

Smarter, Safer, and More Secure

Better and Smarter with IoT

MONNIT® KOREA

Monnit Korea provides innovative IoT wireless sensor solutions to customers
in wide range of industries at reasonable prices

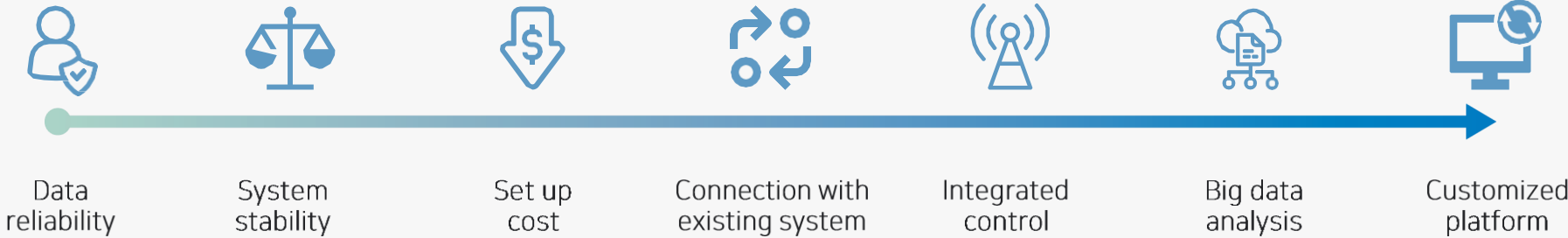
Why MONNIT?

One solution can bring several effects



- Quick response in case of emergency
- Energy saving and labor cost reduction
- Operational efficiency improvement through big data analysis
- .
- .
- .
- Various operational effects based on solution composition

Clients Consideration



Competitiveness

IoT Device & Service provider



All in

MONNIT® KOREA

How it works



Wireless sensor

Collects data and transmits to the gateway



Gateway

Receives data from the sensor and transmits it to the cloud server



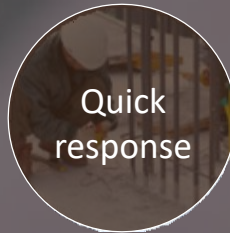
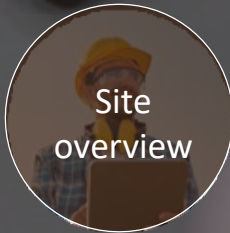
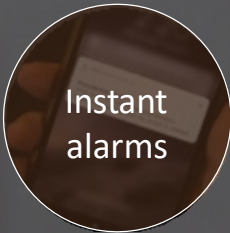
Platform

Data visualization and instant notifications

Service Provided



A water leak was detected in the warehouse building#52!
2021/03/09 12:30 pm
Battery : 90%



Monnit Sensor Map



Temperature



Temperature
3 Foot Probe



High Temperature



Low Temperature



Duct Temperature



Water Temperature



Thermostat



Thermocouple



Dry Contact



Ultrasonic



Water Detection



Water Rope



DC Voltage Meter
(200VDC)



AC Voltage Meter
(500VAC)



DC Voltage Detection
(200VDC)



AC Voltage Detection
(500VAC)



3 Phase AC Current Meter
(20/150/500Amp)



AC Current Meter
(20/150/500Amp)



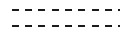
Resistance



DC Current Meter
(0~20mA)



Button



Pulse Counter



Motion



Vehicle Detect Counter



Light Meter



Activity Detection



Open/Close (Door)



Control



Vibration Meter



Advanced Vibration
Meter



G-force Snapshot



G-Force Max-Avg



Impact Detect



Tilt



Pressure Meter



Differential
Air Pressure



Carbon Dioxide
(CO₂)



Air Quality



Carbon Monoxide
(CO)



Hydrogen Sulfide



Tilt Detection



Air Velocity



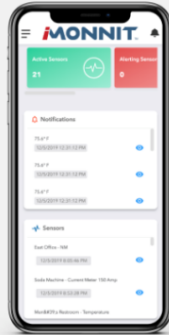
Humidity

Why Monnit?



Easy Setup and Use

All of Monnit's remote monitoring systems can be setup in about 15 minutes and our intuitive interface makes managing your system a snap!



Exceptional Wireless Range

Our optimized RF communications platform provides superior wireless range for covering large areas.



