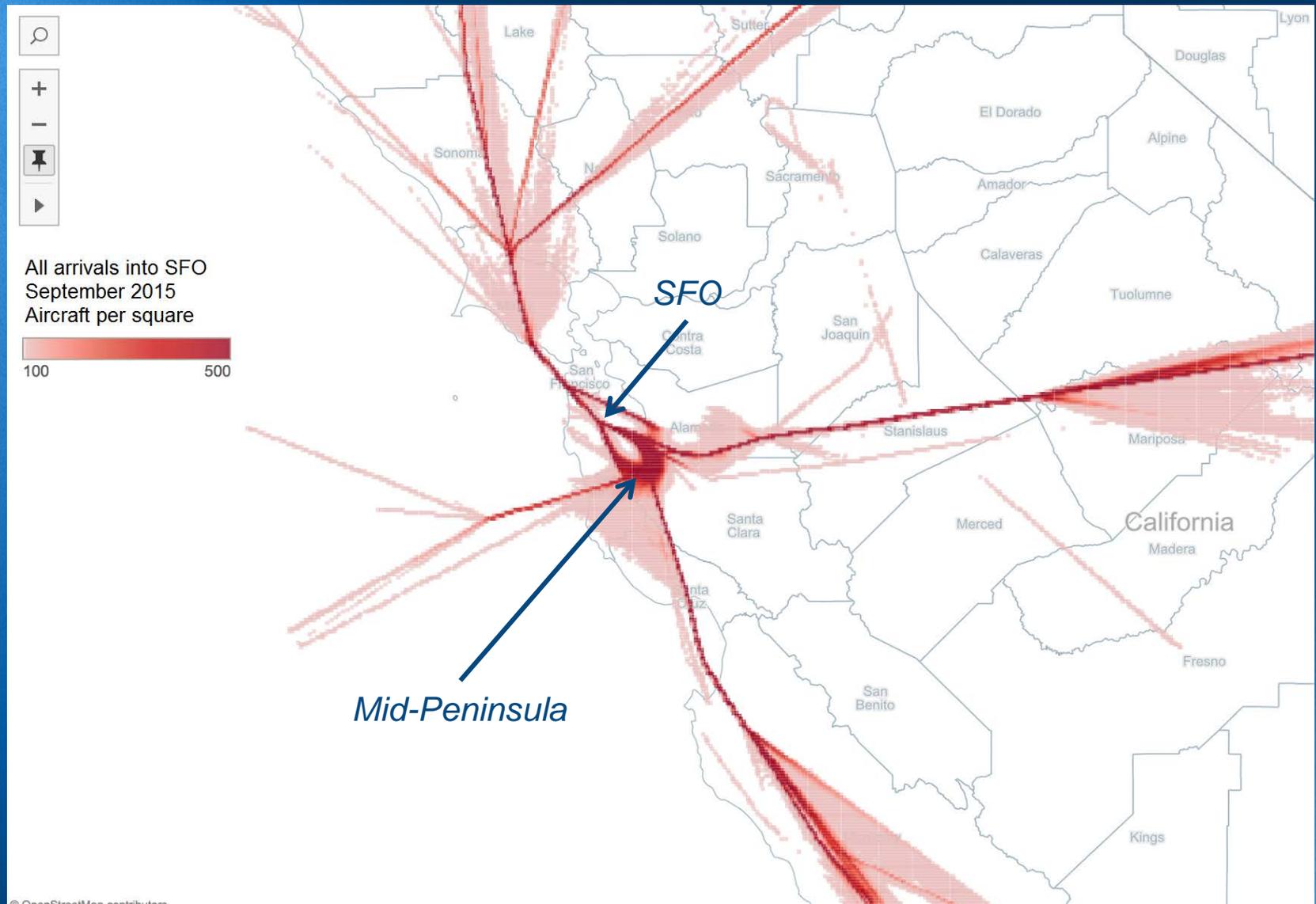
May 11, 2016



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



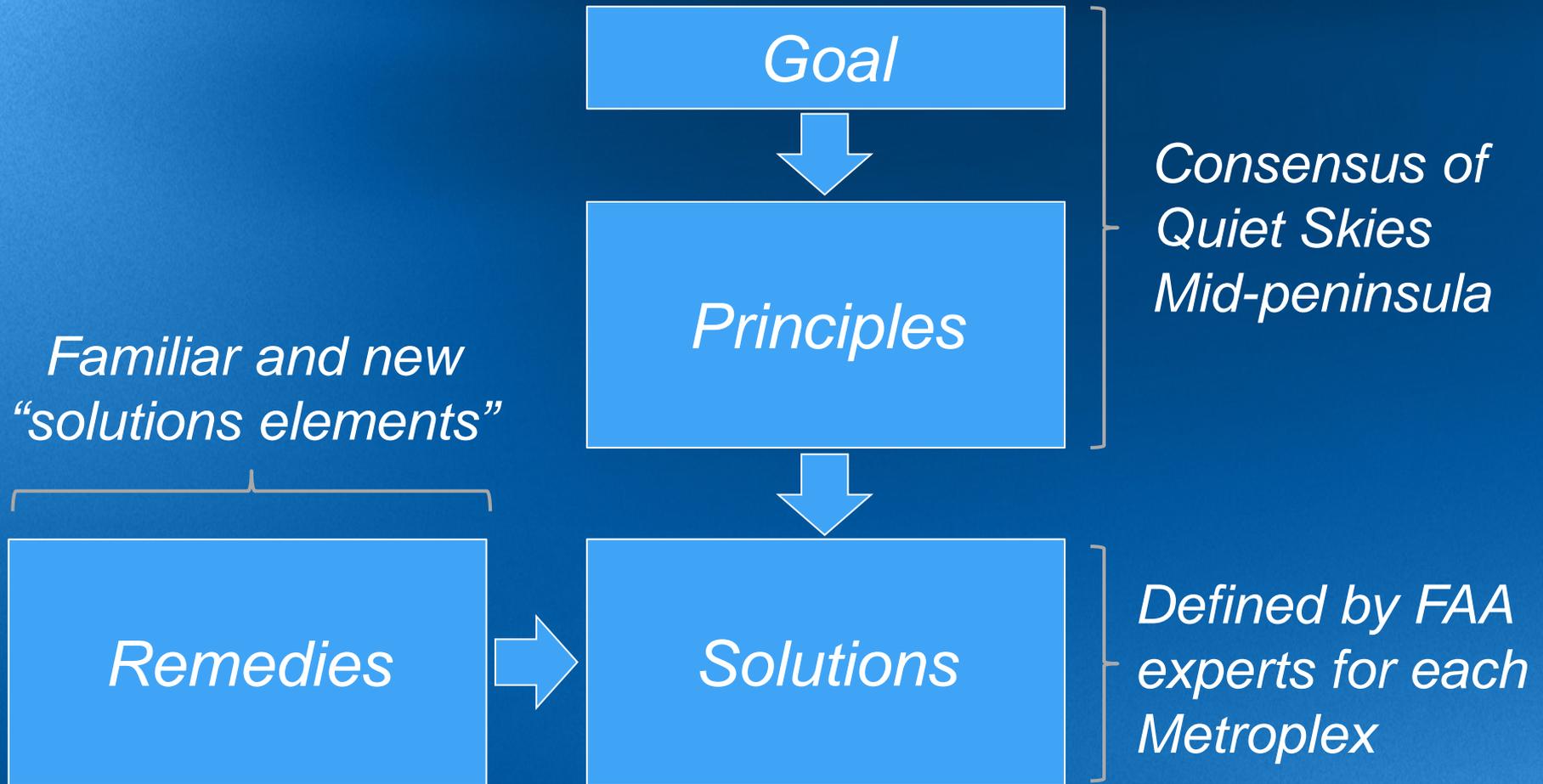
[...] We welcome one letter signed by each of your organizations stating for the record