



IMAtack

Vysoce přesné a spolehlivé
lokalizační řešení Indoor Asset
tracking

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15. 11. 2022



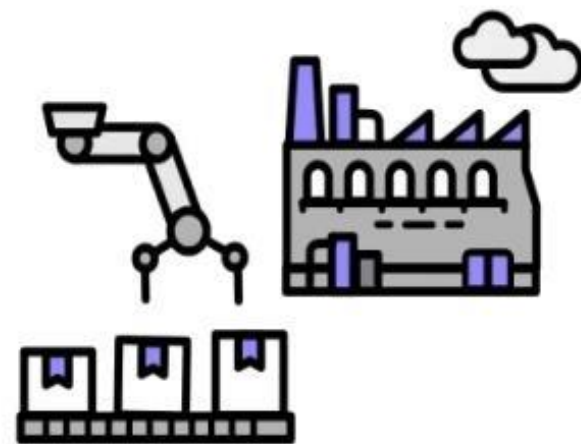
Indoor Asset Tracking

- RTLS: Real-Time Location System
- Bluetooth 5.1 Angle of Arrival
- IPS: Indoor Positioning System

- **Tracking:**
 - Assets
 - People
 - Goods
 - Material
 - Instruments
 - ...
- **Optimise:**
 - Processes
 - Workflows
 - Space/Workplace usage
 - Security and safety
 - Collision avoidance
- Covid-related monitoring
- **Access control**
- **Customer behavior analytics**
- **Retail navigation**
- **Sports** real-time tracking
 - In-game analytics

Quuppa

Factories and Warehouses
(Industry 4.0)