Low Power Long Life

Monnit wireless sensors feature industry leading power management, allowing sensors to last for up to 12+ years.



80+ Sensor Types

With over 80 different sensor types and more developed all the time, the sky is the limit for what you can monitor.



Low Cost High Quality

Monnit wireless sensors start at just \$49 and basic online sensor monitoring and notifications are FREE!



Global RF Frequencies

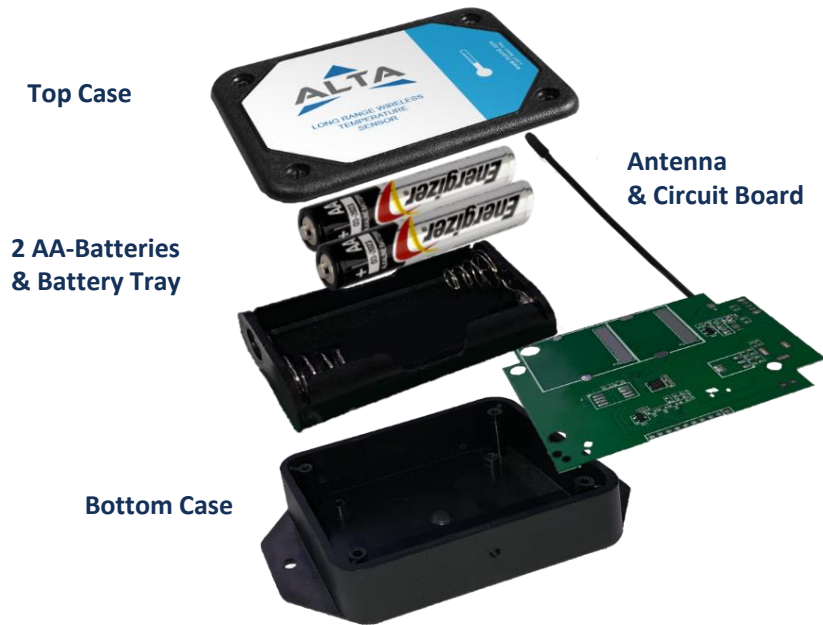
Our wireless products are available in global frequencies (900, 920, 868 and 433 MHz).



Network Security

SENSOR PRINTS

Implementing **256-bit SHA3** authentication, SensorPrints creates a “fingerprint” for a Monnit Wireless Sensor that contains an authenticated sensor message.



- ✓ **Integrated on-board data storage** allows ALTA sensors to store data messages if communication to a wireless gateway is disrupted (power outage, Internet outage, or out of range).
- ✓ **Over-the-air updates** allow ALTA products to be updated remotely if new fixes or features become available.

GATEWAY ENCRYPTION

Monnit uses the same encryption methods used by websites to transmit financial data. Secure socket layer (SSL) protocol is employed with **128-bit AES** encryption while sending and receiving data



Protocols Supported:

- ✓ DHCP
- ✓ DNS
- ✓ NTP
- ✓ UDP
- ✓ TCP
- ✓ SNMP
- ✓ Modbus TCP
- ✓ Serial Modbus

This encryption allows all transmitted data that would otherwise be difficult for someone to read, to also be encrypted. The encryption is bi-directional so both the data that is being sent as well as the responses being returned are encrypted.

MONNIT's Strength

300+
Meter



Exceptional
wireless range

10+
Years



Low power
Log life



Integrated
on-board
data storage



Customized
platform



Guaranteed
quality

Benefits



Increased productivity
and reduce costs



Easy set up and
installation



High quality for
low price



Prevention of
accidents



Integrated control with
all devices



Secured Big
Data

Monnit Korea

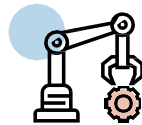
Solution cost comparison



Infrastructure

Structural health
monitoring

Average cost of other providers	Monnit solution
\$50,000	\$10,000



Equipment / Facilities

Predictive
maintenance

Average cost of other providers	Monnit solution
\$30,000	\$3,000



Environment

Well being enhancement
Air-quality monitoring

Average cost of other providers	Monnit solution
\$20,000	\$2,000



Energy

Energy saving based on
Big Data analysis

Average cost of other providers	Monnit solution
\$60,000	\$18,000

*Cost is based on the actual installed site, prices may fluctuate depending on the site



Building IoT Monitoring Solution

Monnit Korea

Building Solution



Building
lifespan
extension



Accident
prevention



Reduction
of operating
cost

○ Building management with smart IoT sensors

Application cases



Fire fighting facilities

Provides an immediate alarm when the fire detector for each area is activated



Hot water circulation pump

Prevents hot water supply interruption accidents by providing an alarm when a fault occurs



PLC Panel

Monitoring and subdivision of various alarms in PLC panel



UPS inverter

Monitors the inverter output current of the UPS facility, and alarms when an abnormal current occurs.