what you think the FAA can do to implement change. [...]

*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 [...]*

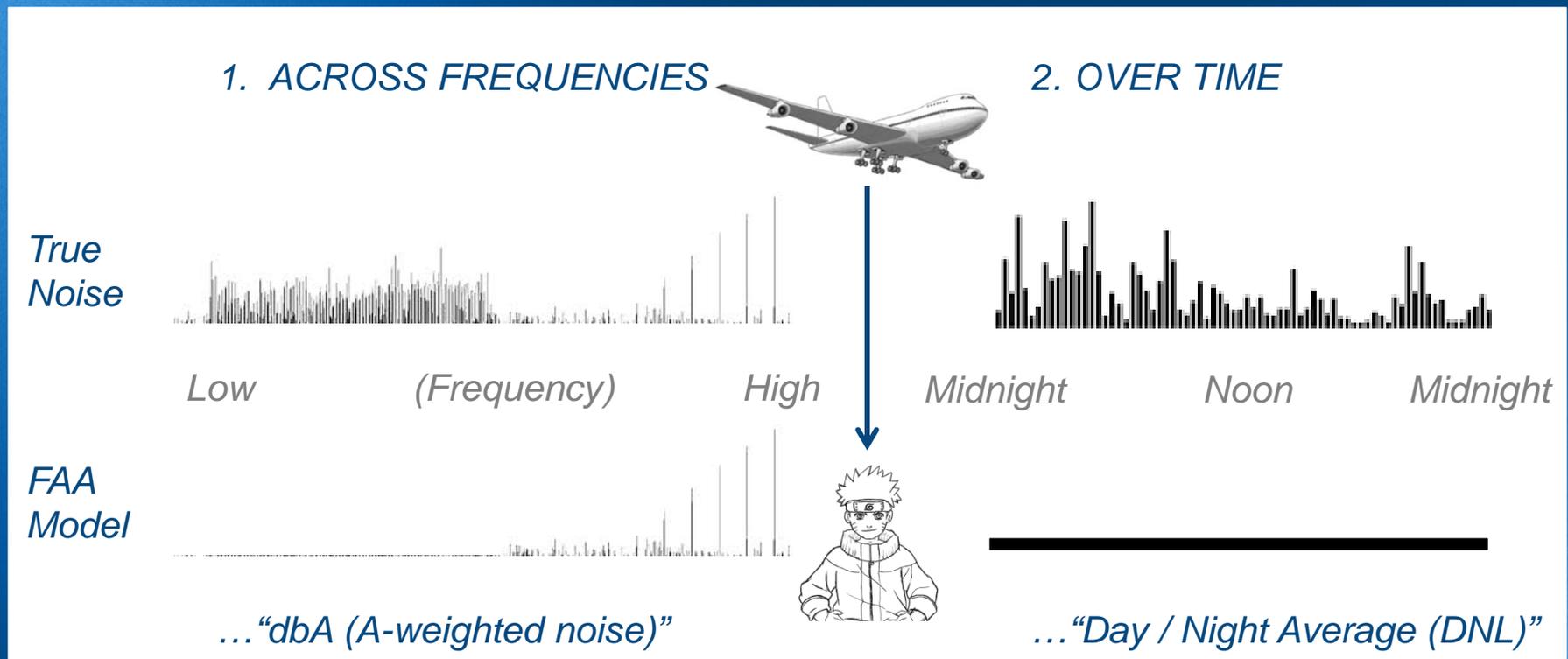
#1 Safety

#2 Noise

#3 Operational Efficiency

Principles (Evaluation Criteria)

