



Hybrid RTLS (Real-Time Location System) Joint Solution for Industry 4.0 & Healthcare



Movement of people & assets
in Manufacturing involve:



SAFETY



TIME



ENERGY

This is causing decreased **worker productivity**, **production delays** and **increased equipment costs** but manufacturers do not have the right tools to **capture precise data about these movements**.



Movement of people & assets
in Healthcare involve:



SAFETY



TIME



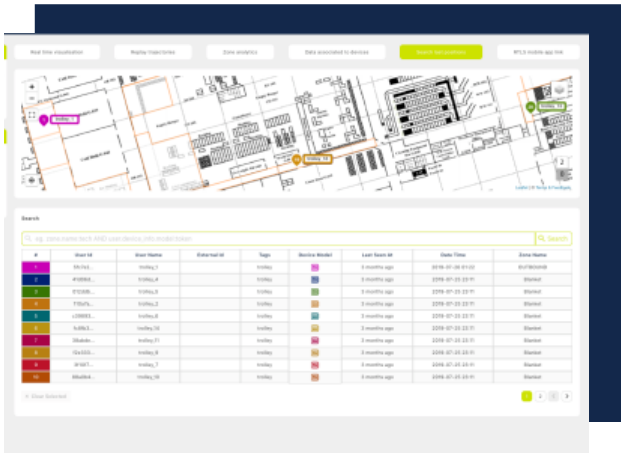
ENERGY

This is causing more spreading of diseases and overcapacity in hospitals but health professionals do not have the right tools to **capture precise data about these movements.**



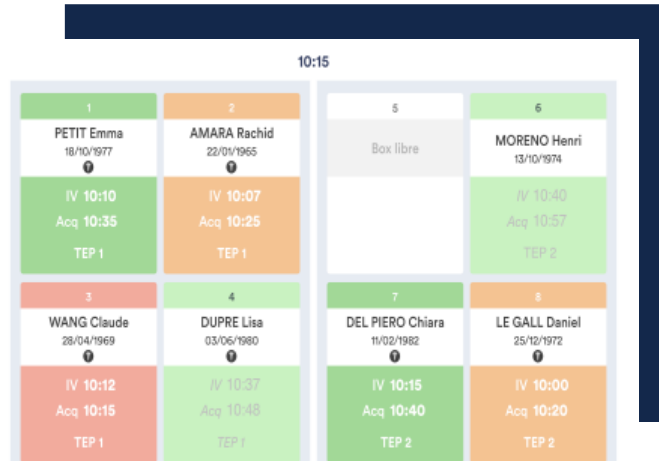
Ubudu Real-Time Location System (RTL) to make operations more efficient and safer

Save workers' time



Real-time asset tracking

Avoid bottlenecks



Location-based alerts

Increase equipment utilization rates



Location analytics



Ubudu hybrid UWB & BLE RTLS integrated into Huawei AP for reduced TCO

Tags

Small low-power transmitters attached to assets to be tracked



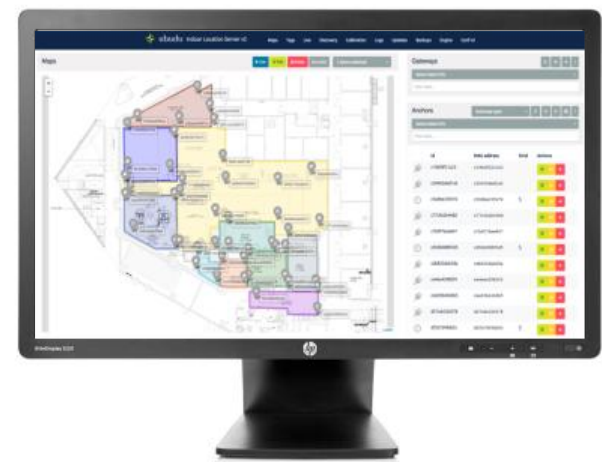
Anchors / Wi-Fi Access Points

Devices scanning tag signals, placed at fixed positions and sending back data to Server



