Overview of IRIS for Urban Geophysics Workshop
6/4/19
In a nutshell

• We are funded by NSF/EAR to provide instrumentation and facilities (THE FACILITY) that might otherwise be out of reach for the community

• We have a representative form of Governance (THE CONSORTIUM) to receive guidance and strategic vision from the community we serve

• This creates a democratization of resources to support seismology
  • AND GEOPHYSICS

Facilitate, Collaborate, Educate
IRIS - The Facility

Facility Operator

• Instrumentation Services
  – Global Seismographic Network (w/USGS)
    • Long-term global research and monitoring
  – Portable Instrumentation (PASSCAL)
    • Shorter-term research experiments
    • Seismic Source Facilitation
    • Magnetotelluric Facility – adding more NSG
  – USArray (part of EarthScope)
    • Structure and evolution of North America
    • Now in Alaska
  – Polar Services

• Data Services
  – Data Archiving, Distribution and Products

• Education and Public Outreach
  – Students and Public
Provides state-of-the art instrumentation to PIs and their students
Maintenance, test, storage, field prep, packing and shipment
  – ~930 broadband
  – ~430 short/intermediate period
  – ~3800 active source
  – MT and GPR – being added
Support PIs with planning, training, in-field support (if needed), post-experiment data support
~$80 M inventory
Instrument depot at New Mexico Tech
Source facility at UTEP
~7M/y
In the past year:
  – Supported 60 new and 41 continuing experiments

Science Impacts

Diverse studies & innovative approaches
Earth structure at all scales
Earthquake sources and seismicity

~10,000 stations
Supporting Experiments Large and Small

PASSCAL Instrument Center

Active Source Experiments

EarthScope - Flexible Array
IDOR – Idaho Oregon
Active Source
Seeking New Funding

• Mid-Scale Research Infrastructure (MsRI)
  – Proposal submitted
  – ≈$18.5M to enhance Portable observations
    • Near Surface Geophysics Instrument Center
    • Large N – another 2,500 nodes
    • Next Gen Data Acquisition and BB sensors
    • Infrasound (200)
  – If funded – 4 year project begins on 1 Oct 2019!