

Alaska Volcano Observatory

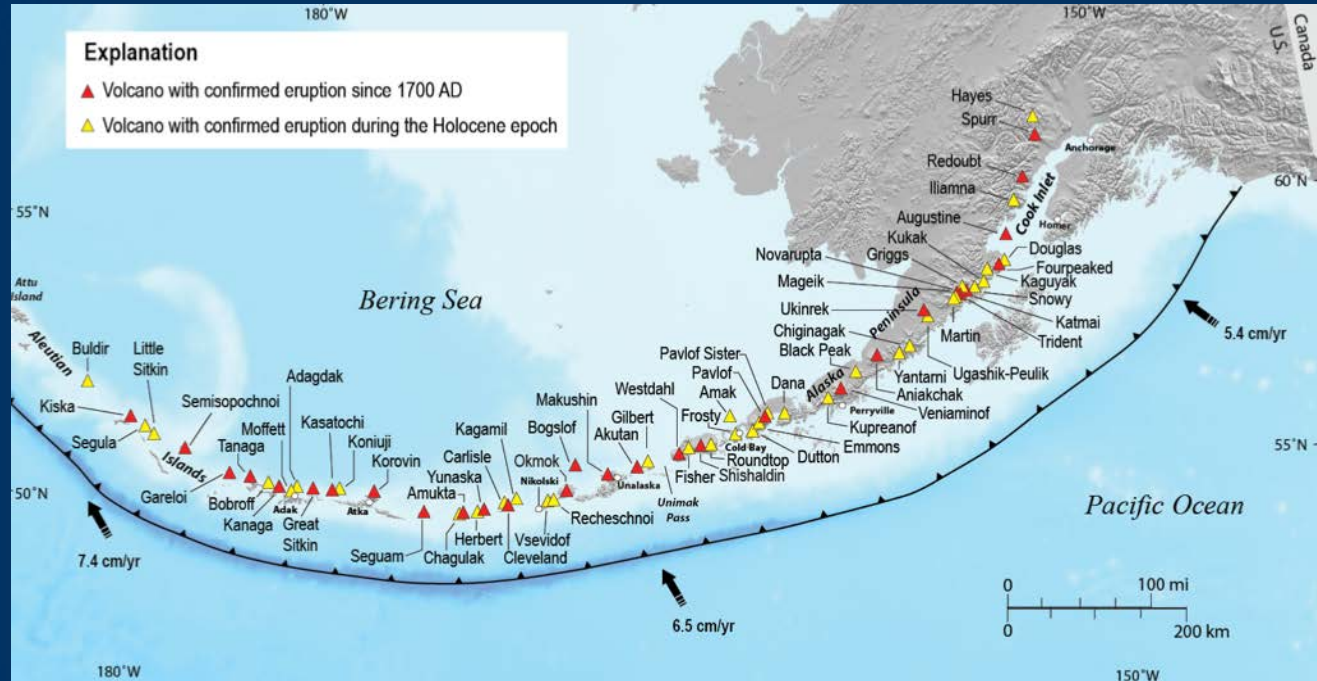
...and how AVO's seismic network might benefit the AACSE



Alaska Volcano Observatory
U.S. Geological Survey
University of Alaska, Fairbanks

