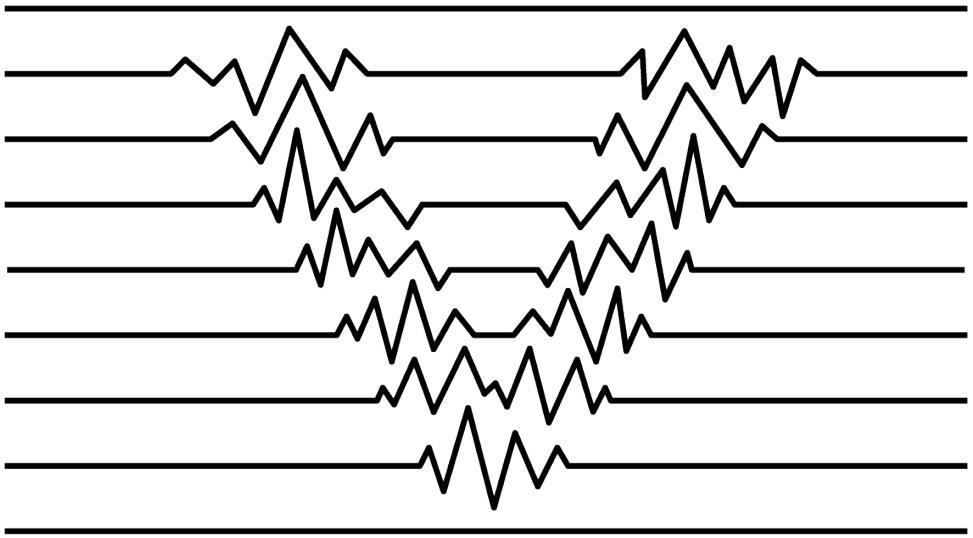
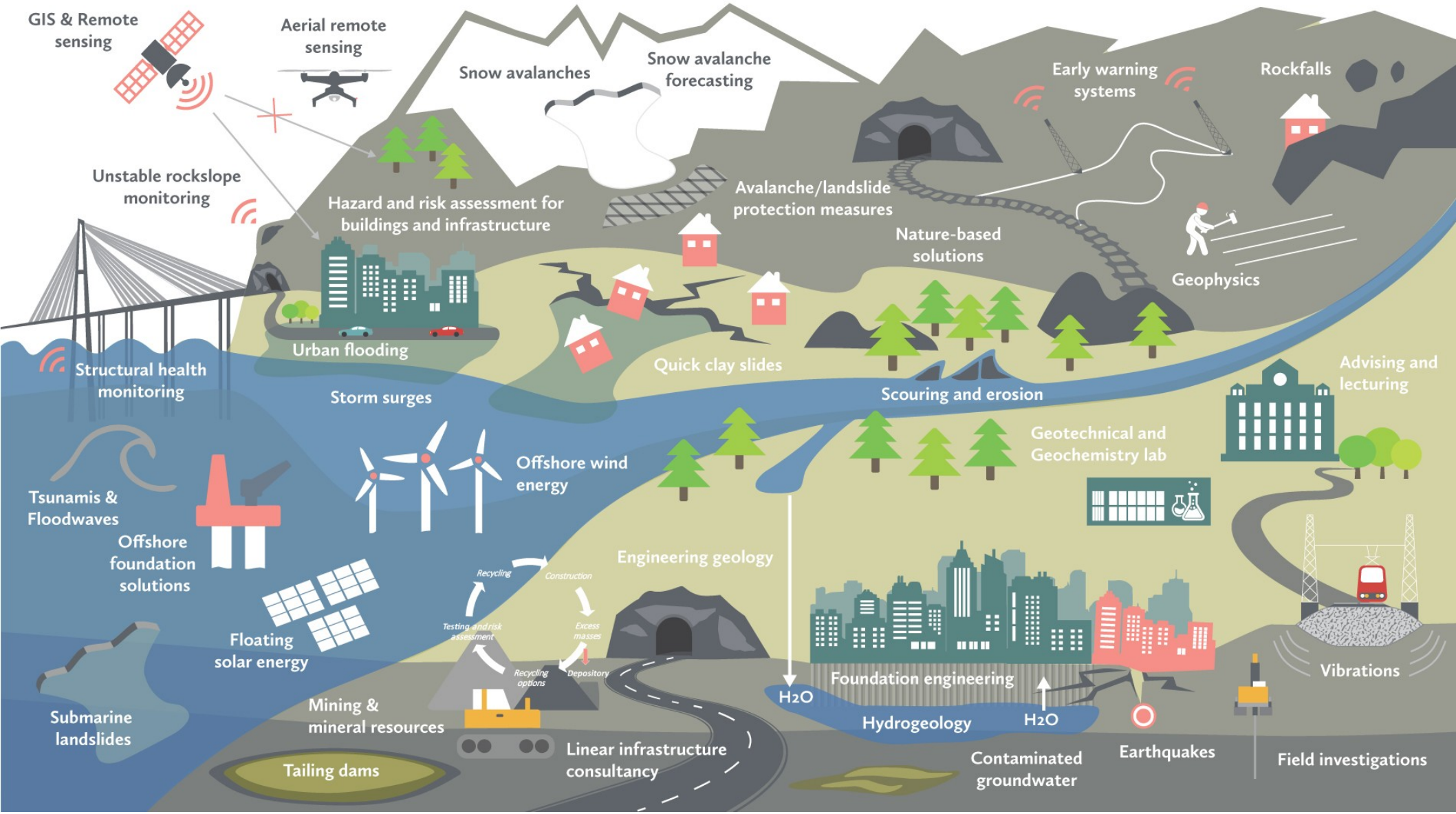