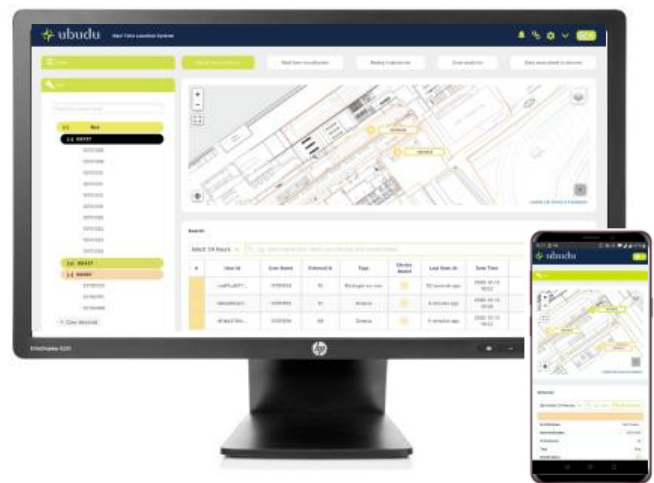
Location Engine

Server computing the positions based on data collected. Infrastructure management.



Application Engine

Server for end-user applications, out-of-box (search, flow analysis, alerts...) or custom (API)





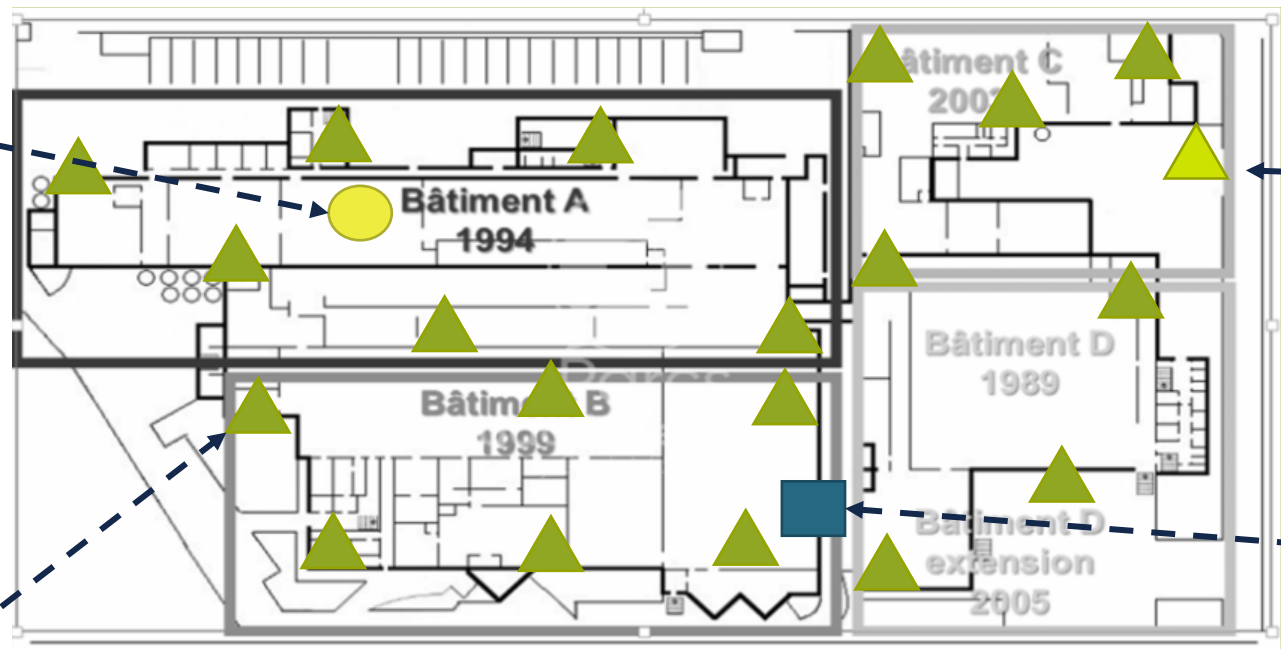
UWB TDoA architecture, for high accuracy with possibility of combining with Smart BLE



Smart Tags (UWB+BLE) attached to each asset

UWB

Smart Anchors (UWB+BLE) or Huawei APs placed in elevation to obtain Line of Sight