Alaska's Volcanoes

66
eruptions
at 22
volcanoes
since 1988

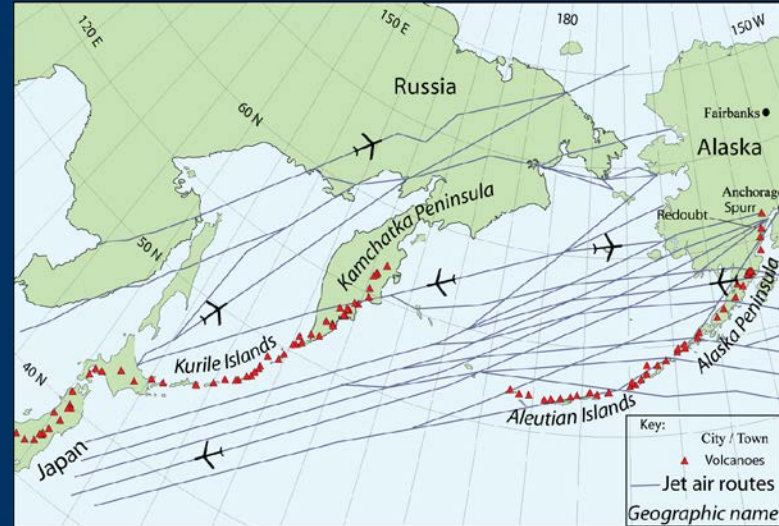


- VEI 4
- VEI 3
- VEI 2
- VEI 1
- VEI ?, small

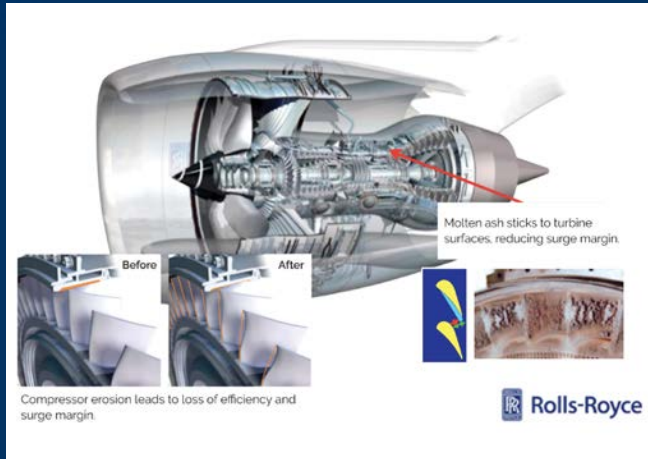


Volcanic Hazards in Alaska

- Up to 50,000 passengers per day fly over the North Pacific
- Over 60% of Alaska's population lives within 300 km and downwind of Cook Inlet volcanoes