Healthcare facilities



Smart Buildings



Sports

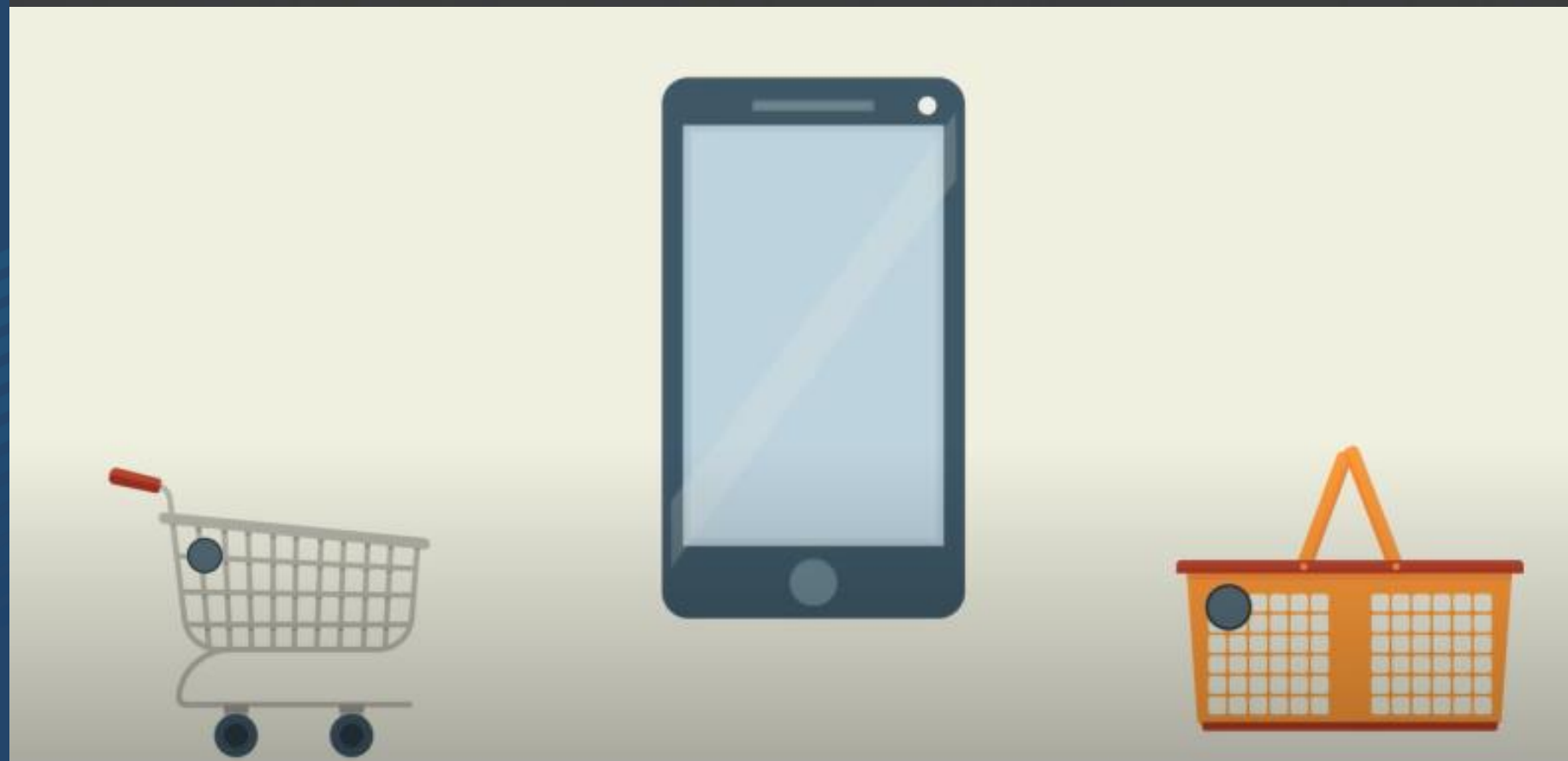
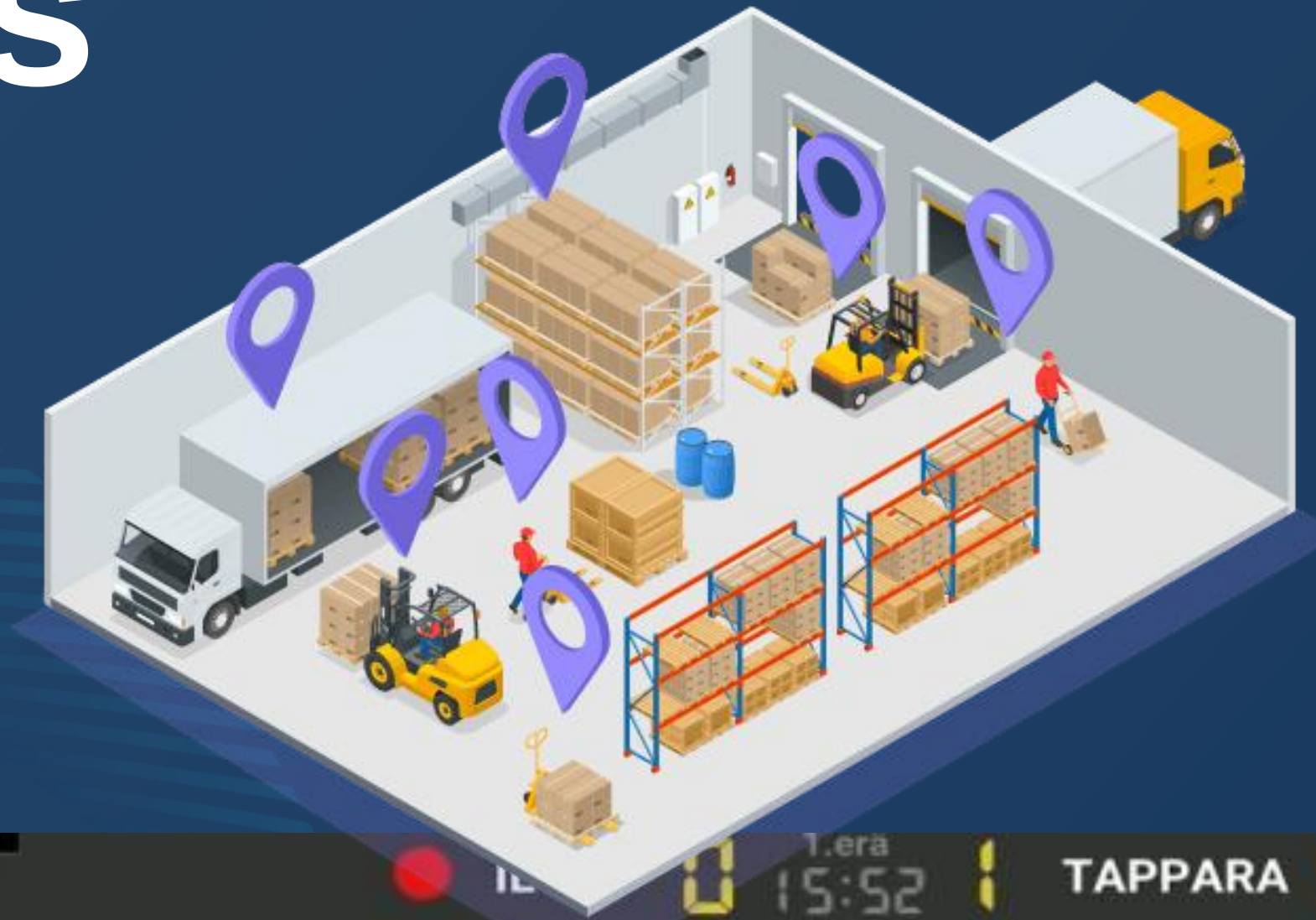