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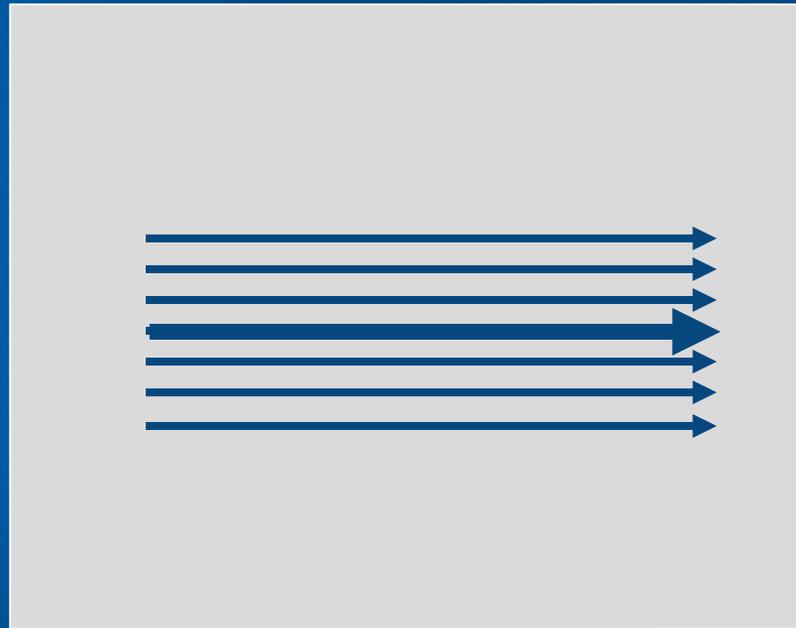
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MONSOON

Move Our Noise Somewhere Over Our Neighbors

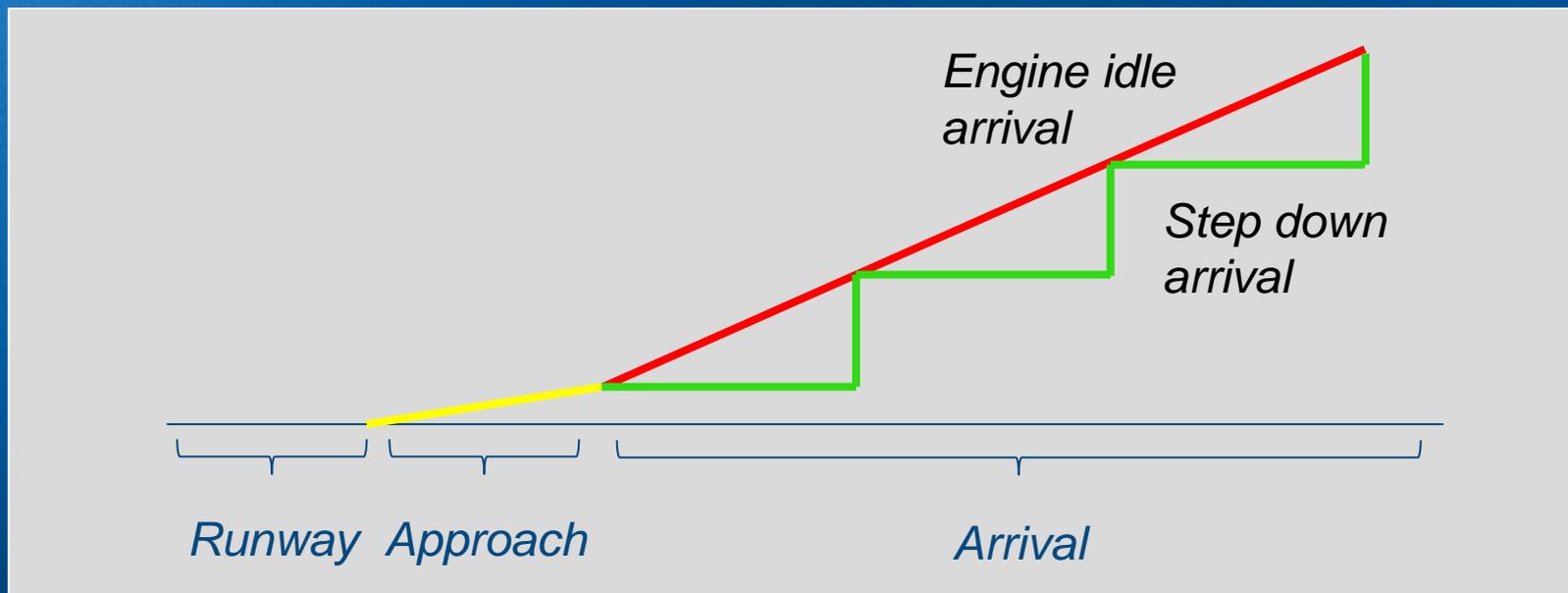
Remedies (Solution Elements)

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



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- 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