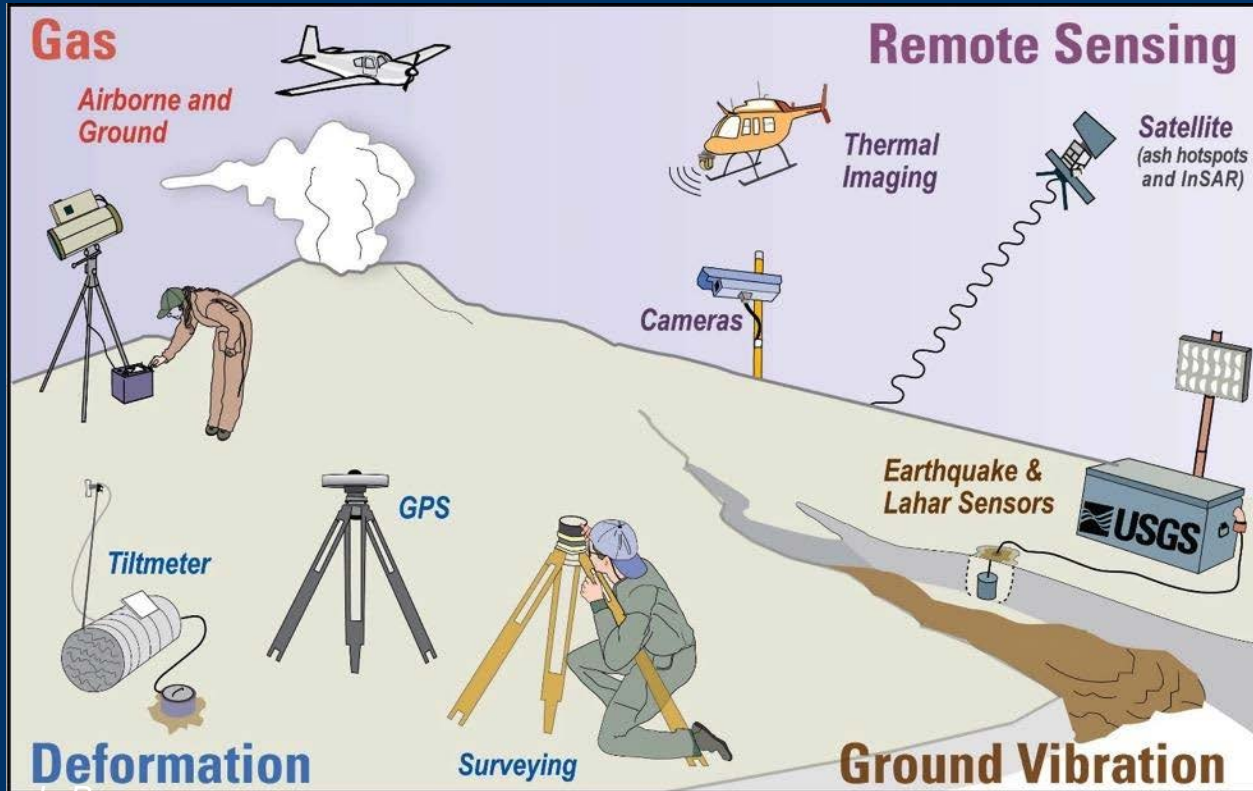


North Pacific air routes (blue lines) pass over or near more than a hundred potentially active volcanoes (red triangles).



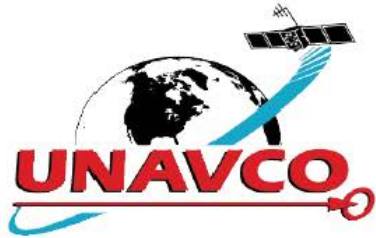
When ash enters jet engines, it can wear down and even mangle blades in the turbines and reduce airflow as it builds up.

