Dam Safety Monitoring Solution

A Dam | Sensors | Software | Web Interface
Component: The Dam

Dam Types
• Embankment
  • Earth fill
  • Rock fill
• Concrete / Embankment
• Concrete
  • Gravity
• Buttress
• Arch
**Component: The Sensors**

**GNSS: Trimble NetR9 GNSS Receiver**
- Independent 3D positioning (>5mm)
- Observes a single point
- Long distances

**Optical: Trimble S8 Total Station**
- Relative 3D positioning (<3mm)
- Observes multiple points
- Relatively short distances < 3 km

**Seismic: Trimble REF TEK Portfolio**
- Broadband seismometers
- Strong motion accelerometers
- SeismoGeodetic sensor

**Geotechnical: 3rd party sensors**
- Piezometers
- Crack gauges
- Flow meters
- Pendulums
Component: The Software

T4D Lite
• Periodic Monitoring
• Manual data capture
• Data archiving, charting, reporting

Trimble 4D Control
• Automated monitoring system (AMS)
• Automated & manual data capture
• Data processing, charting, analysing, reporting & alarming

Seismic: Trimble REF TEK Portfolio
• Automated monitoring system (AMS)
• Seismic data capture prior & post event
• Data processing, charting & alarming
Intuitive web interface:
Intuitive web interface:

- Data visualisation
Intuitive web interface:

- Data visualisation
Intuitive web interface:

- Data charting
Intuitive web interface:

- Data analysis (high frequency data)
Intuitive web interface:

- Data analysis (composite view)
Intuitive web interface:

- Data alarming (escalation definition)
Intuitive web interface:

- Control Room Environment
Trimble proposal to Dam owners:

- Evaluate your dam to determine status of existing monitoring system and sensors
- Design a complete solution to:
  - Simplify your existing workflows
  - Use the data from your existing sensors
  - Supply and install new sensors if required
  - Introduce automation where advisable
- Provide a manual data collection App and Tablet with automated data upload features
- Services on offer
  - Manage the system for you at a level to suite your needs
  - Design, install, commission and monitor system as required
  - Maintain the system and sensors
Thank You