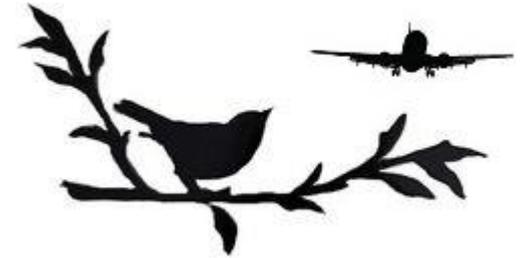
Thank you

Bill Evans

Quiet Skies Los Altos Hills

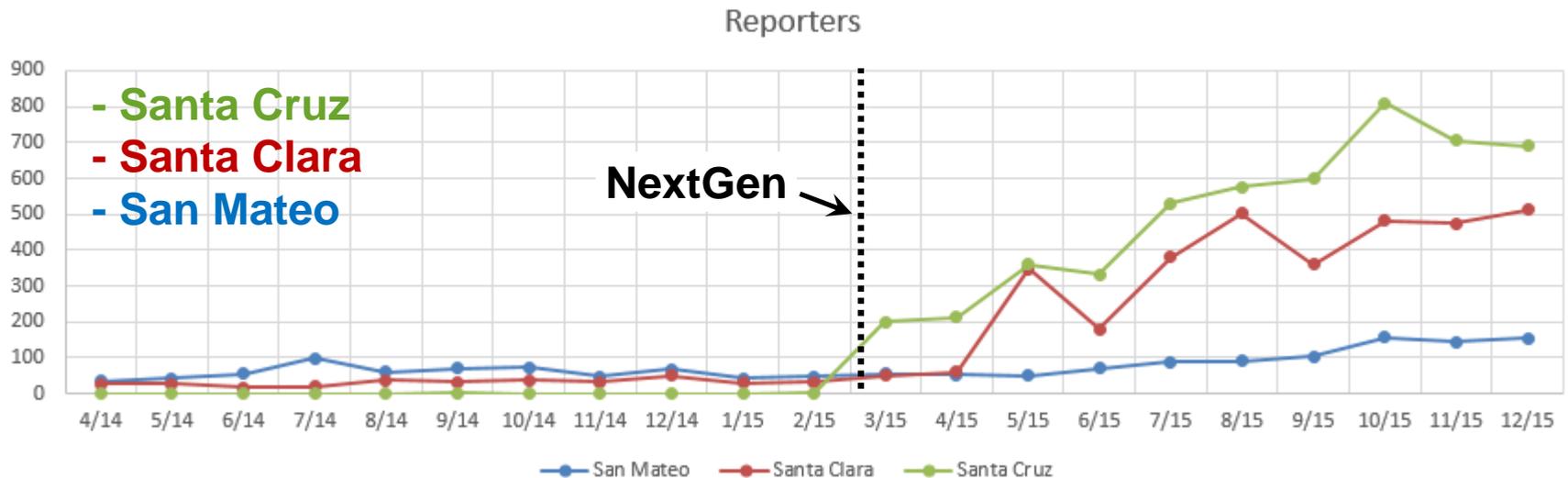
Quiet Skies Mid-Peninsula

www.quietskieslosaltoshills.org



Restore our Peace of Mind

(Los Altos Edition)



This is the graph of the number of people reporting noise issue, based on SFO data.

- Starting with NextGen deployment on March 2015, things took a sharp turn for the worse for the south bay.
- There were problems before NextGen, in PA, WS, PV and near the airport. However, for PA, WS and PV, things also got much worse on March 2015.

Our first question was: “Is this issue inherent to NextGen”. The answer we found was: “No”. It is possible to recreate the pre-NextGen procedures under NextGen technology, thus returning the situation before.

We do not oppose more elaborate studies and solutions if they are openly put forward, but right now recreating the Pre-NextGen environment is an absolute no-brainer first step.



A common LASP narrative is that “The FAA concentrated traffic over our town”. This is pre-NextGen traffic over Carmel Valley. This is absolutely false.

About 100 planes overfly the town, and 50 are dispersed.

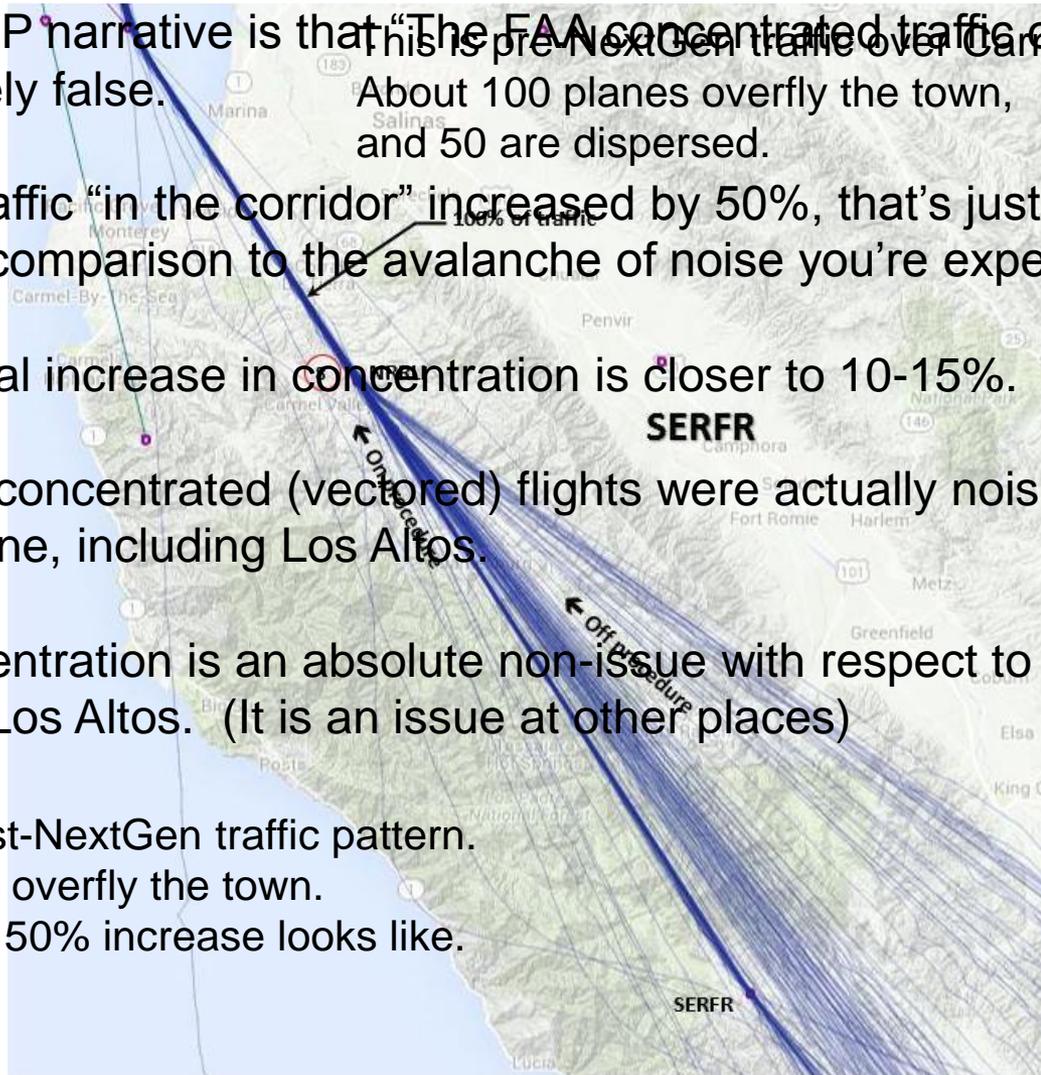
First, even if traffic “in the corridor” increased by 50%, that’s just 1.5x. This is really insignificant in comparison to the avalanche of noise you’re experiencing.

