
PEOPLE AND TECHNOLOGY

Workers Safety with IoT and AI

**IndoorPlus+ Asset Tracking solution
Toxic emissions exposure Use Case**

USE CASE – Workers Safety

| Reference Use Case



- In 2015, 2 workers of the LG Display Factory in Paju, South Korea, died due to unmonitored over-exposure to Nitric Oxide.
- A production stop required for investigation costed USD 30M to the company.

IndoorPlus⁺ Workers Safety



| Context

THE PROBLEM

- Some facilities are equipped with hazardous materials and present dangerous zones.
- Employees can occasionally be exposed to dangerous situations.
- Workplace accidents causes serious legal issues and financial losses to companies in addition to the human harm.

STATUS QUO

- The size discrepancy between the large facility area and low number of workers leads to unwanted isolated situations.
- Loss of personnel track/ location makes it difficult for the rescue team to operate in a timely manner.



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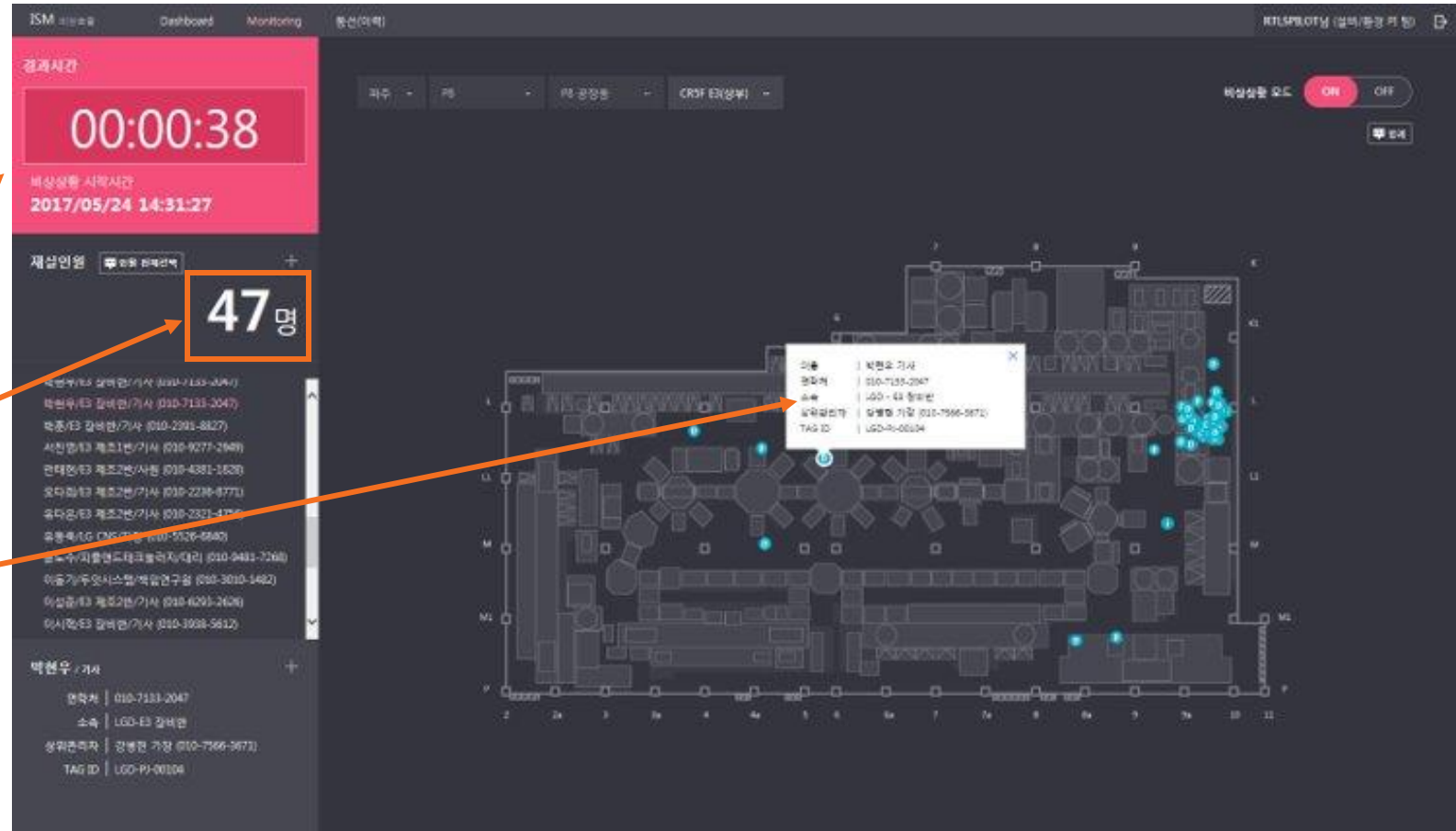
OUR SOLUTION

- Use of wearables to track personnel movement and location within the facility in real time (Security + Safety)
- Warning notification when a wearable has been removed
- Alarm in case of unauthorized access for quick identification and response
- Personnel location history to track back any movement in time

USE CASE – Workers Safety

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- All workers wear tags to track the m (badge, bracelet... any type of wearable)
- All workers locations visible on the map in real time
- Time elapsed since safety alert is given
- Count of workers on site
- A click on the worker gives the worker's information



USE CASE – Workers Safety

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- Geofenced area to determine zones of danger
- Number of workers in the defined zone
- Visual display of the zone on the map

USE CASE – Workers Safety

| Required hardware installation

- System up and running 24/7 after installation

WEARABLE
DEVICE | HANVIT SI D



BLE TAG

- Coin battery [640mA]
- SOS button
- Gyro/Accelerometer Sensor
- RTC
- Buzzer



BLE Scanner

- BLE 4.0 Supports
- Simultaneous 200 scanning / sec
- POE support



IndoorPlus+ RTLS Server SW

- Location and sensing
- Dashboard
- Alarm and recording



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

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