Ethernet/Wi-Fi

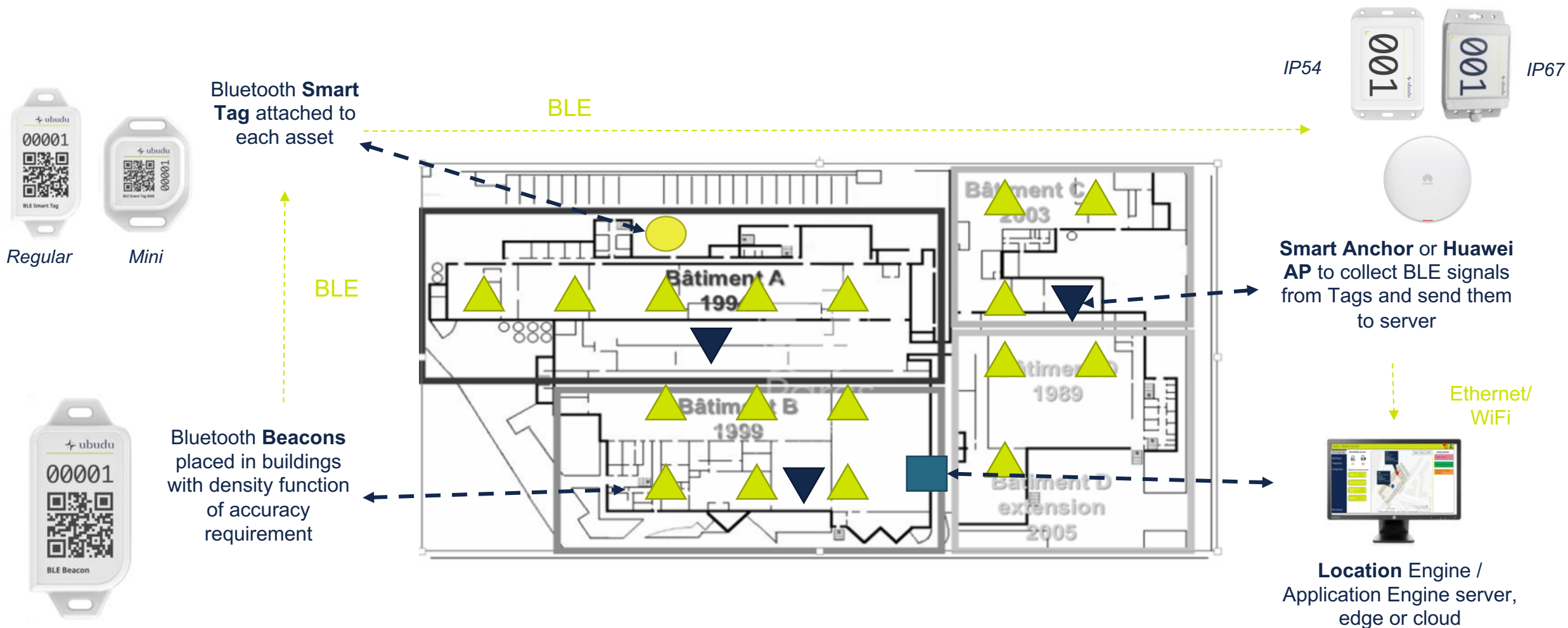
Bluetooth Beacons added in additional non Line of Sight areas (eg, toolboxes)



Location Engine / Application Engine server, edge or cloud



BLE Smart architecture, for the most simple installation with possibility of combining with UWB TDOA



Advantages of Huawei x Ubudu Joint RTLS



FAST ROI

- **30% reduction in TCO** thanks to lower infrastructure, installation & maintenance costs with integrated Wi-Fi, BLE and UWB on same device
- **Ready-to-use software** for typical use cases
- **Fast integrations** thanks to open API
- **Competitive price** thanks to use of standard components