Volcano monitoring





Affiliated agencies, partners & collaborators

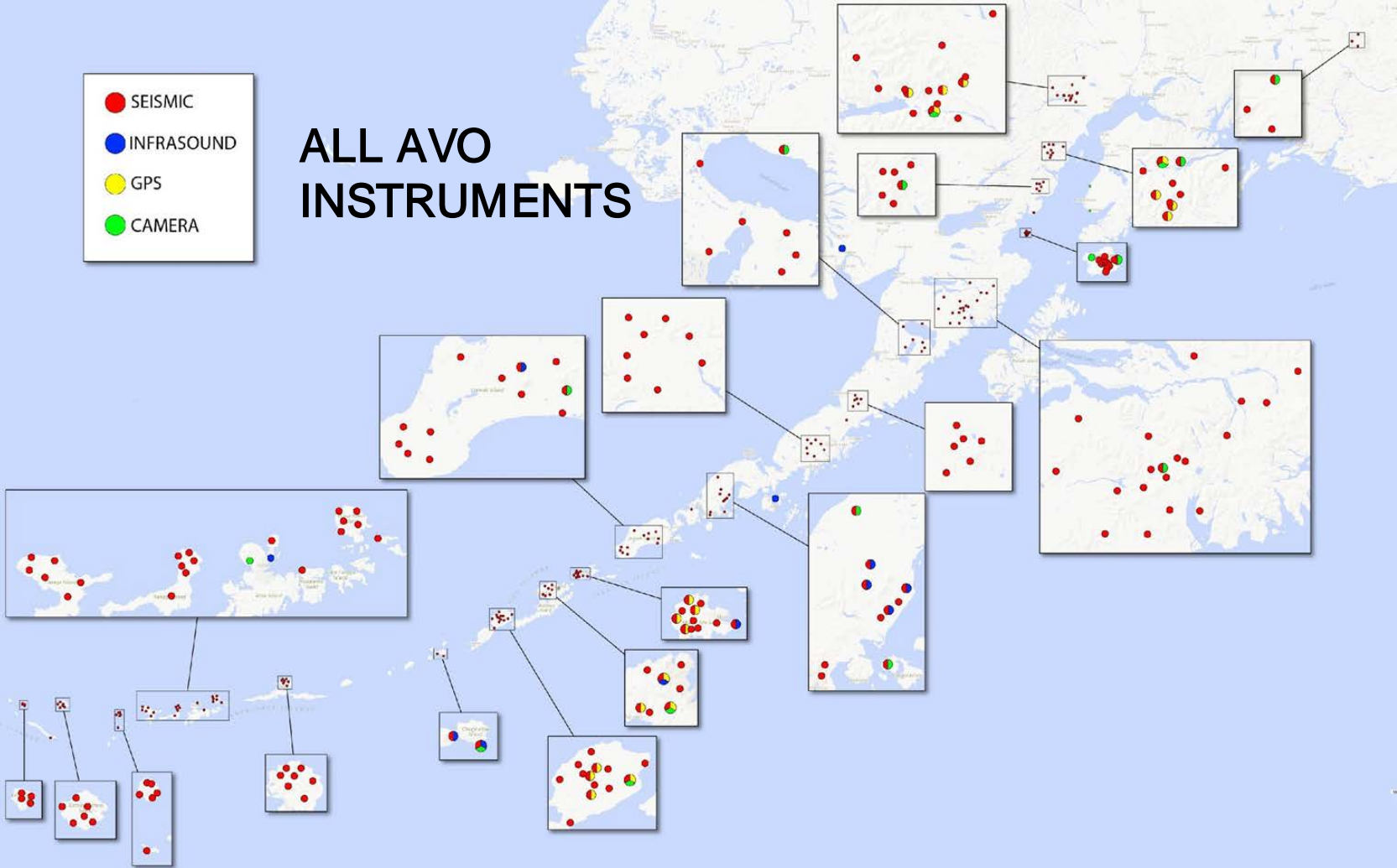


