

### Scenario

Unstable slopes represent serious hazards for those nearby. Heavy rain or gradual creep can lead to a sudden slide, wiping out all obstacles below.

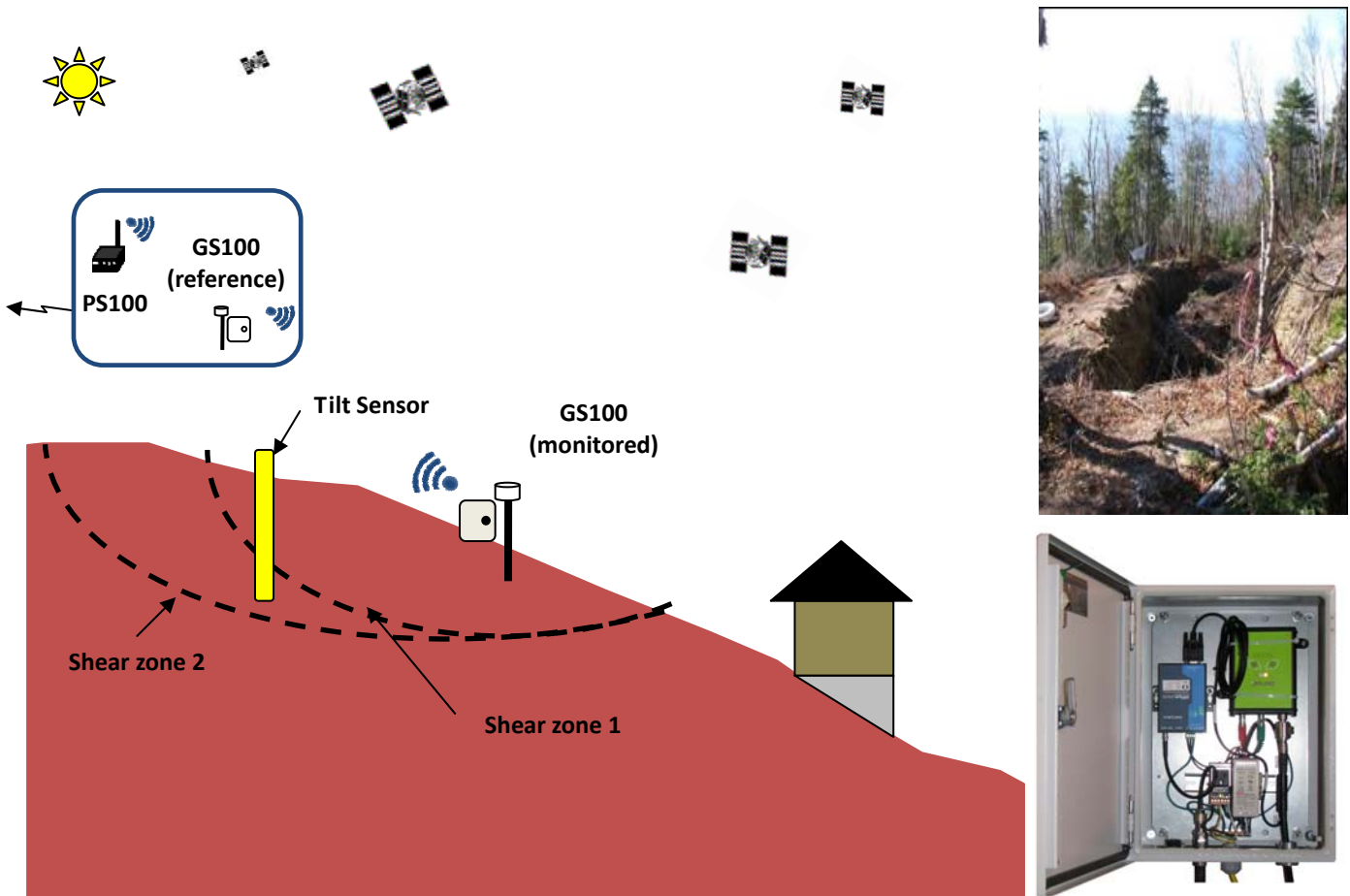
### Traditional Instrumentation

By placing sensors strategically along the slope, advance warning of a slide can be detected. Crackmeters, tiltmeters and slope inclinometers are commonly used to detect changes in stability. One of the challenges of using

this technology is that they require an intimate knowledge of geological conditions of the area.

### mmVu™ Advantages

Because mmVu™ uses Global Navigation Satellite System (GNSS) based sensors, it is able to use reference measurements several kilometres away from the deformation zone. This eliminates the need for previous knowledge of the underlying geological conditions. Additionally, expensive drilling costs can be avoided when trying to reach stable ground for reference points for tilt sensing systems.



**Above:** A GS100 station is used to monitor an unstable slope. Data are sent wirelessly to a PS100 to calculate mm level positions in real-time. The assumption that the tilt sensor has reached stable ground is incorrect. mmVu™ avoids stability issues. **Top right:** A crevice in an unstable slope. **Middle Right:** a GS100 used for slope monitoring and for reference stations.