Septic tank

Prevents the overflow situation of the septic tank, which cannot be inspected at all times



Piping equipment PS room

Water detection sensor is installed to prevent accidents caused by leakage of various pipes in the PS room



Hot and cold water piping

Provides real-time alarm when abnormal pressure occurs

Monnit Korea

Building Solution

Real-time monitoring with Monnit software platform.
By managing all the buildings with sensors installed without visiting check up, it is possible to increase operational efficiency and reduce labor costs, thereby greatly reducing overall operating costs.



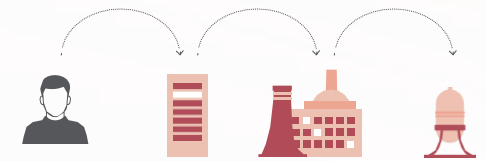
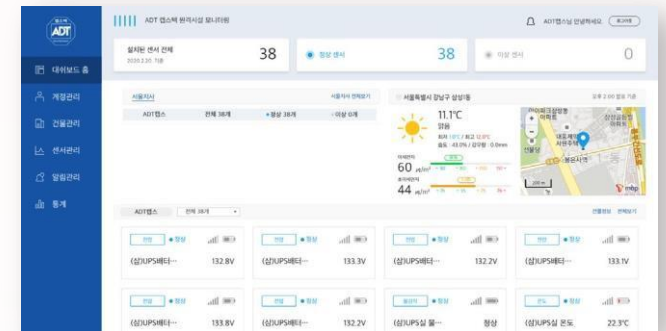
Integrated control



