

# Locate and track people, equipment and valuable materials in indoor and outdoor surroundings

sTrack® is a powerful IoT-based Real-Time Locating System (RTLS) to track people and assets in any environment, allowing you to optimize asset management, monitor restricted or dangerous areas and always keep key environmental and risk indicators under control

## Benefits

### ENSURE OPERATORS' HEALTH AND SAFETY

#### People health and safety in the worksite

Identify people presence in real-time in dangerous areas, detecting fall, checking safety equipment and sending real-time warnings to workers or safety teams to prevent potentially harmful situations.

#### Mustering areas

Manage mustering areas for emergencies through real-time evacuation plans and notifications to safety teams.

#### Environment monitoring

Monitor air quality, gas concentration, temperature, humidity, pressure and other environmental parameters, sending messages when thresholds are exceeded.

### MONITOR WITH ADVANCED CAPABILITIES

#### Geolocalization

Know the exact position of people, assets and infrastructure devices throughout one or multiple sites with Global Navigation Satellite System (GNSS) coordinates.

#### External access management

Monitor visitors and external staff knowing how many people are in each area, how they moved around over time and activate facilities on time.

#### Restricted areas management

Identify people authorization in real-time in restricted areas and avoid unauthorized accesses.

### FACILITATE REPORTING

#### Data collection and analysis

Data collected from the IoT devices facilitate the generation of statistical reporting for performance and safety analysis. Data are available in edge or in cloud for AI applications and data analysis

#### Optimize resources

Help workers pick the right materials for the right order, know where critical assets are placed avoiding loss of time, plan better routs of vehicles to optimize time in a construction site.

#### Efficiency

Real time reporting of anomalies, (e.g., a tracked object is in the wrong place or is missing from the required area) reduces operational downtime and impacts positively workers morale.

#### Costs Control

Verify each contractor's actual staff on-site, length of stay in each area and always have the available data to control costs & check invoices.

## Fields of application



**Construction Sites**



**Logistics**



**Oil & Gas Plants**



**Farming**



**Office & Building Management**



**Industrial & Maintenance Processes**



**Public Sector & Smart Cities**

## sTrack at work

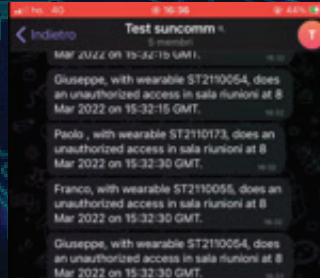
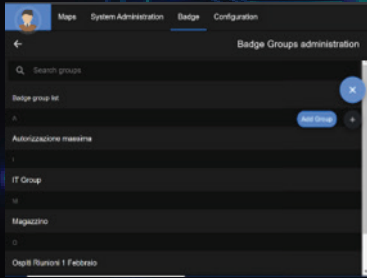
sTrack allows you through IoT technology to manage and monitor multiple floors and sites from a single user interface via web or smartphone app (iOS and Android). You can access functionalities based on user role, e.g. maintenance team, security team.

Easily manage assignment of badges / tags to groups to determine authorizations

Monitor people and assets movement across sites on maps in real-time

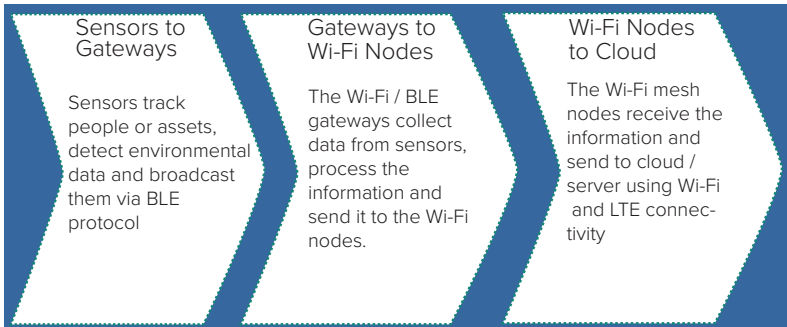
Receive Telegram alerts based on configurable triggers (e.g. access violation)

Get alerts directly on maps and take immediate action



## sTrack in Details

### Communication technology and dynamics



#### Sensors to Gateways

Sensors track people or assets, detect environmental data and broadcast them via BLE protocol

#### Gateways to Wi-Fi Nodes

The Wi-Fi / BLE gateways collect data from sensors, process the information and send it to the Wi-Fi nodes.

#### Wi-Fi Nodes to Cloud

The Wi-Fi mesh nodes receive the information and send to cloud / server using Wi-Fi and LTE connectivity

### Devices and sensors

#### ED Server

Device that configures, manages and monitors all system nodes. Connected via LAN, it stores MySQL database, MQTT broker and the virtualization protocol.



#### sGate®

Operates as BLE Observer and Wi-Fi/BLE gateway for MQTT messages. The device is powered by a solar power bank, and it is equipped with a fixing system that can be adapted to different supports and surfaces.



#### sTag®

BLE devices performing tracking and telemetry functions, equipped also with MEMS sensors.



#### IoT Sensors & devices

Any other type of sensor & device can be easily integrated in the platform to provide additional environmental parameters.

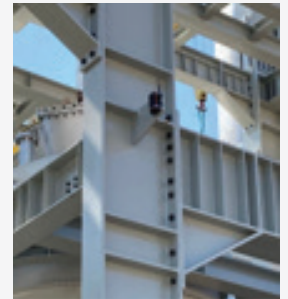


## Use Case

"IoT by construction" in a chemical plant in Poland

A major European EPC contractor, needed to locate people and assets, monitor environmental parameters and keep key risk indicators under control in a chemical plant construction site. The solution must especially be adaptive to the intrinsic evolution of a construction site from green field to brown field, spanning 16,000 sqm with 40 to 450 daily workers and subcontractors on-site.

With sTrack the customer was able to quickly roll out, manage and maintain a RTLS, starting with few nodes and gateways and adding to the infrastructure as the construction site grew bigger and more complex.



sTag wearable devices provided to the workers performed tracking and telemetry functions to ensure safety of workers and security of the site.



sTrack application recorded workday beginning / end for each worker and sub-contractor (In and out passage of each sTag at predefined gates), length of stay in each area, including the multi-story buildings, with floor specification, anomalies of typical pre-determined routes (e.g., entrance into restricted or dangerous areas), geofencing and violation of protected areas. sTag devices associated to mobile assets allowed for a quick identification of machinery and tooling around the site.