Second, the real increase in concentration is closer to 10-15%.

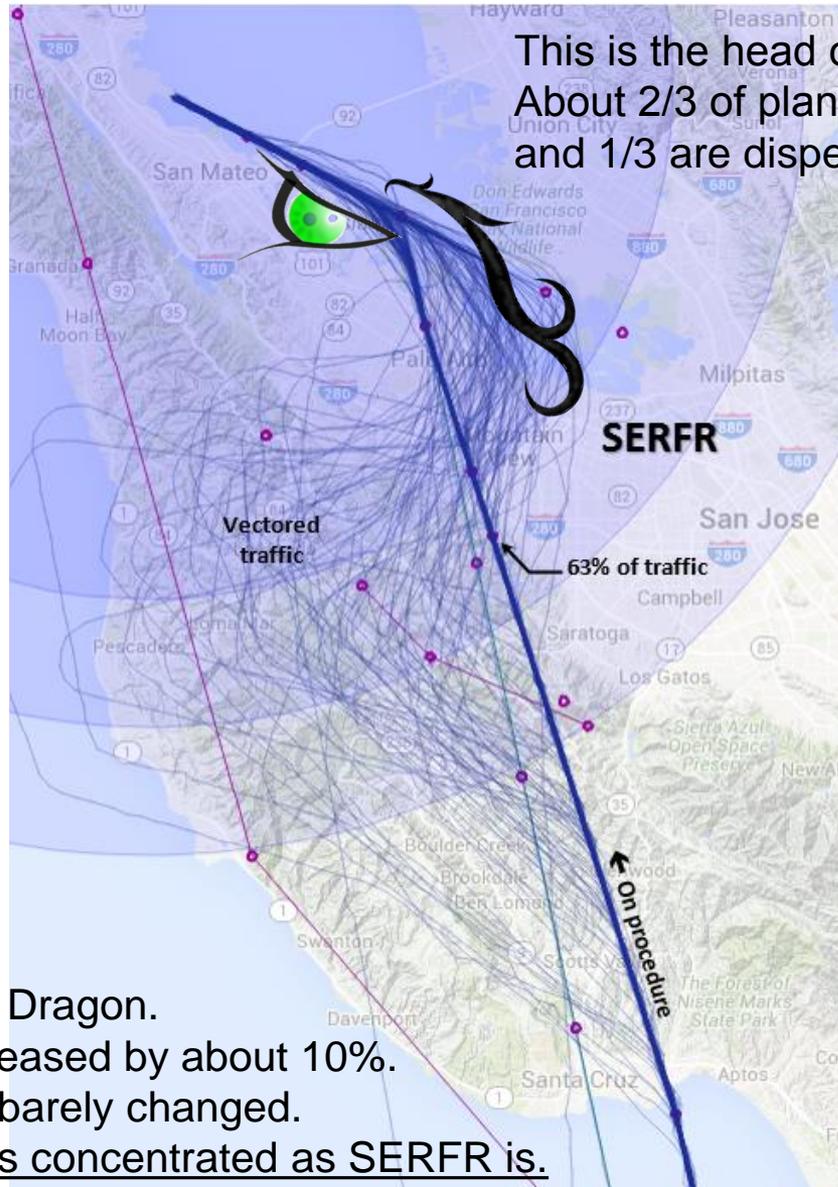
Third, the non-concentrated (vectored) flights were actually noisier. Vectoring is BAD for everyone, including Los Altos.

In short – concentration is an absolute non-issue with respect to the NextGen transition over Los Altos. (It is an issue at other places)

This is the post-NextGen traffic pattern. All 150 planes overfly the town. This is what a 50% increase looks like.



Dragon

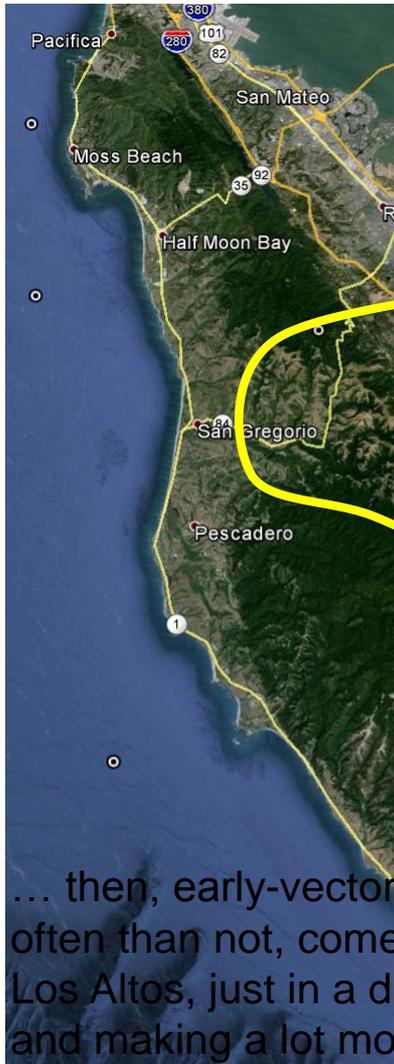
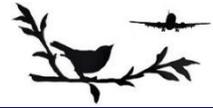


This is the head of the “Dragon”, pre-NextGen. About 2/3 of planes overfly the “corridor”, and 1/3 are dispersed (vectored).