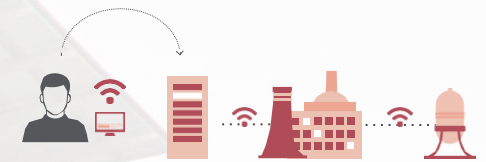
Maintain cleanliness



Real-time data transmission



Existing facility inspection method

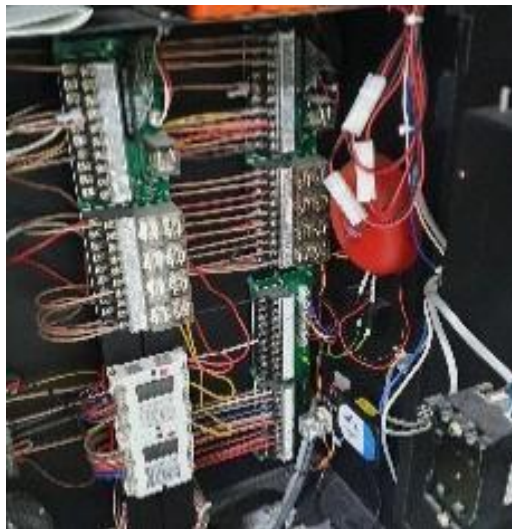


Monitoring with Monnit sensors

Monnit Korea

Building Solution

Projects



HDC iControls (2020.09)
Building management with 1000 sensors



ADT Caps (2020.07)
Platform development/ BMS integration



Gangwon Inje 3821 Military Unit (2020.10)
Septic tank IoT management solution

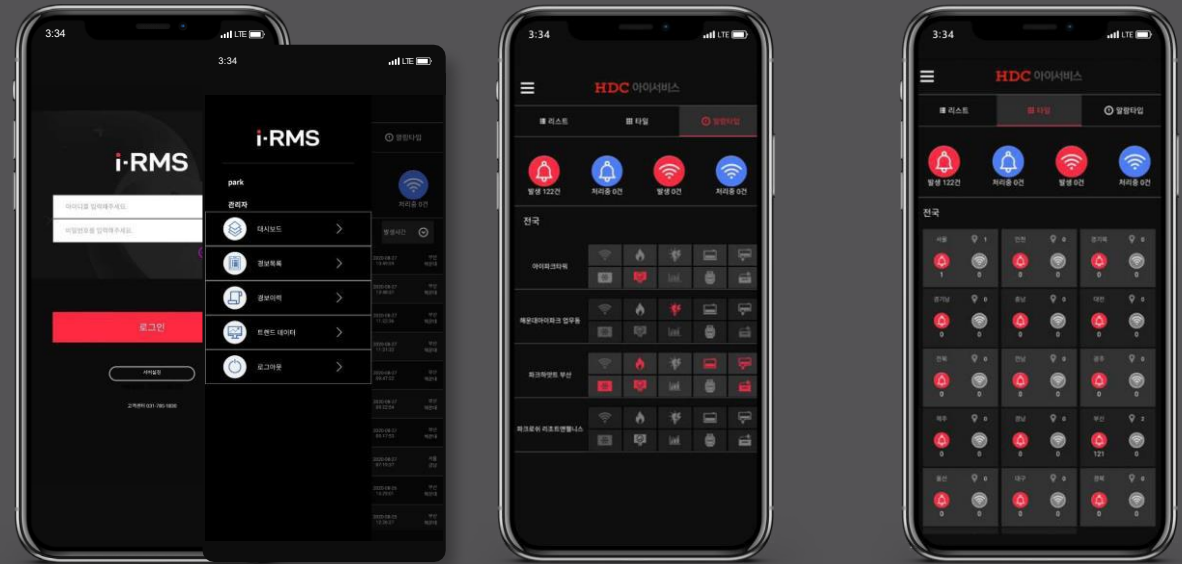
Case study

Client : **HDC**



Solution

Establishing a digital twin for sustainable building management and forming an integrated control network by improving the operability of building facilities



Platform development through open API



Smart Factory Monitoring Solution

Monnit Korea Smart Factory Solution



Quality
improvement



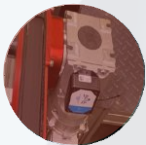
Productivity
increase



Cost
reduction

○ Factory monitoring with smart IoT sensors

Application cases



Conveyor belt

Prevents production line breakage through pre-failure inspection



Flow meter

Smart metering implementation using Monnit sensor for the DC output value of the flow meter



AHU Motor

Detection of abnormal vibration and temperature of the air conditioning motor



MCC Panel

Establish predictive maintenance of facilities by grasping the amount of power in independent processes



Temperature and Humidity Control

Monitoring and automation of HVAC system using environmental sensors and relay



Gas ventilation treatment equipment

Measurement of abnormality in the toxic gas purification treatment – abnormal vibration and temperature

Monnit Korea Factory Solution

Real-time monitoring with Monnit software platform.
By managing all the buildings with sensors installed without visiting check up, it is possible to increase operational efficiency and reduce labor costs, thereby greatly reducing overall operating costs.



Smart Factory Benefits

Through a platform that can be accessed from anywhere, it is possible for managers to efficiently manage site and facilities, and for workers to improve work efficiency and prevent safety accidents with a pleasant environment.

Real-time data collection and management

Efficient data management is possible by quickly and accurately collecting various data generated in the factory and storing them in the cloud

Provision of instant alarms

Provision of real-time alarms when parameters exceed the set threshold value

Data visualization and real time monitoring

Monitoring of the overall factory status in real-time and creation of digital twin based on Big data

Data statistics and analytics report

Event prediction and facility predictive maintenance based on big data analysis and machine learning algorithms

Monnit Korea Smart Factory

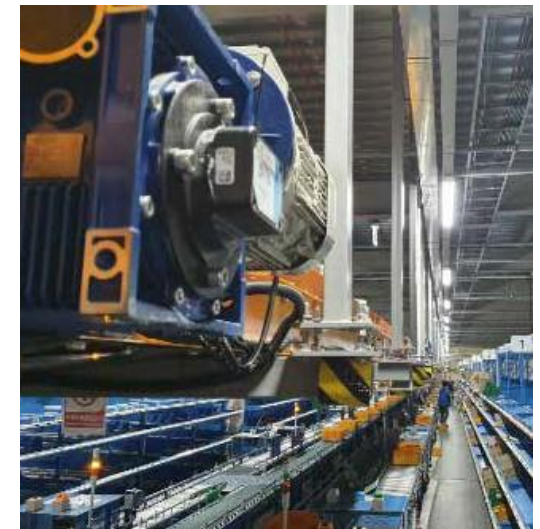
Projects



SK Gas (2021.01)
Gas facility predictive
maintenance IoT solution



Daedong Door (2020.06)
Production line motor status
Monitoring/predictive maintenance



