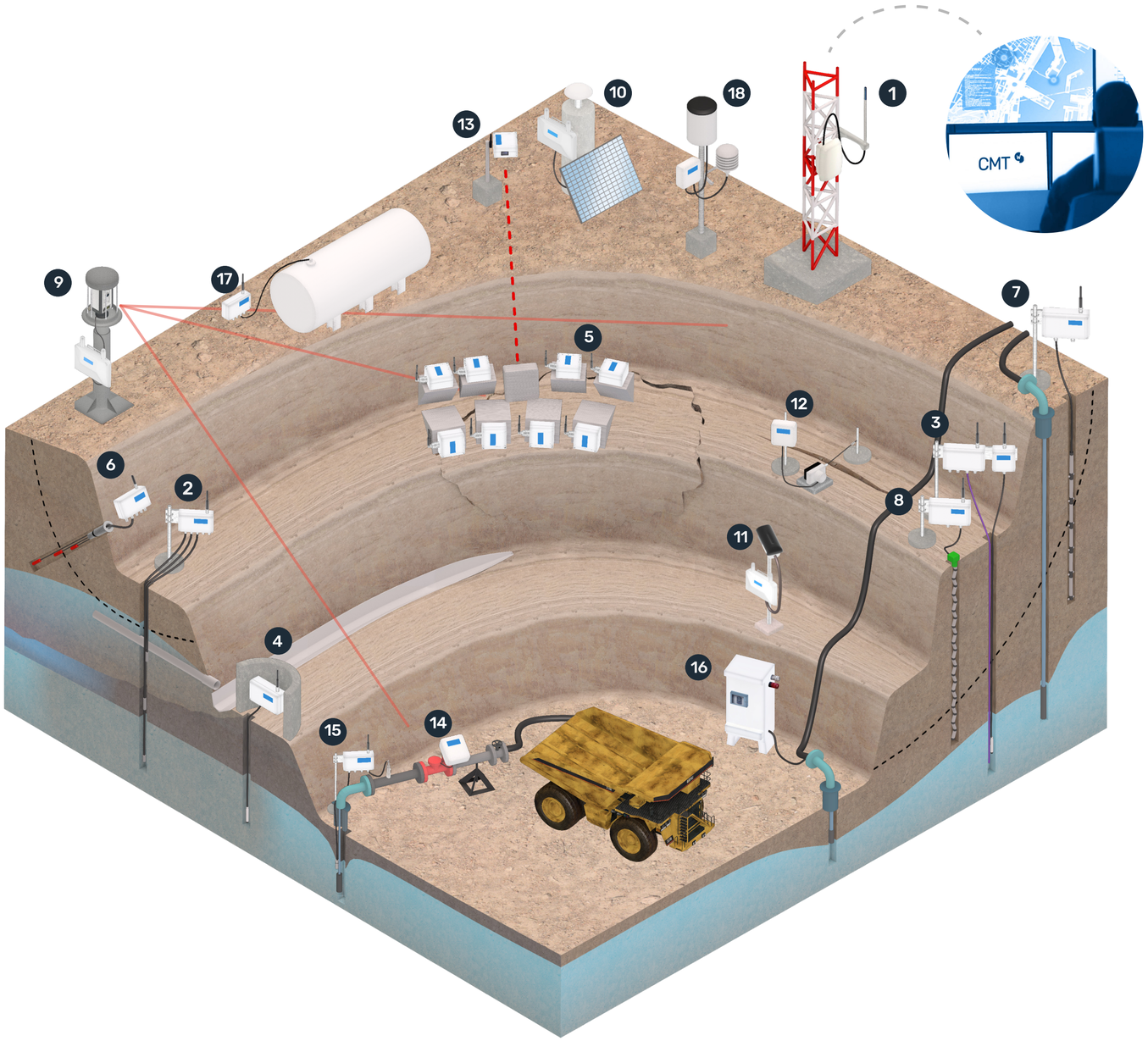
IoT Remote Monitoring Solution

Open Pit Mines



1 Remotely manage and monitor your deployed devices and networks. Obtain monitoring data either on-premise or through the cloud. The gateway sends all data to the **Connectivity Management Tool (CMT)** based on your selected sampling rates. Integrate your data analytics software in CMT to create complete monitoring reports.

GEOTECHNICAL | GEOSPATIAL MONITORING

2 Monitor pore water pressure through vibrating wire piezometers in a borehole connected to a **Vibrating Wire 5-channel data logger**.

3 Assess the pore water pressure with a piezometer connected to a **Vibrating Wire 1-channel data logger.** Locate the depth of a sliding surface using coaxial cables and a Time-Domain Reflectometer (TDR)[1] connected to an **Analog data logger**.

4 Analyze the quality of the water with a water multi-parameter probe connected to a **digital logger or a Thread X3**.

5 Detect slope movements in real-time (less than 2 seconds in most cases) through the **Tilt90-X wireless tiltmeters** for the **Event Detection Solution**.

6 Measure vertical deformation at various depths with a multi-point borehole extensometer (MPBX) connected to a **Vibrating Wire 5-channel data logger**.

7 Assess horizontal displacements through in-place inclinometers connected to a **digital logger** mounted on a pole.

8 Assess horizontal displacements through ShapeArrays connected to a **digital logger** for up to 100 segments and or a **Thread X3** for longer chains.

9 Complement your geotechical monitoring with a total station connected to a **Thread X3** for accurate movement detection.

10 Accurately measure 3D displacement of structures and ground movement using precision GNSS sensors connected to a **Thread X3.**

11 Integrate automated remote visual observations to your condition monitoring program with a field camera connected to a **Thread X3.**

STRUCTURAL MONITORING

12 Monitor movement across surface cracks with a draw wire sensor connected to a **Piconode.**

13 Check the relative distance variation of the slopes with the **LaserTilt90**, a 3-in-1 laser distance meter, inclinometer and data logger, pointing at a target surface.

PROCESS MONITORING

14 Pumping rate measured with a water meter connected to a **Piconode**.

15 Monitoring water level and temperature in the dewatering well and pressure in the pipe through a water level sensor and a pressure transmitter connected to an **Analog data logger**.

16 Control water flow in dewatering operations with a Variable Frequency Drive and a flowmeter connected to a **Thread X3**.

17 Monitor diesel fuel levels with a fuel tank level sensor connected to an **Analog data logger**.

ENVIRONMENTAL MONITORING

18 Monitor precipitation with a rain gauge and air temperature with a thermistor connected to a **Piconode**. If you need to monitor more parameters, use a weather transmitter connected to a **digital logger**.

WORLD SENSING Monitoring What Matters