

PEOPLE AND TECHNOLOGY

Smart Technology with IoT and AI

IndoorPlus+

Construction sites

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<https://healthcare.indoorplus.io/>



Construction

»» We ensure the safety and attendance of your workers on construction sites with real-time monitoring and instant response solutions in case of danger.

Industry Understanding

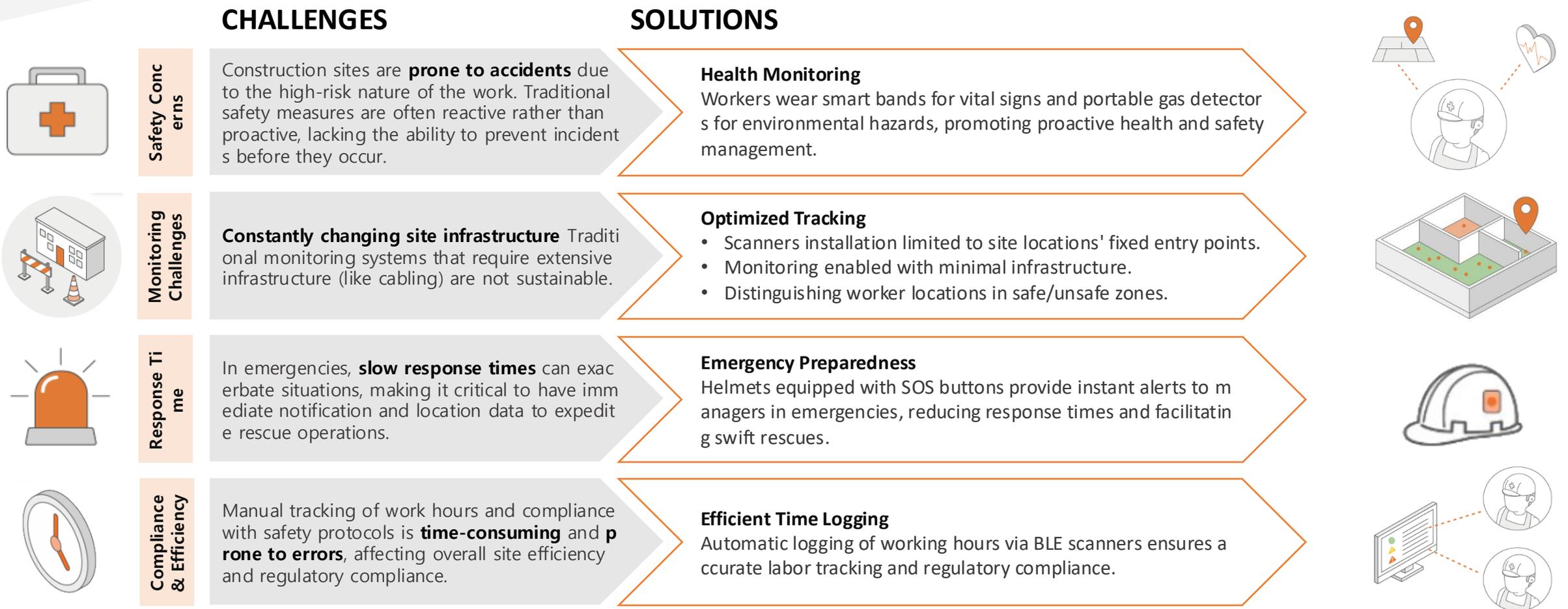
The construction industry is known for its dynamic and often **hazardous environment** where safety and efficiency are paramount.

With multiple layers of operations, including intricate architectural designs and structural complexities, construction sites require robust systems to monitor and manage **workforce safety**.

These systems need to adapt to constant environmental changes **without disrupting the workflow**.

As construction sites evolve, so does the necessity for technologies that can offer real-time monitoring, efficient response mechanisms, and compliance with **safety regulations**.

Construction



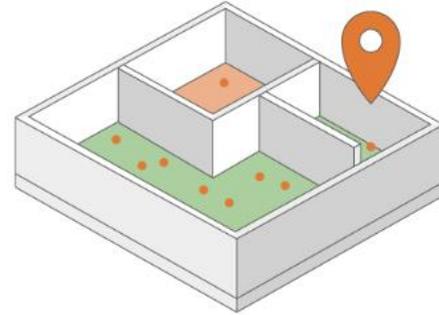
Construction

Worker Location and Biometric Data Monitoring



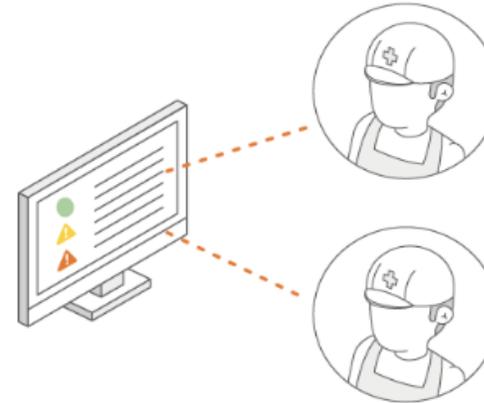
Real-time monitoring of the workers' biometric data lets you minimize the rescue time in a case of emergency and even take cautious action before an incident occurs.