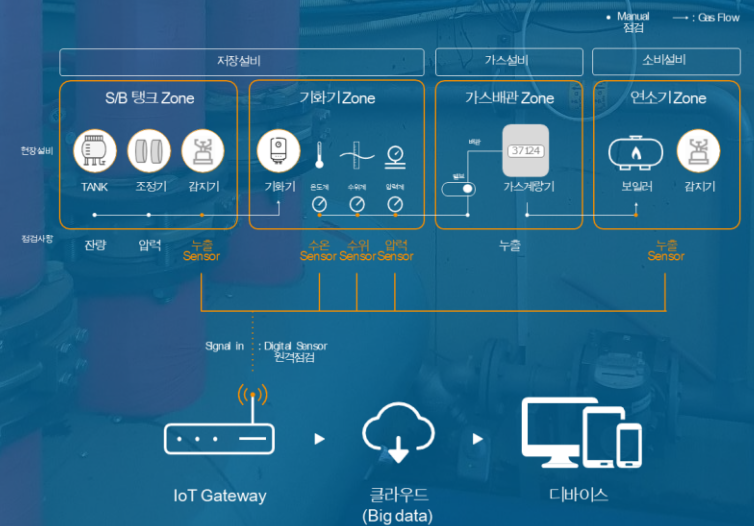
CJ Logistics Hub (2020.11)
Conveyor belt real time monitoring/
Predictive maintenance of equipment

Case study

Gas plant monitoring



Monnit wireless sensors are installed all over the plant to monitor gas leakage, pipe pressure, temperature of equipment, fuel levels for **predictive maintenance and accident prevention** purposes.





Construction Site Monitoring Solution

Monnit Korea Smart Construction Solution



○ Construction site **Monitoring**



Tower crane

Detection of abnormal vibrations and measurement of working hours



Cement curing

Real-time monitoring of cement curing temperature



Piping equipment

Measures liquid or vapor pressure up to 300 PSI (21 kgf/cm²)

