

Substation Condition Monitoring System



Substation Condition Monitoring System NIPPON SIGNAL

Collecting data on signs of substation deterioration by using IoT sensors, and realizing remote monitoring instead of time-consuming patrol inspections.

Challenges for railway operators

Declining workforce

Challenges in Securing Workforce
for Substation Patrol

Current patrol inspections rely on
human vision, hearing, and smell

Building a Remote Patrol System to Address Challenges

Substation Condition Monitoring System

Image-Based
Equipment
Diagnosis

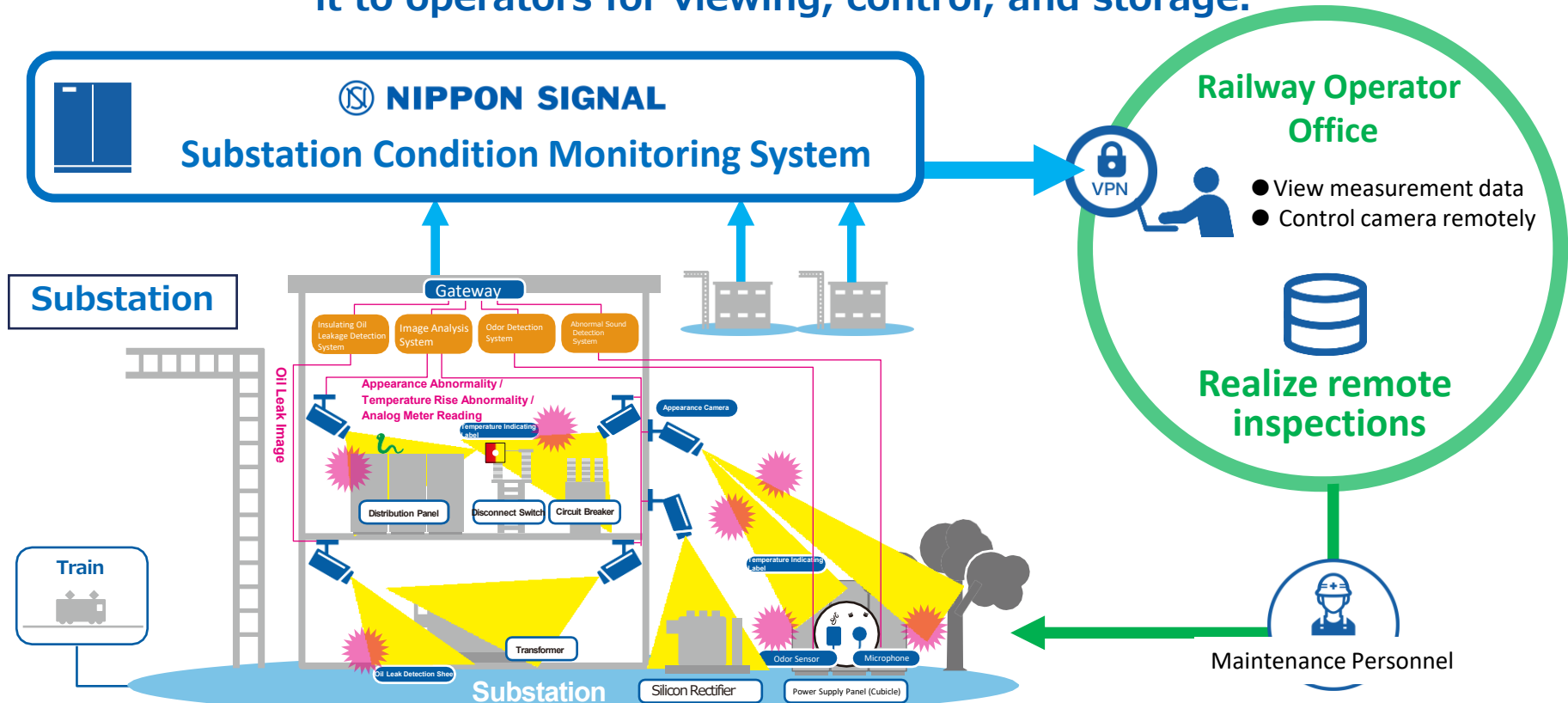
Detection of
Wire
Overheating

Detection of
Insulating Oil
Leakage

Detection of
Abnormal
Sounds

Detection of
Unusual Odors

Collects monitoring data from each substation and provides it to operators for viewing, control, and storage.



Introducing our products and sensing devices used in the system.

Our Products

SubMS

Substation Monitor System

- Aggregates and provides data from all substations



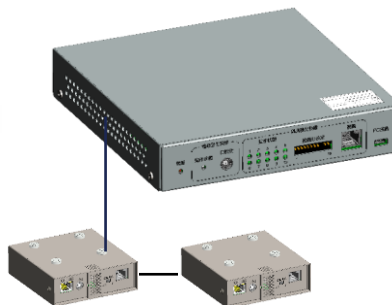
PC

- Supports multiple sensors
- Analyzes daily inspection data within one day



Odor Sensor System

- Detects odors caused by volatile organic compounds
- Measures temperature, humidity, and pressure



Sensing Devices

Network Camera



- Detection of Changes in Temperature-Indicating and Oil-Leak Labels
- Detection of Abnormalities in Equipment Appearance

Microphone



- Detection of Abnormal Sounds in Equipment

AXIS
COMMUNICATIONS