AVO's monitoring network

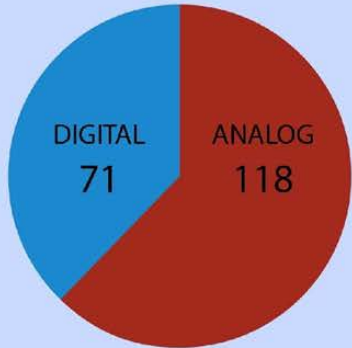
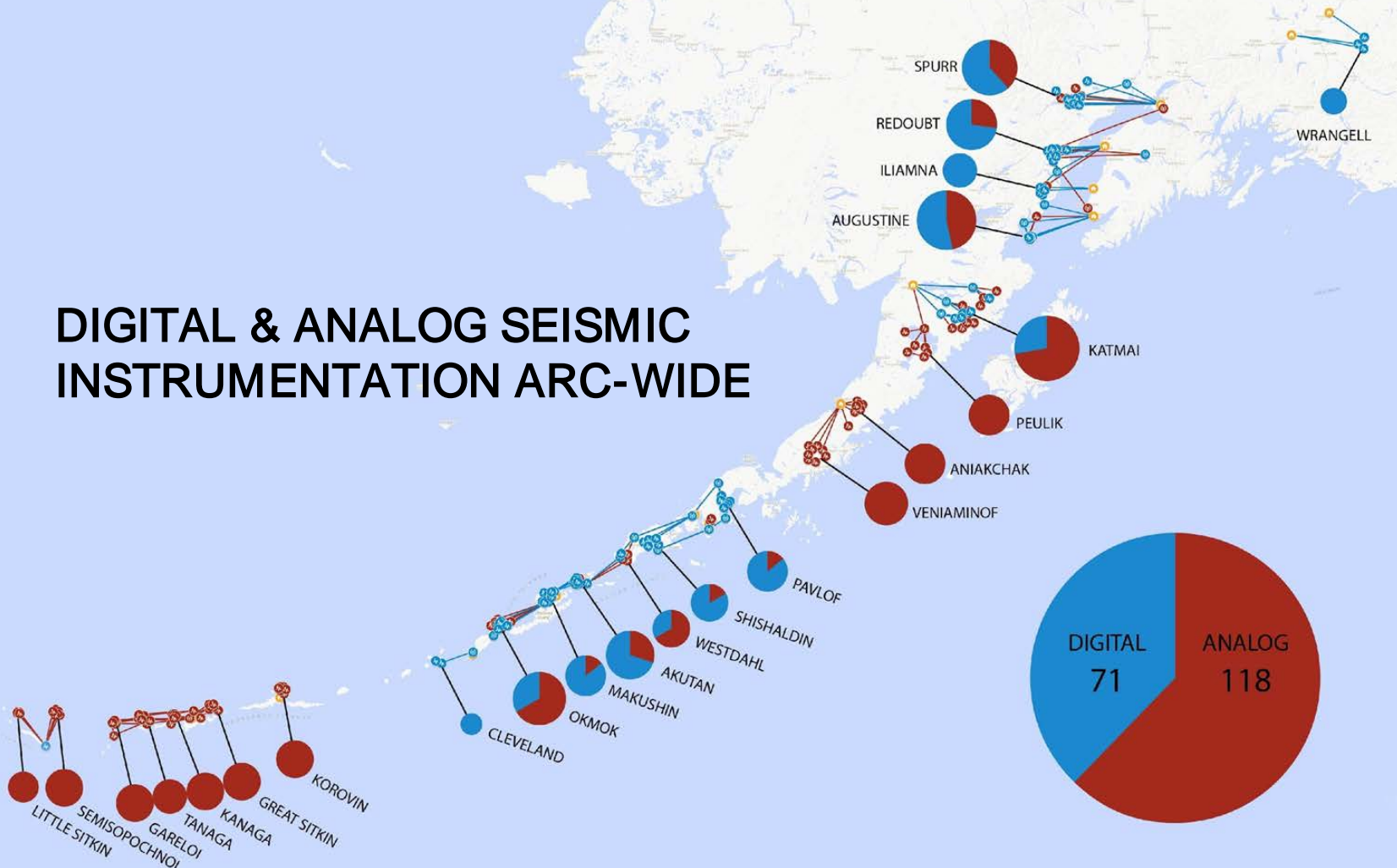


