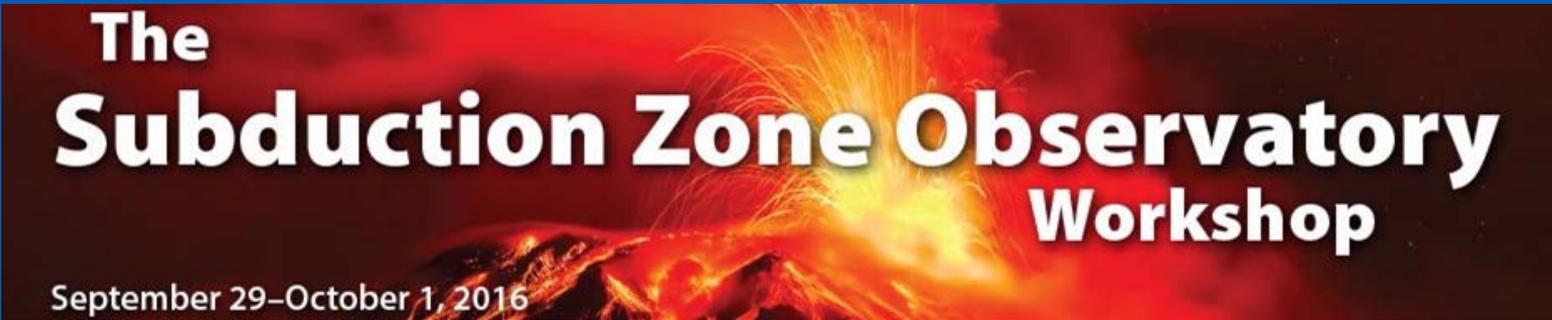


# The Subduction Zone Observatory Workshop



September 29–October 1, 2016

350 Applicants & 242 Total Attendees

67 Early Career Scientists & Students

45 from 21 Non-US Countries

32 Break-out Groups

>60 White Papers

## *Key Themes Emerged from the Boise Workshop:*

- Focus on the Fundamental Processes that Underlie GeoHazards
- 4D Datasets – Time-Evolving Phenomena
- International Coordination/Opportunities
- Modeling Collaboratories
- Sampling over Geologic Time

# SZ4D Initiative Vision Document

Lead Authors:  
Jeff McGuire WHOI  
Terry Plank, LDEO

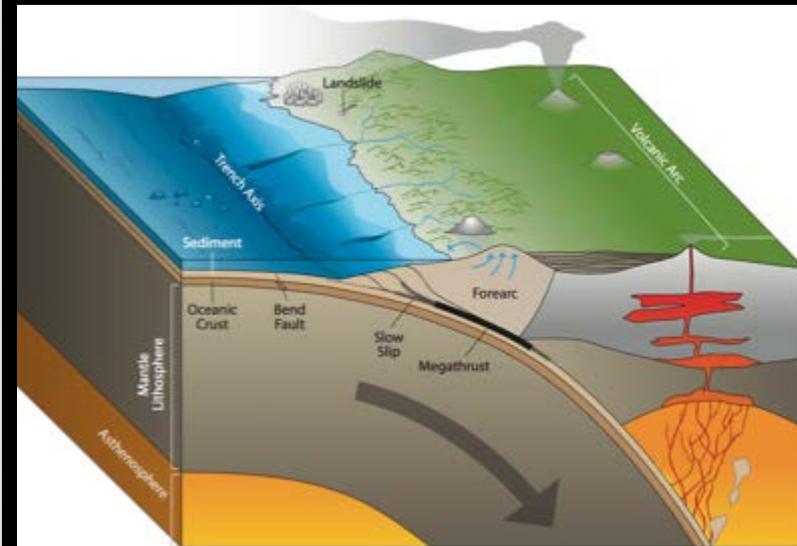
*with 21 others &  
contributions from many  
more*

<https://www.iris.edu/sz/sz4d.pdf>

## The SZ4D Initiative

Understanding the Processes that Underlie  
Subduction Zone Hazards in 4D

A Vision Document Submitted to the National Science Foundation

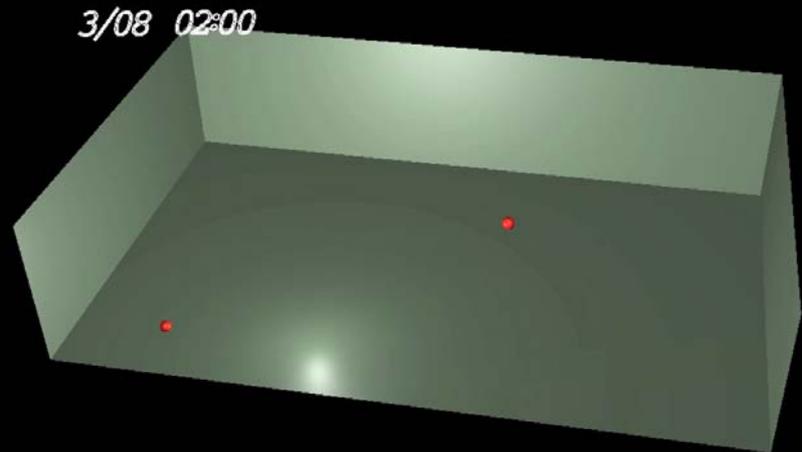


*Increase our predictive understanding of  
Eruptions, Tsunamis, Earthquakes, and Landslides by:*