Risk Level Category and Head Count per Zone



Categorizing the risk level per work zone and keep track of workers allocated in the high-risk areas in real-time.

Work List, Risk Level, Allocated Workers Count



Work Assignment by Risk Level and Allocated Workers Count in Real-Time

Emergency Preparedness



Helmets equipped with SOS buttons provide instant alerts to managers in emergencies, reducing response times and facilitating swift rescues.

Construction- Enhanced Safety and Efficiency on Construction Sites

Our solution

Real-Time Monitoring Dashboard
A dashboard offers a comprehensive view of all workers' locations, health statuses, and hours, supporting effective management and emergency coordination.

Health Monitoring
Workers wear smart bands for vital signs and portable gas detectors for environmental hazards, promoting proactive health and safety management.



Smart Band (Biometric Data)

Emergency Preparedness
Helmets equipped with SOS buttons provide instant alerts to managers in emergencies, reducing response times and facilitating swift rescues.

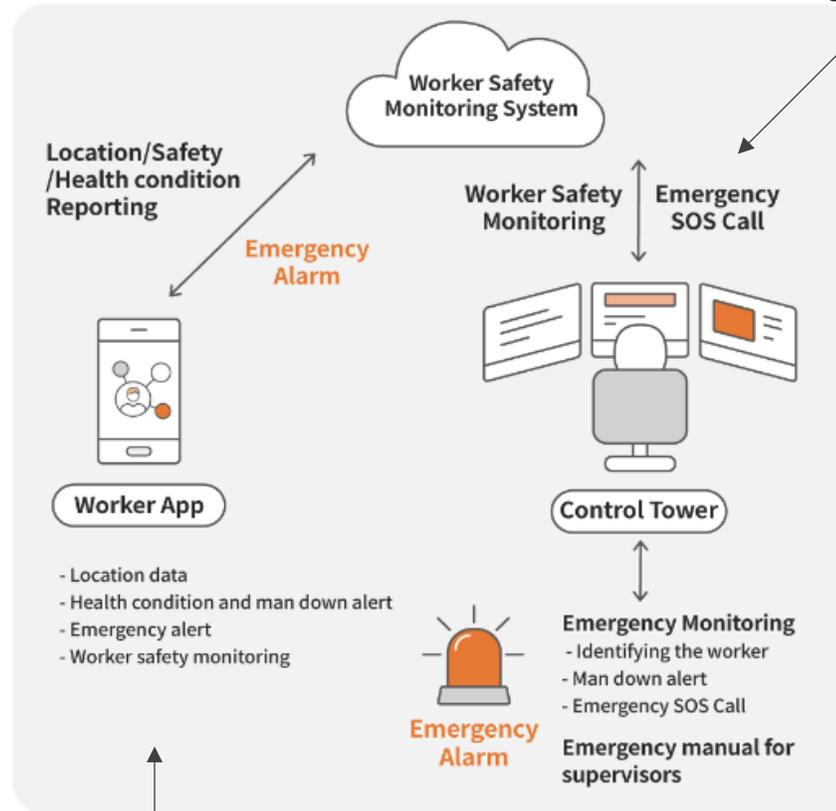


Smart Tag Accelerometer (X,Y,Z) SOS

Advanced Tracking
BLE tags on workers' helmets and scanners at site locations enable real-time monitoring with minimal infrastructure, distinguishing worker locations in safe and unsafe zones.



Location Beacon Improves location accuracy



Efficient Time Logging

Automatic logging of working hours via BLE scanners ensures accurate labor tracking and regulatory compliance.