SPIN

MONITORING A RESTLESS EARTH

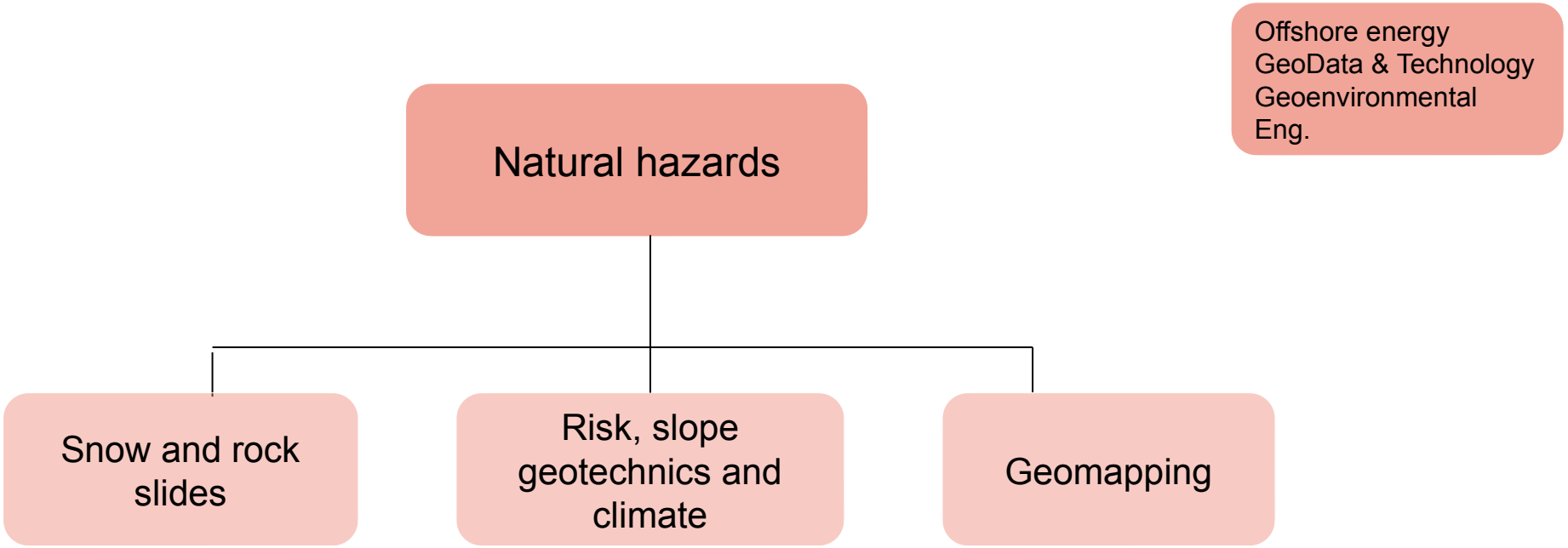
http://spin-itn.eu

Norwegian Geotechnical Institute



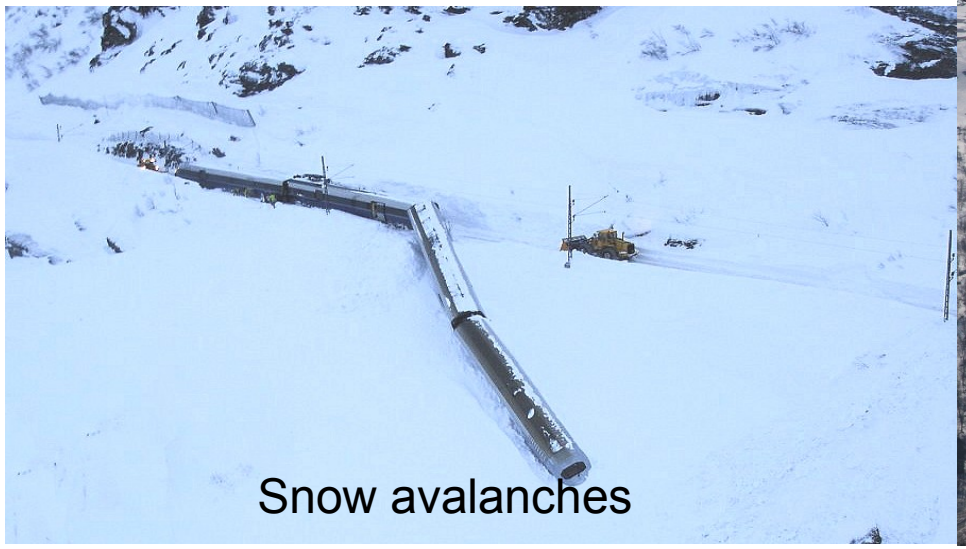
Dylan Mikesell

Natural hazards – 60 scientists and staff



- Expertise in:
  - the assessment and management of risks related to a wide range of natural hazards
  - monitoring these effects through satellite-based and geophysical methods
  - mapping and modelling these effects through GIS and numerical simulation
- Goal: prevent damage and loss caused by natural hazards, both geohazards as well as climate change-related effects

Hazard topics: Landslide, Avalanche, Tsunami, Flood (natural & tailing dams), Permafrost



Why SPIN?

- *NGI needs to study changes in local material properties and investigate the complex behavior of materials as they deform*
  - *Not just using seismic methods!*
- Looking for new types of instruments that bring new information (spatial and temporal)
  - Often building our own sensors to monitor infrastructure and/or the environment
- Opportunities:
  - Infrastructure: off-shore wind platforms, railway lines, subsurface tunnels
  - Natural hazards: avalanches, floods, landslides, etc.
  - Sites: GEOLAB facilities, installations in Europe aimed to study subsurface behavior and the interaction with structural critical infrastructure elements (e.g., a bridge) and the environment