- capturing and modeling emergent phenomena*
- collecting datasets 4D – in real time  
and through geological time*



Volcano Deformation: 1992 – 2000  
Seguam, AK



Foreshock (and SSE) sequence preceding  
2011 M9.1 Tohoku Earthquake  
(copyright NHK & A. Kato)

# Implementation

## Concepts:

### Strategy:

Long-term, continuous instrumentation

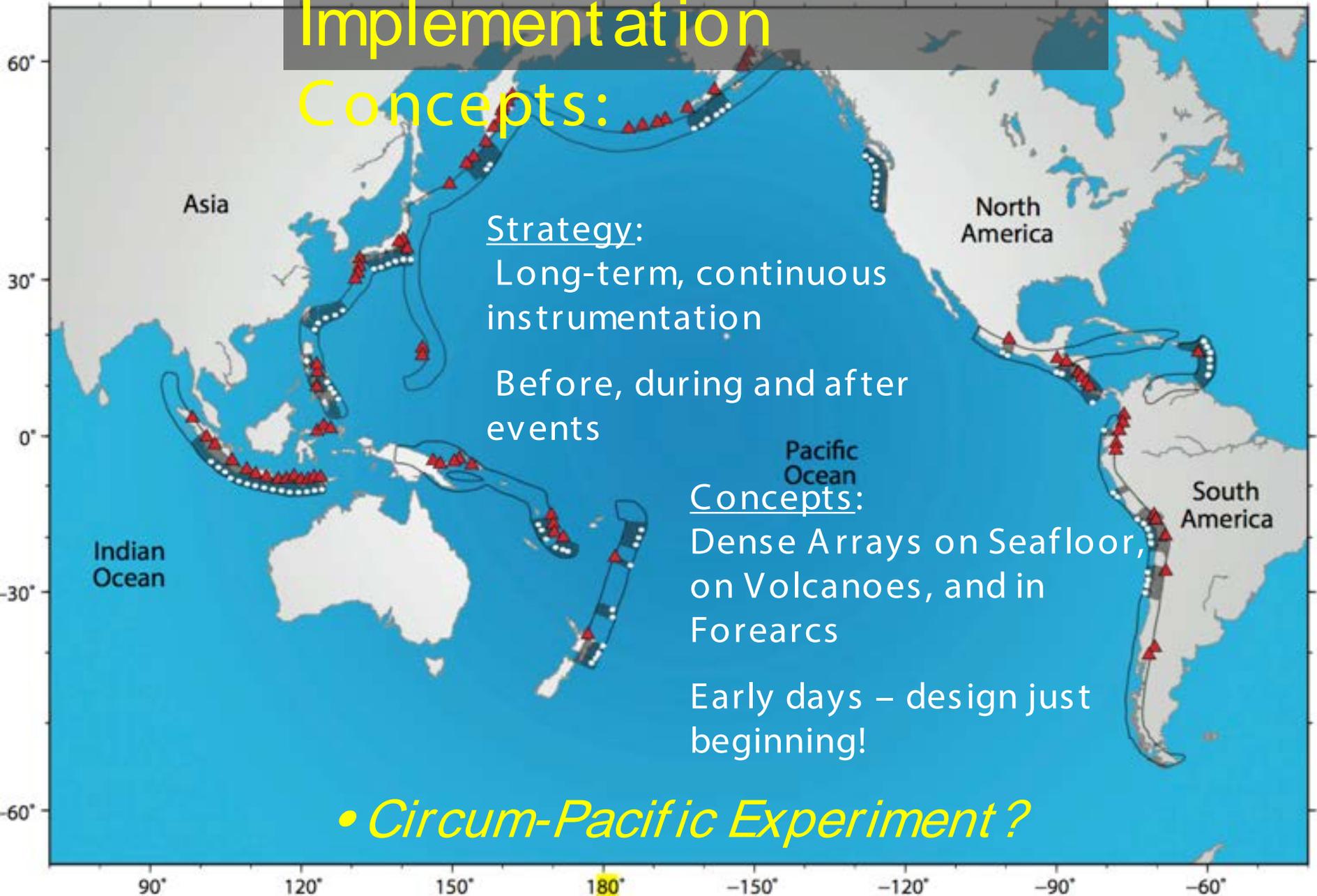
Before, during and after events

### Concepts:

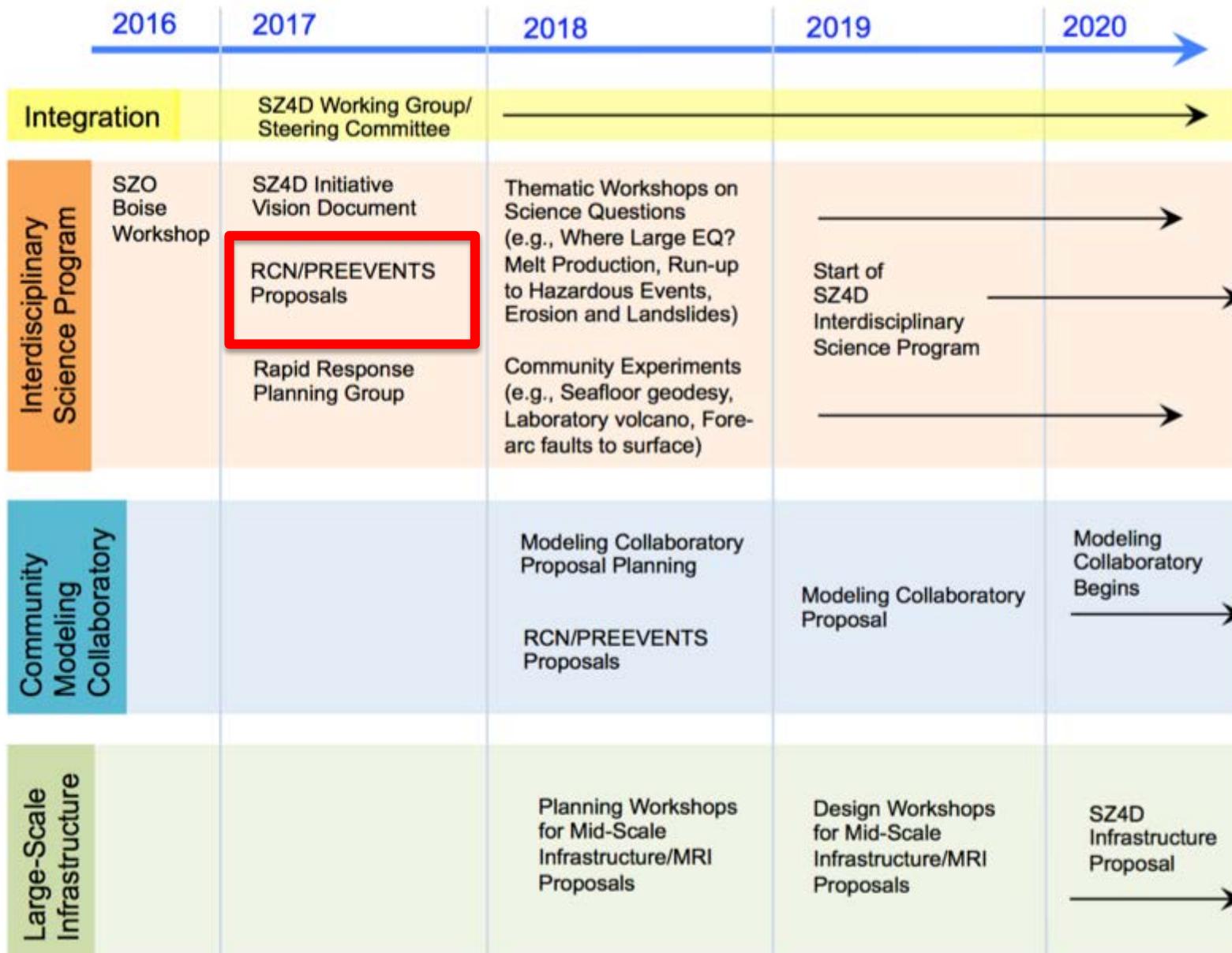
Dense Arrays on Seafloor, on Volcanoes, and in Forearcs

Early days – design just beginning!

• *Circum-Pacific Experiment?*



# Proposed SZ4D Timeline for Development and Implementation



# NSF Research Coordination Network: *RCN for SZ4D*

## Steering Committee:

Emily Brodsky, Melodie French, Terry Plank, Diana Roman, Matt Haney, Diego Melgar, Doug Wiens, Sarah Penniston-Dorland, Harold *Tobin* (*PI for RCN proposal & office*) ...and several more TBD.

*RCN Proposal to be submitted early 2018*

- SZ4D RCN Planned Activities:
  - Communication (web, news, etc.)
  - In Reach (research community) and Out Reach (broader science community, agencies, stakeholders, and public)
  - Sponsor and facilitate Working Groups to develop SZ4D program



TH43H

*Coordination of Subduction Hazard  
Town Hall Meeting*

Thursday, 14 December  
12:30 - 13:30

Convention Center – Rooms 255-257

*First 50 people get a boxed lunch!*