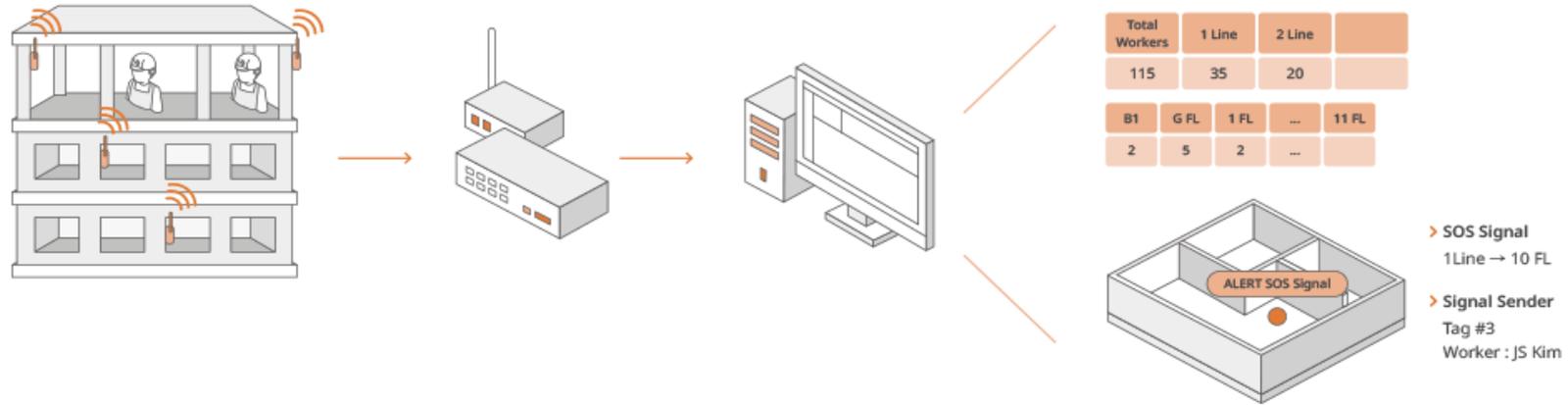


Case Study – Samsung C&T (Attendance & Safety)

Use Case Overview

Client: Samsung C&T

Challenge: Need for real-time tracking of workers to enhance safety and emergency response on a large construction site.



Technology Implemented

- **Technology:** Bluetooth Low Energy (BLE) scanners and beacons.
- **Deployment:** Scanners installed at critical entry points; beacons attached to workers' hard hats.
- **Features:**
 - Real-time location tracking divided by aboveground and underground areas.
 - SOS button on each beacon for emergency alerts.

Outcomes

- **Enhanced Safety:** Minimized time to rescue during accidents, improving overall worker safety.
- **Improved Accountability:** Accurate, real-time data on worker presence and location.

Key Benefits

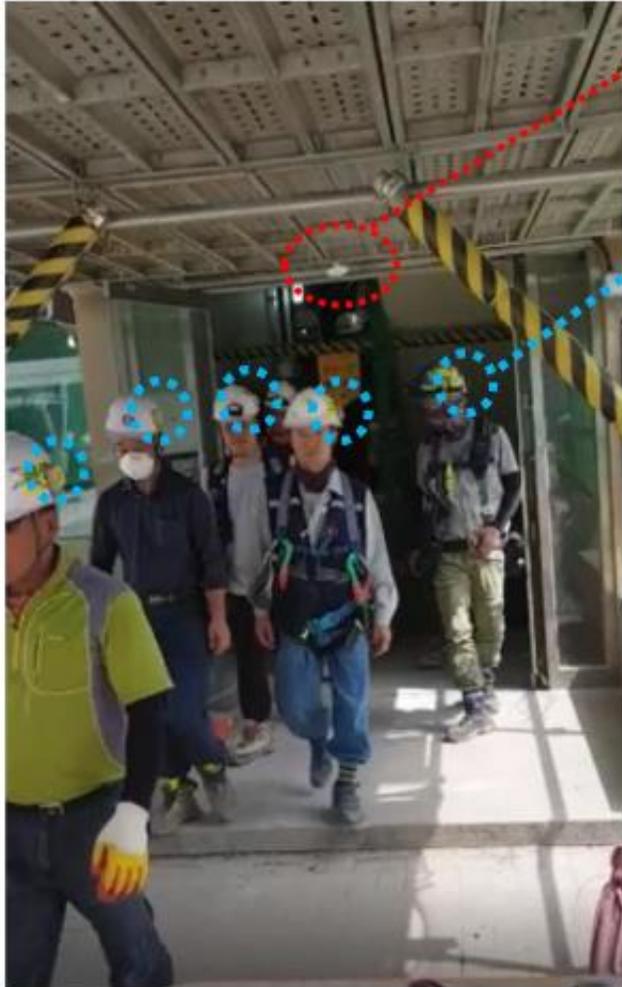
Real-Time Safety Monitoring:

- Automatic and continuous headcount and location monitoring of field personnel.
- Quick localization of workers in case of an emergency via SOS button.

Operational Efficiency:

- Immediate identification and counting of onsite workers.
- Streamlined process for locating specific individuals or checking for missing personnel through the IndoorPlus+ platform.

Case Study – Samsung C&T



BLE scanner

BLE tag



가.보.금.장	방수.도.장	타일.석.미	경량.목.공	도배.장.한	가.구	관.기	설.비	관.리	기.타
29	12	9	47	0	0	24	27	1	0

Area	Count
A	110
B	31
C	5
D	3

일차	일련	방	일시
1차	1	방	100424
2차	2	방	100425
3차	3	방	100427
4차	4	방	100430
5차	5	방	100411
6차	6	방	100429
7차	7	방	100410
8차	8	방	100419
9차	9	방	100433



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Actionable **Geolocation Intelligence** and **Smart Sensing**