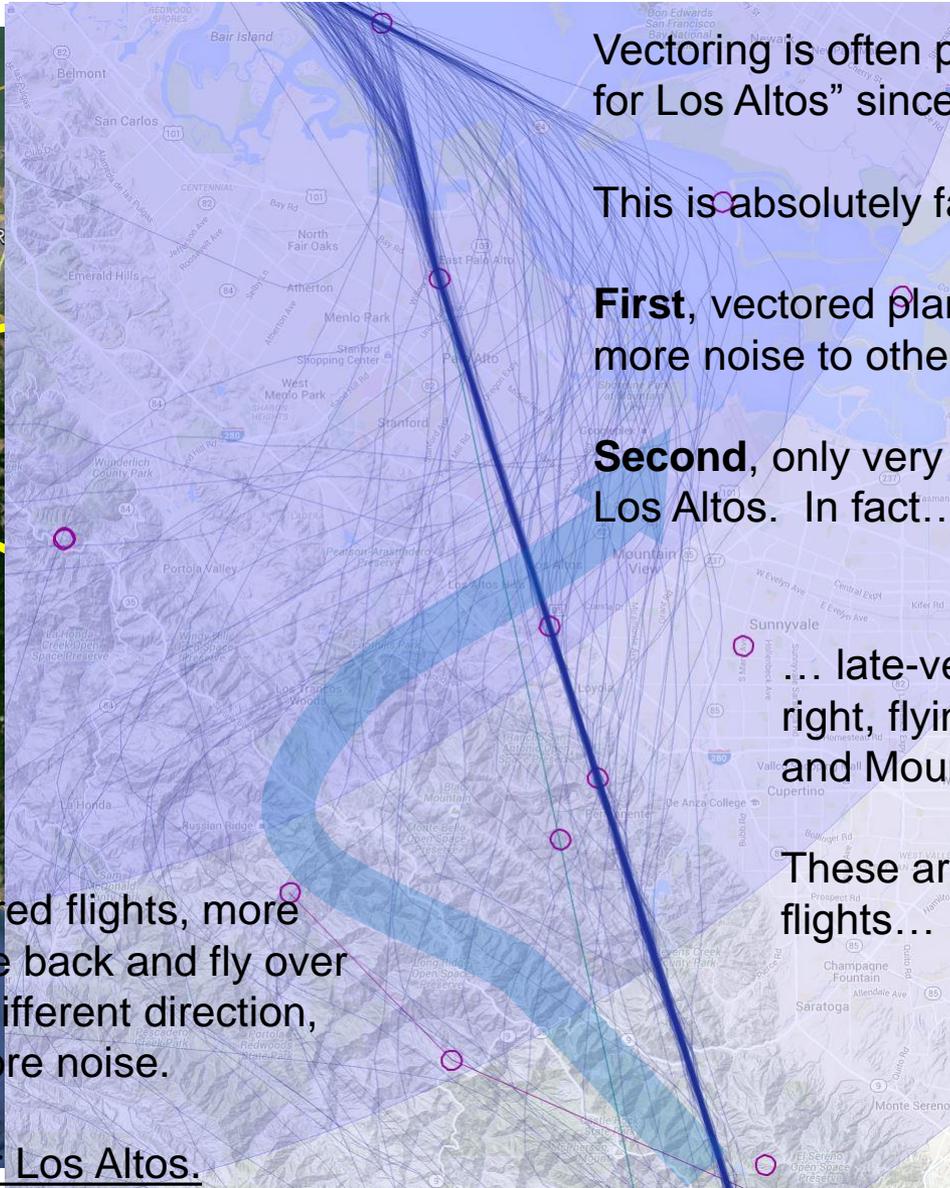
Arrow back and forth to see the changes again

This is the post-NextGen Dragon. Traffic in the corridor increased by about 10%. The amount of vectoring barely changed. BIG SUR was every bit as concentrated as SERFR is.



... then, early-vectoring flights, more often than not, come back and fly over Los Altos, just in a different direction, and making a lot more noise.

Vectoring is BAD for Los Altos.



Vectoring is often portrayed by LASP as “good for Los Altos” since it diverts noise elsewhere.

This is absolutely false.

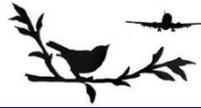
First, vectored planes are noisier, and so add more noise to other people.

Second, only very extreme vectoring avoids Los Altos. In fact...