- SEISMIC
- INFRASOUND
- GPS
- CAMERA

ALL AVO INSTRUMENTS



DIGITAL & ANALOG SEISMIC INSTRUMENTATION ARC-WIDE

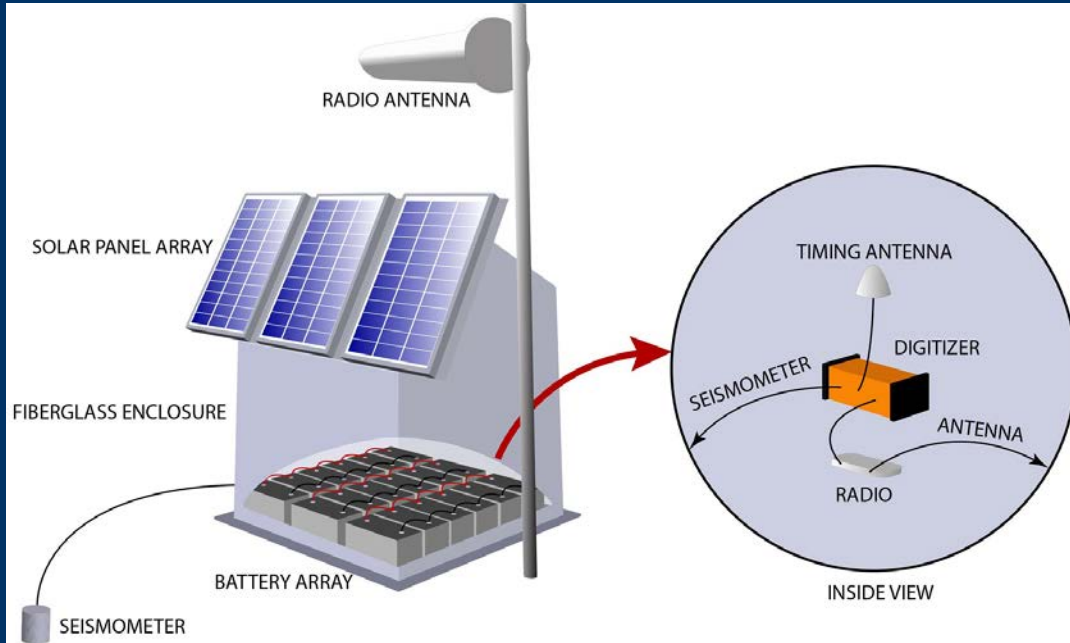


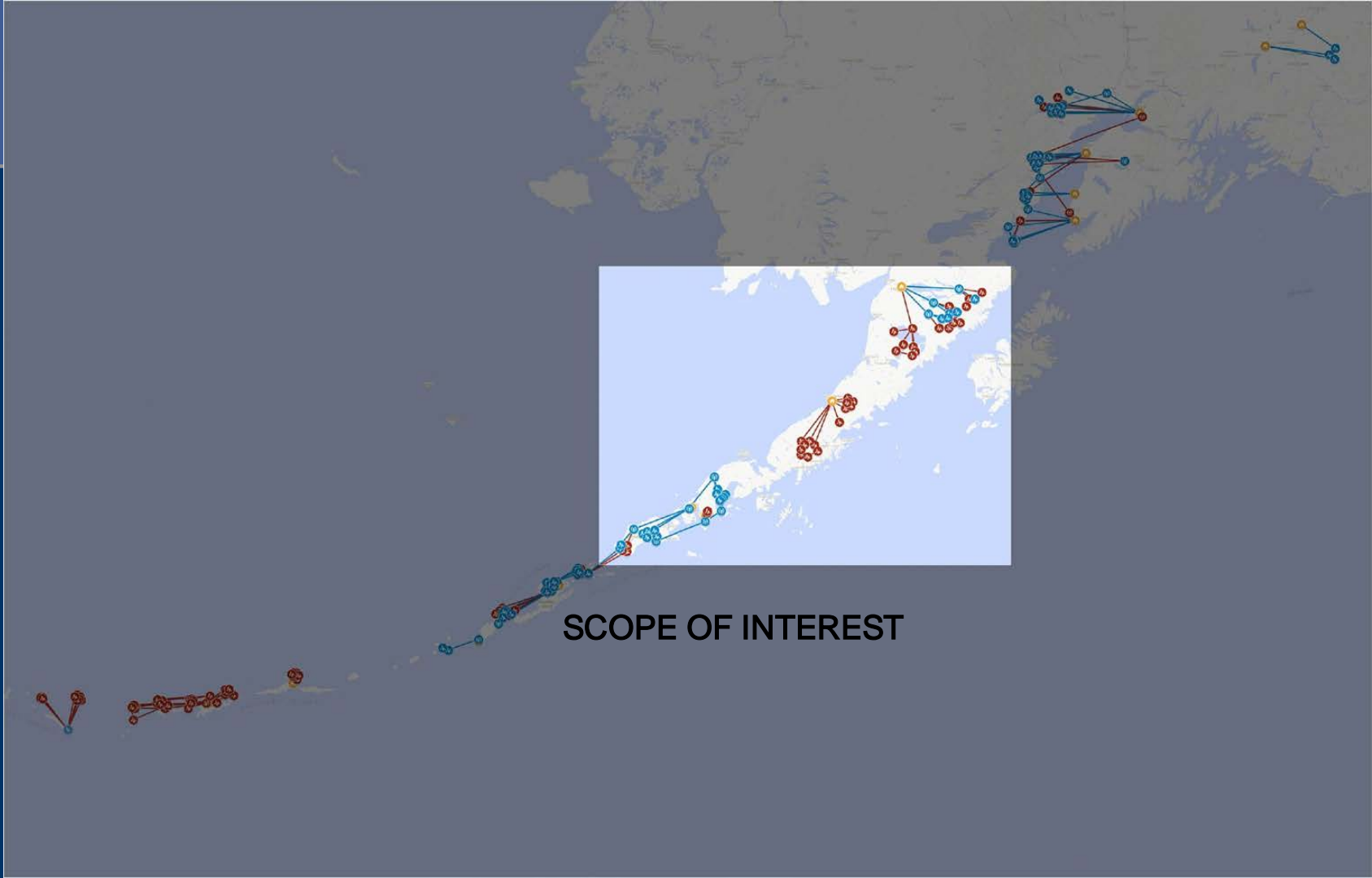
Analog to Digital station conversions

- Increase power capacity
- Improve instrumentation
- Lower noise floor