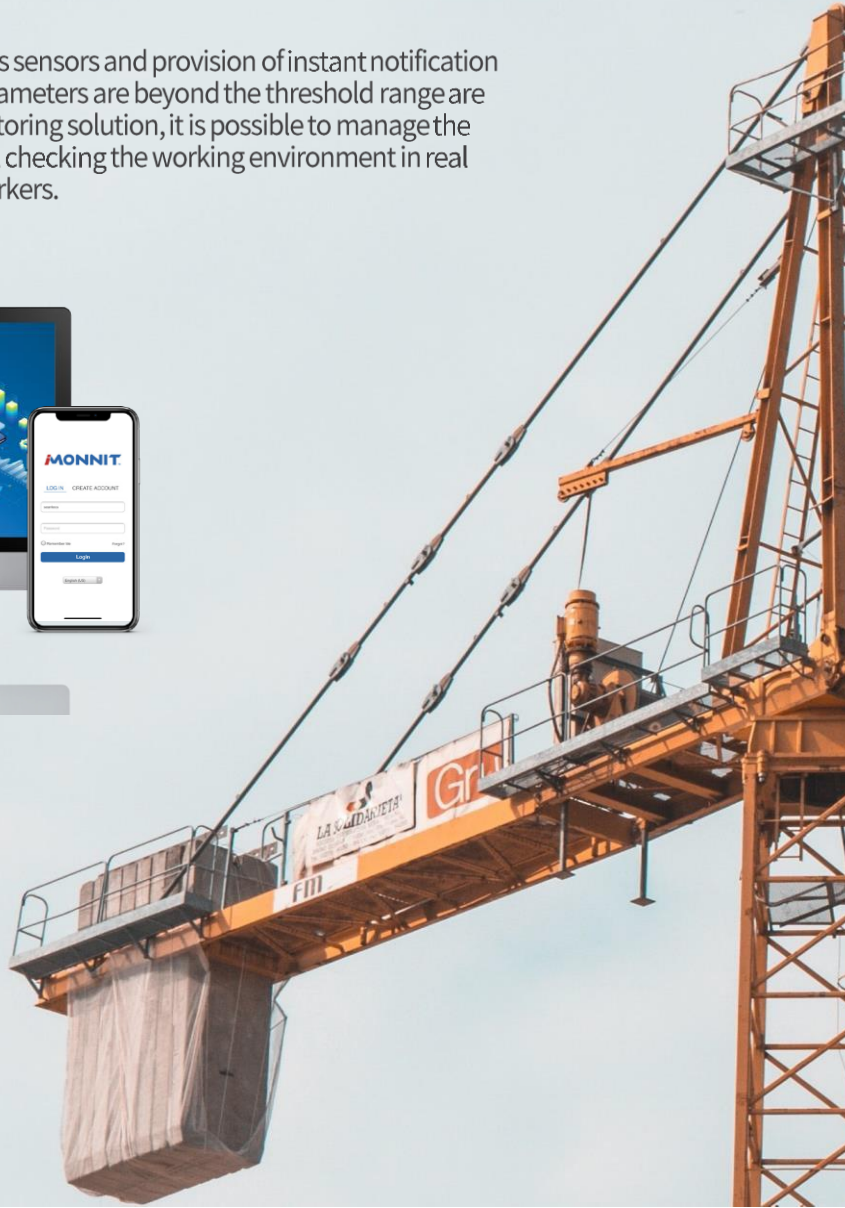


Construction site safety management

Abnormal vibration monitoring, fire alarm, Summer heat wave alarms, air quality

Monnit Korea Construction Site Solution

Collection of data with wireless sensors and provision of instant notification anytime, anywhere, when parameters are beyond the threshold range are detected. With a remote monitoring solution, it is possible to manage the site without a visit. In addition, checking the working environment in real time protects the safety of workers.



○ Real time monitoring **with Monnit Platform**

Monnit Korea provides an open API to customers build their own platform.