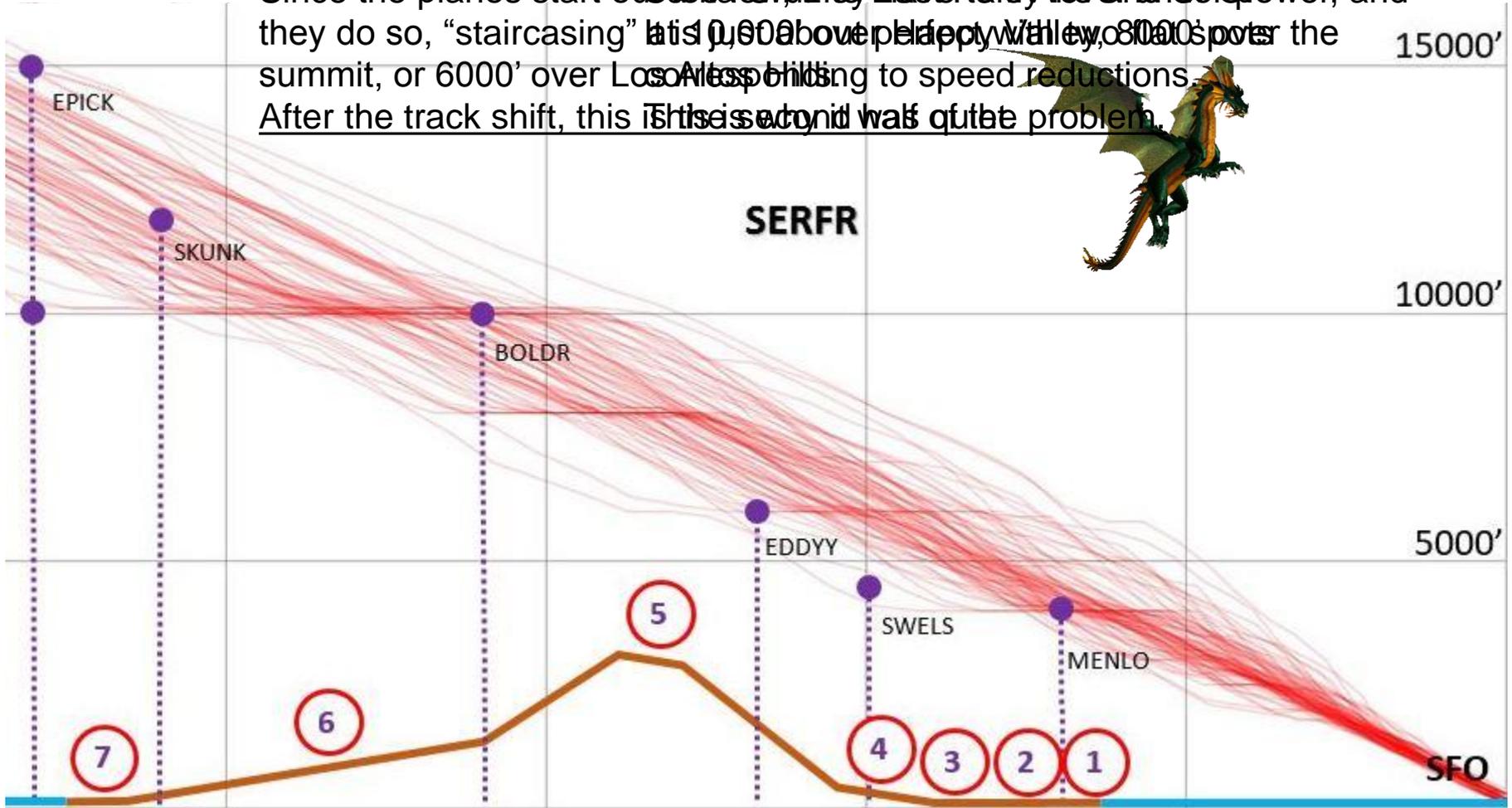
... late-vectoring planes turn to the right, flying over most of Los Altos and Mountain View.

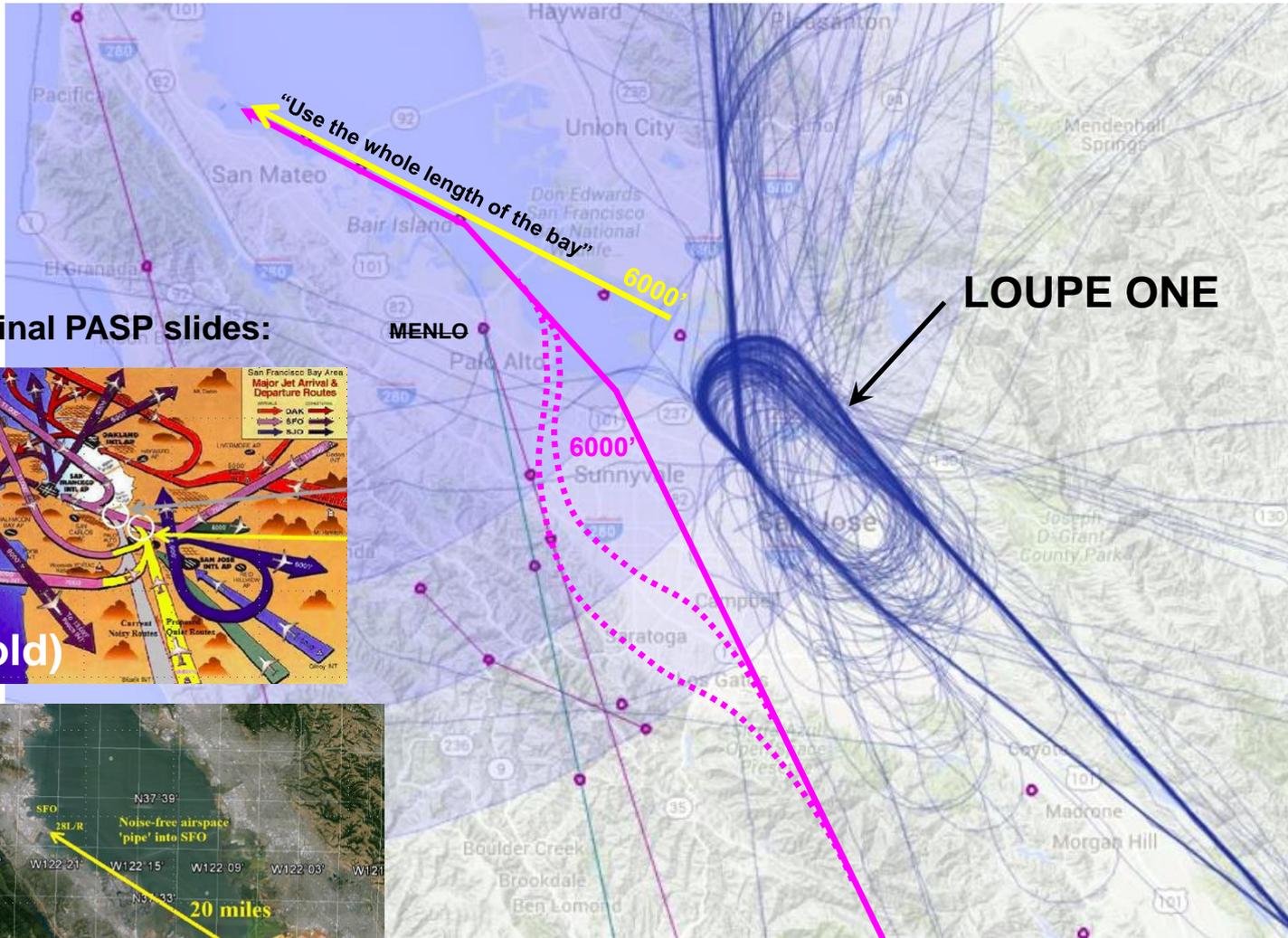
These are about 1/3 of vectored flights...