EXAMPLE OF TYPICAL DIGITAL UPGRADE SITE





SCOPE OF INTEREST

DIGITAL INSTRUMENTATION WITHIN SCOPE OF INTEREST

KATMAI

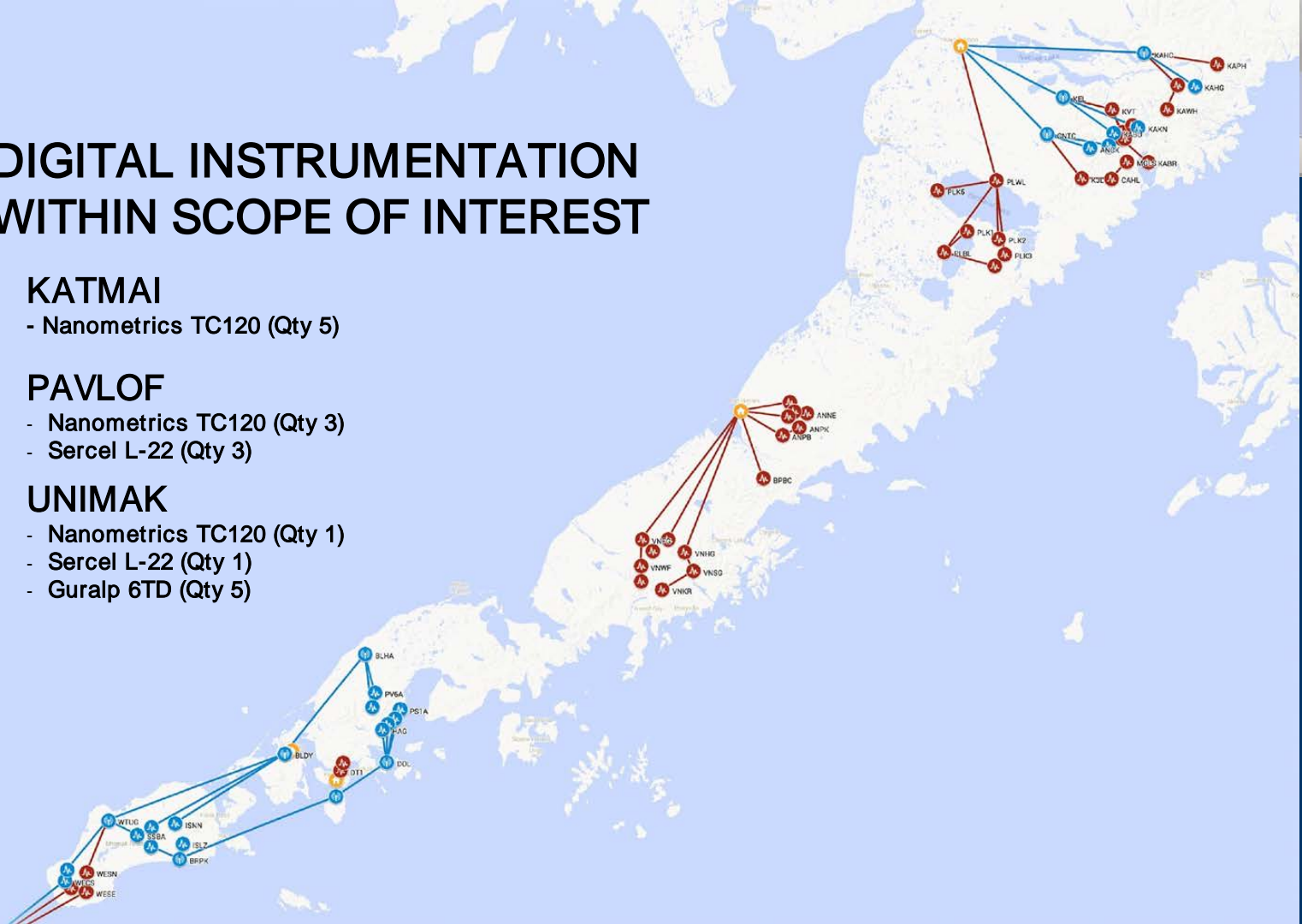
- Nanometrics TC120 (Qty 5)

PAVLOF

- Nanometrics TC120 (Qty 3)
- Sercel L-22 (Qty 3)

UNIMAK

- Nanometrics TC120 (Qty 1)
- Sercel L-22 (Qty 1)
- Guralp 6TD (Qty 5)