Real-time
alarm



Remote
Monitoring



Big Data

Monnit Korea Construction Site Solution

Projects



SK Construction (2020.11)
Collapse prevention of
support structures



Hanhwa Construction (2020.04)
Comprehensive monitoring of the
construction site



Samchully gas (2020.09)
Gas pipe predictive maintenance
solution

Case study

Gas pipe monitoring



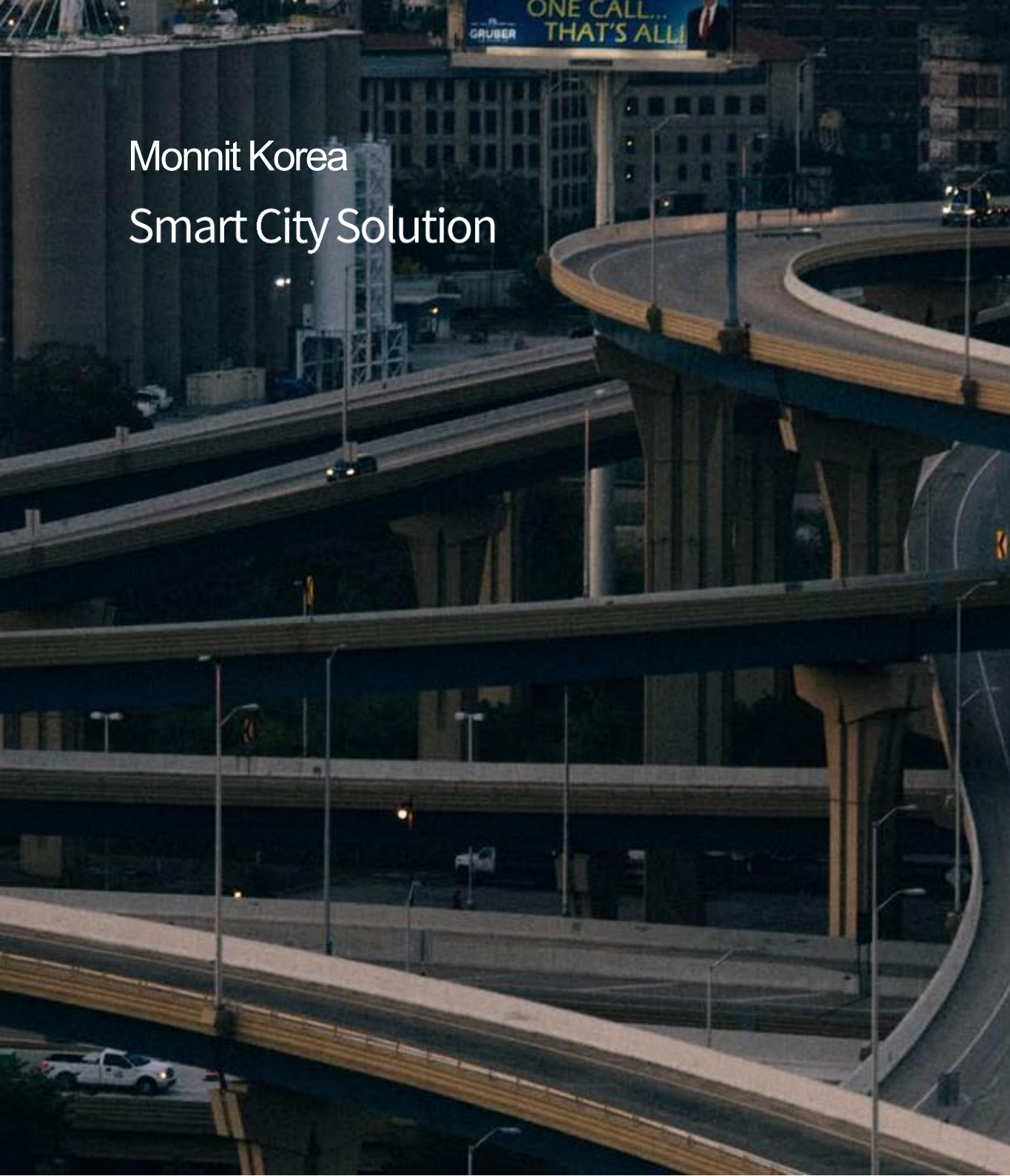
Monnit wireless vibration, tilt and shock sensors were installed on numerous gas pipes under the bridges around South Korea to **monitor status of pipes and prevent possible accidents.**





Smart City

Monnit Korea Smart City Solution

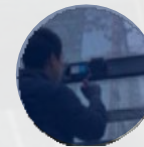


○ Monitoring of Infrastructure and Public sites



Shopping malls and markets monitoring

Prevention of accidents such as fire, collapse of infrastructure and etc.



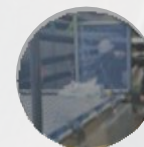
Urban infrastructure management

Bus and subway stations, environmental conditions monitoring



Public Facility Digital Twin

Pre-accident prevention, facility predictive maintenance, real-time integrated control



Collector management

Real-time management of urban infrastructure facilities

Monnit Korea Smart City Solution

Projects



Seoul city underground collector (2020.09)
Prevention of urban infrastructure-related equipment failure



Seoul city bus station (2020.09)
Environmental conditions monitoring and display



Korea Expressway Corporation (2020.07)
Real-time bridge monitoring system

Case study

Bridge structural health



Monnit wireless vibration, tilt and shock sensors were installed to monitor structural health of bridges and collecting the data on structure vibration during pick hours and depending on weather conditions.





Our team

Jay Youm



CEO
General management

Jaekyoung Lee



Business Planning and operation
Accounting

Hanul Lee



Planning
Sales Marketing support

장일호, ILho Jang



Technical sales
Installation
On-site sensor consulting

Hwiseung Hong



Technical sales
Installation
On-site sensor consulting

JQ Lee



Technical support
SW
HW

Youngseck Kwon



Technical sales
Installation
On-site sensor consulting

Alina Kim



Marketing
Overseas sales

Soyeon Tak



Marketing
Design

Our Customers

Construction



Smart Factory



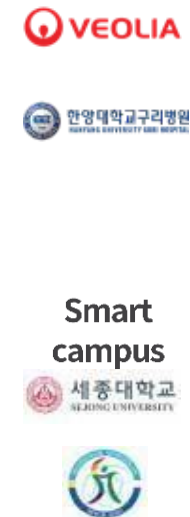
Building FM



Logistics



Hospital



Platform development



Thank you.

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