Retail Spaces



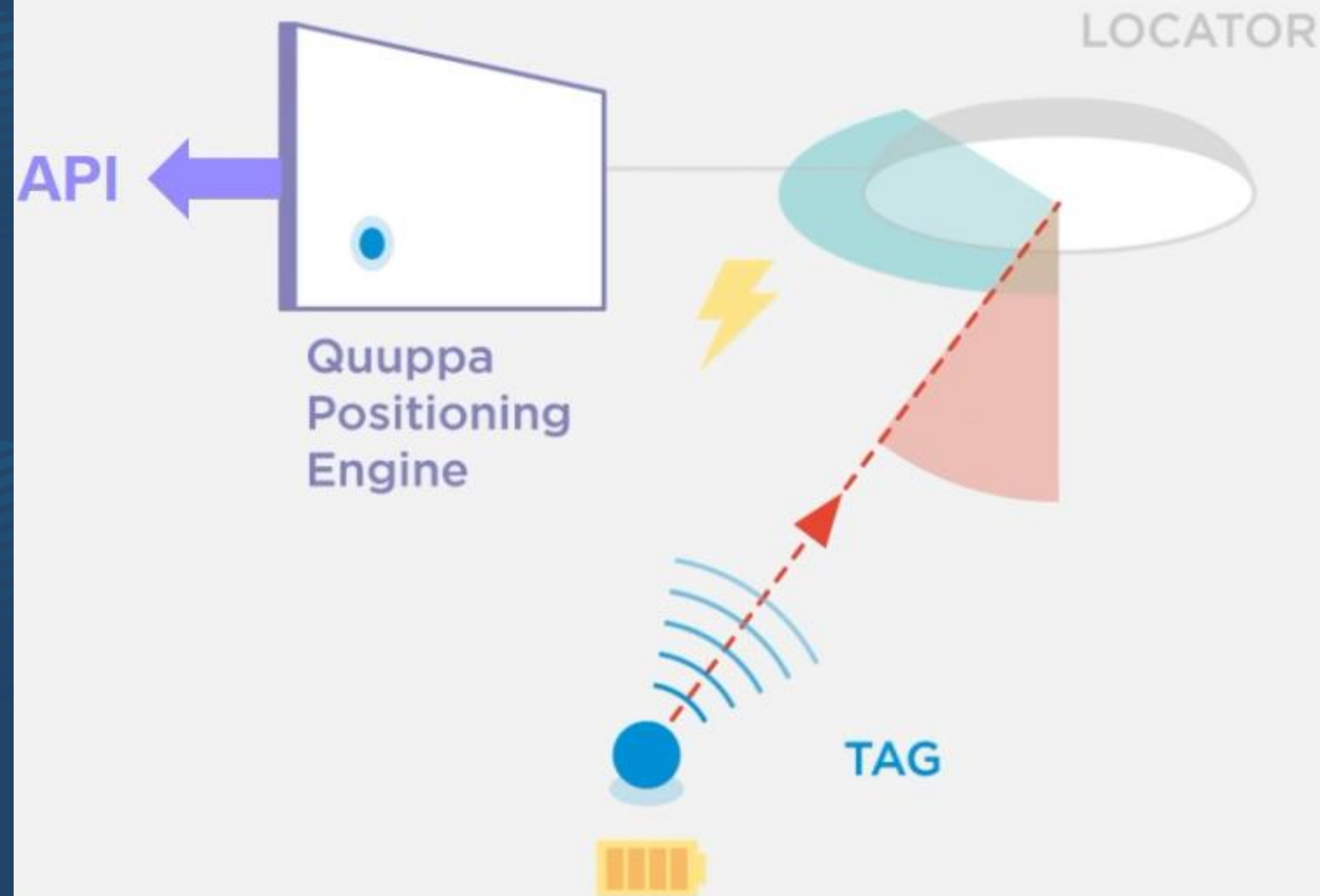
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RTLS use-cases



IMTrack by Quuppa – How?

Angle of Arrival (AoA)



Locator

- Multi antenna receiver
- connected to the server that calculates the tags position