POTENTIAL 2018 EXPANSION WITHIN SCOPE OF INTEREST

KATMAI

- 11 Sites need A2D conversion

PEULIK

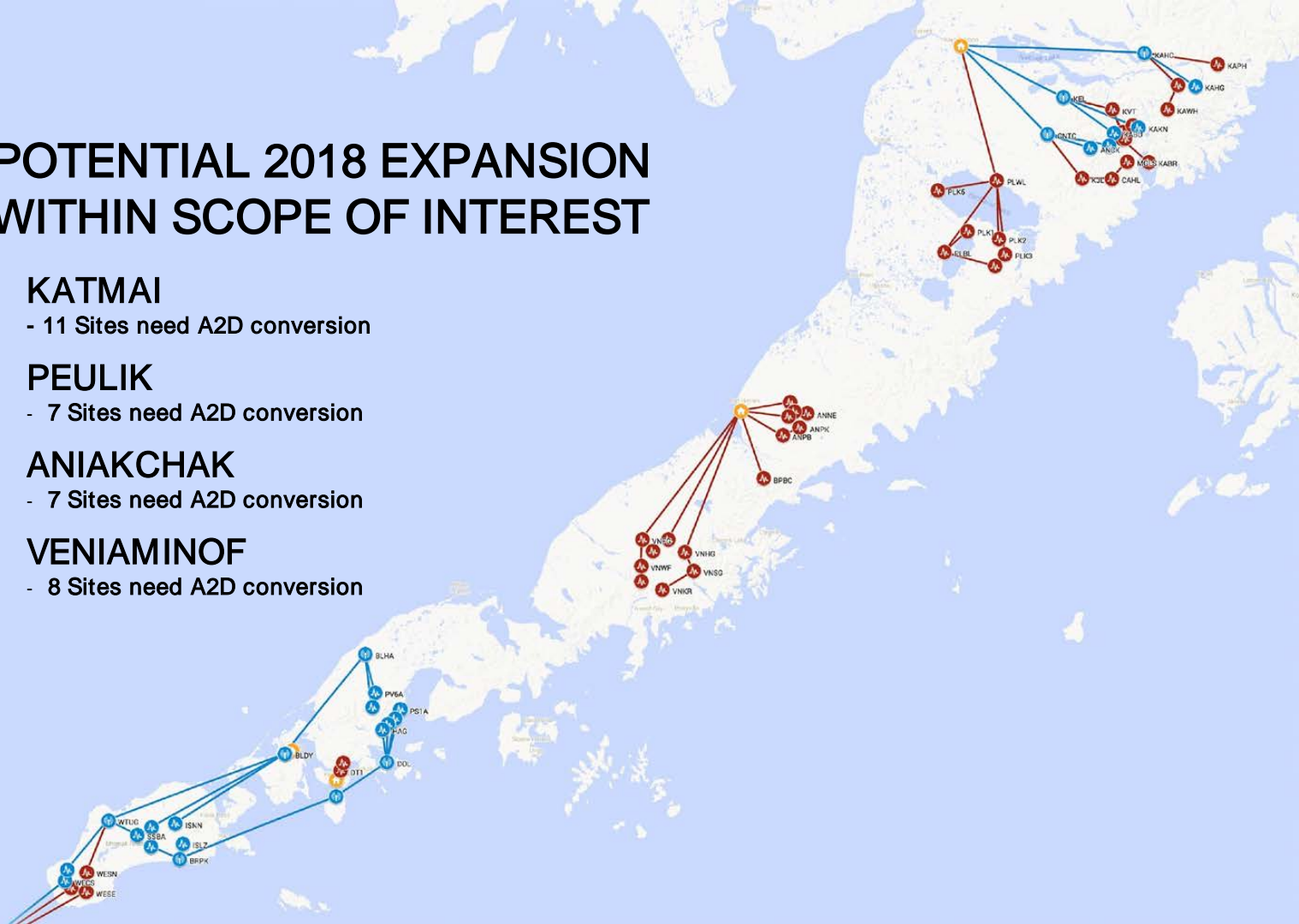
- 7 Sites need A2D conversion

ANIAKCHAK

- 7 Sites need A2D conversion

VENIAMINOF

- 8 Sites need A2D conversion



Concluding thoughts

- All AVO data is of course available to support AACSE
- Some station upgrades have already been done in the area of interest during 2017 field season
- We'll shape and direct 2018 fieldwork to assist the AACSE cause (to whatever extent possible)
- We stand ready to offer support in permitting and shared logistics