Side View



This is the post-NextGen descent profile. This is the profile. Since the planes start out ~~slowly~~ by East Palo Alto and SFO power, and they do so, "staircasing" ~~at 10,000 above~~ ~~they, 8000' over~~ the summit, or 6000' over Los Angeles hills to speed reductions. After the track shift, this is the ~~second~~ ~~was~~ ~~of~~ the problem.

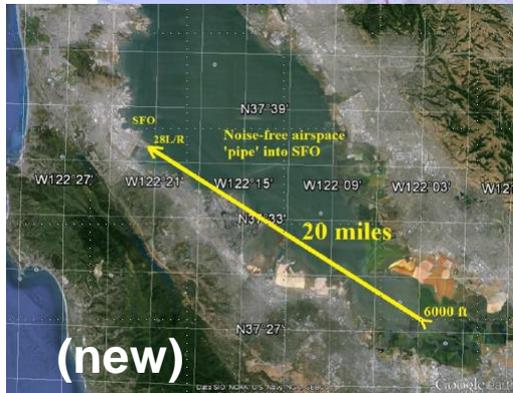
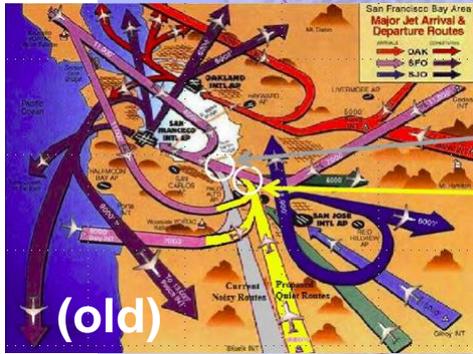




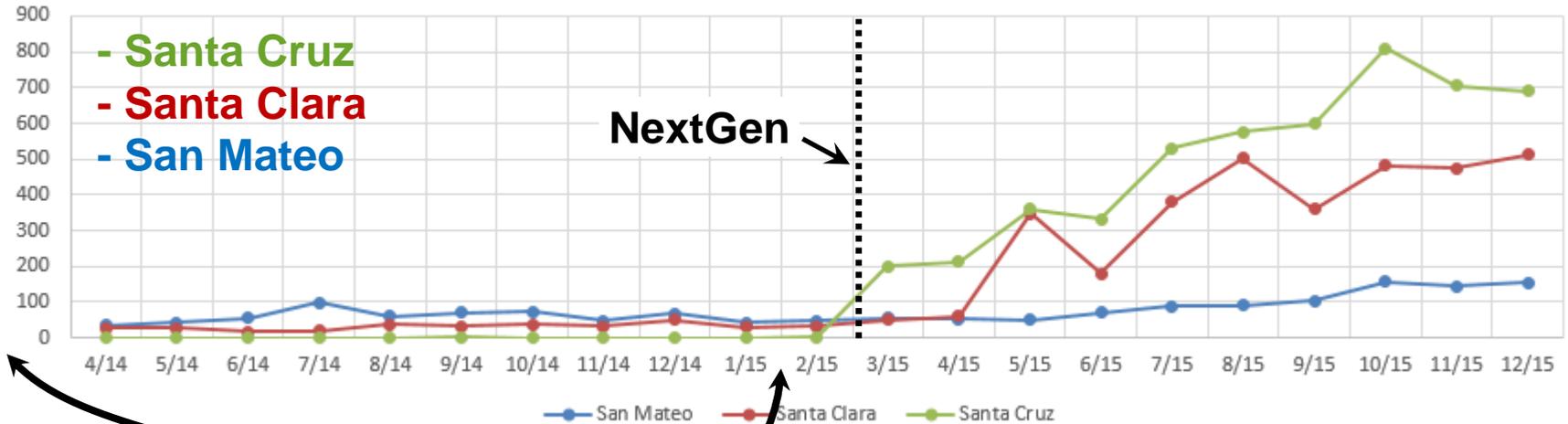
Victim List

- Los Gatos
- San Jose
- Campbell
- Santa Clara
- Sunnyvale
- ---
- Saratoga
- Cupertino

Original PASP slides:



We are losers by default. This is not a zero-impact plan, the other cities will resist, and the current situation will become permanent!



Our plan:

- 1. Recreate.**
(Ground track, altitude profile, speed)
- 2. Improve.**
(Some legacy issues)
- 3. Prevent.**
(Don't do it again)



IF NOTHING HAPPENS,



**YOU WILL LOSE. YOU WILL GET NOTHING.
THIS WILL LAST FOREVER.**



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**Read our detailed solutions under the “Solutions” link,
and if you like them, please endorse them.**