FLEXIBLE & EVOLUTIVE

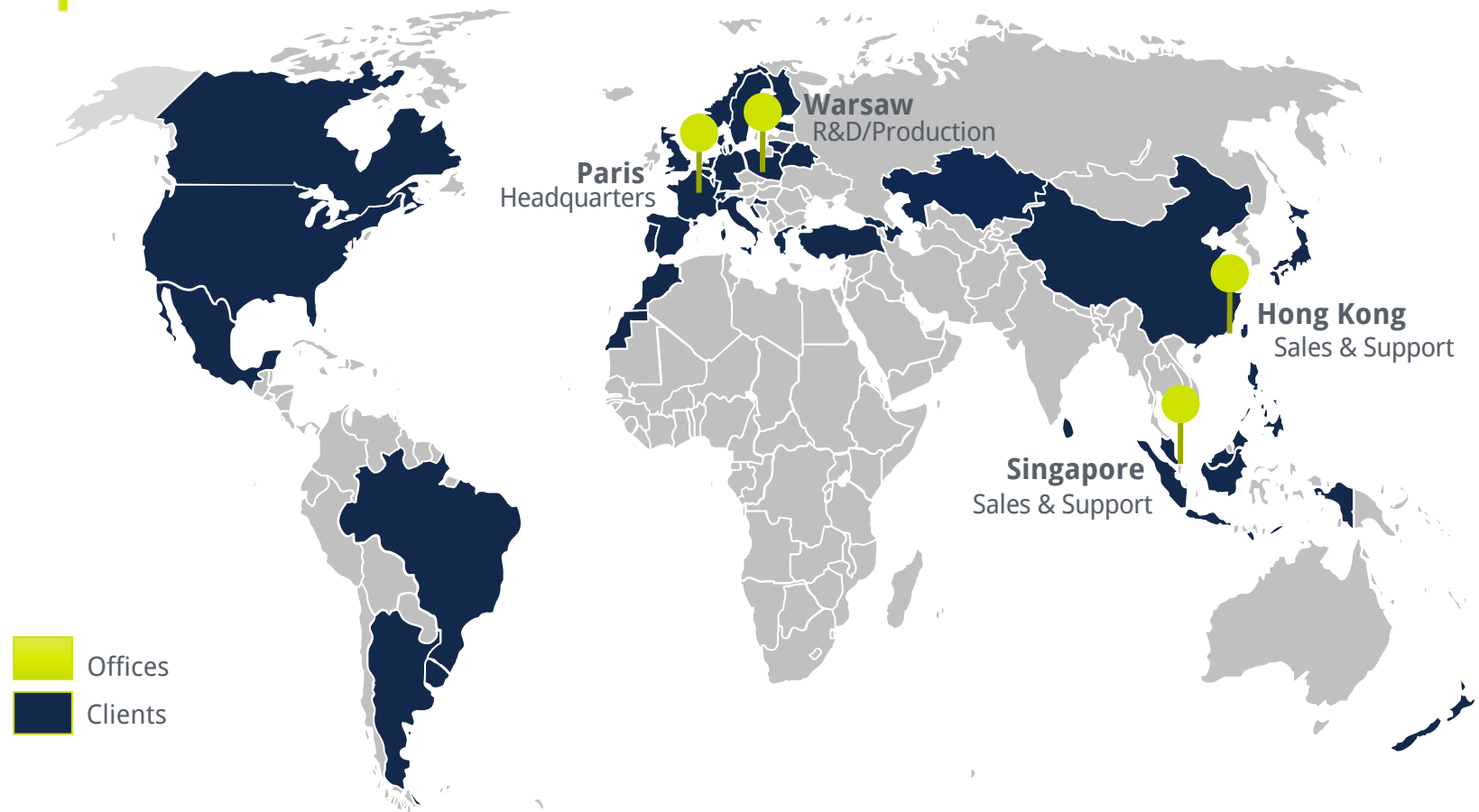
- **Modular architecture** to fit customer needs: BLE, Smart BLE, UWB and other IOT extensions available on Huawei AP
- **Up to 30cm precision** with no calibration required
- Expanding to **Outdoor coverage** using LP-WAN
- **Third-party tags** supported
- Open with **SDKs and APIs**



INDUSTRIALIZED MAINTENANCE

- **Real-time & centralized** maintenance and supervision
- Automatic location accuracy issues **detections and alerts**
- **Battery smart management**, monitoring and alerts

Operating globally for 5 years



3 main markets focus with **direct & indirect** go to market:

- **Hospitals**
- **Industrial sites**
- **Restaurants / smart buildings**

Clients	Partners