Tag

- Low-power transmitter

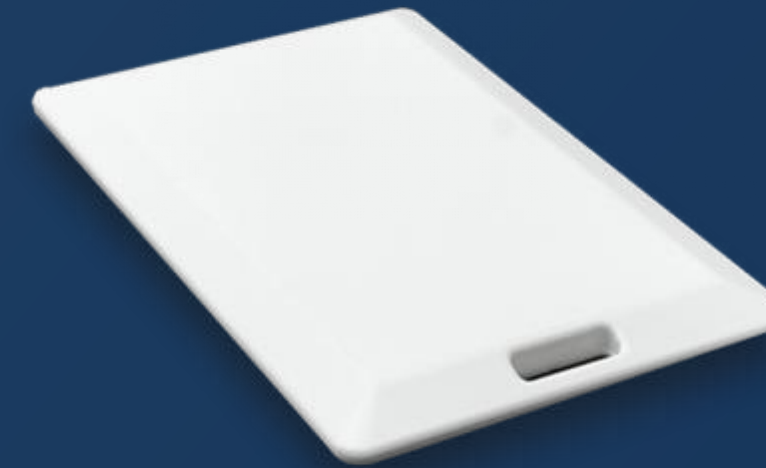
Features

- Intelligence and power consumption
- Limited capacity
- Real-Time Locating System (RTLS)
- Primary use-case: Asset Tracking

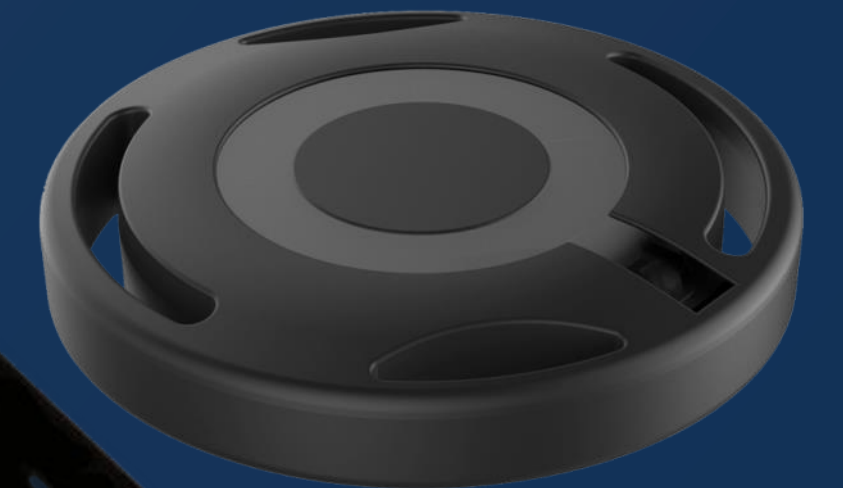
Quuppa Positioning Engine

- combination of advanced algorithms, AI, and machine learning developed over the course of 15+ years
- API output for 3rd party integration

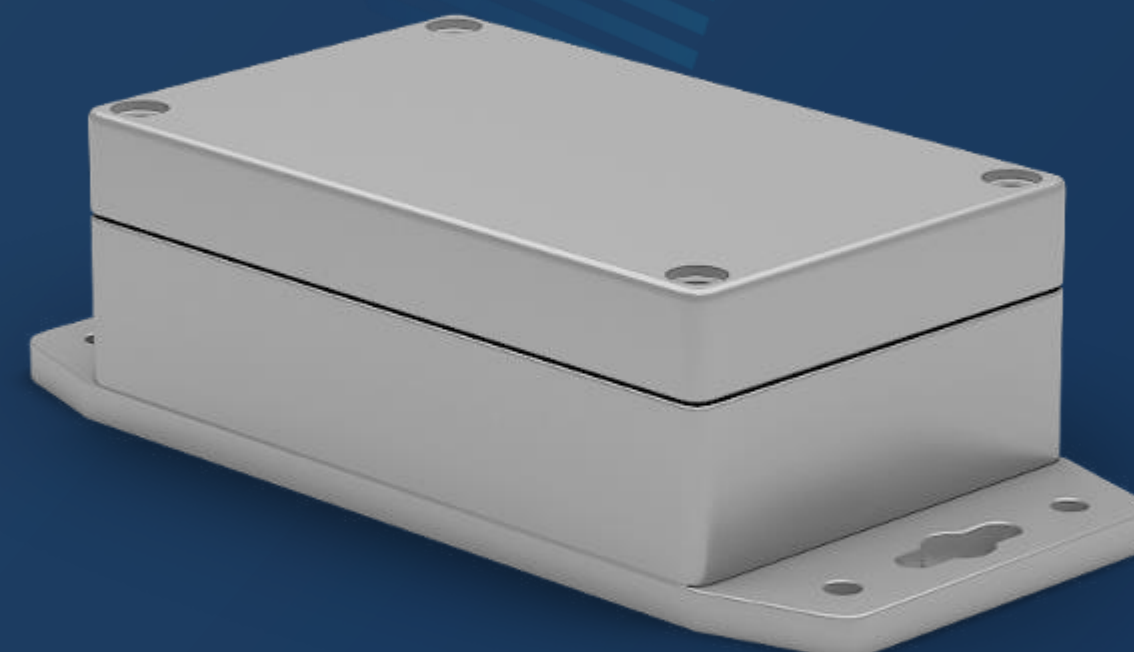
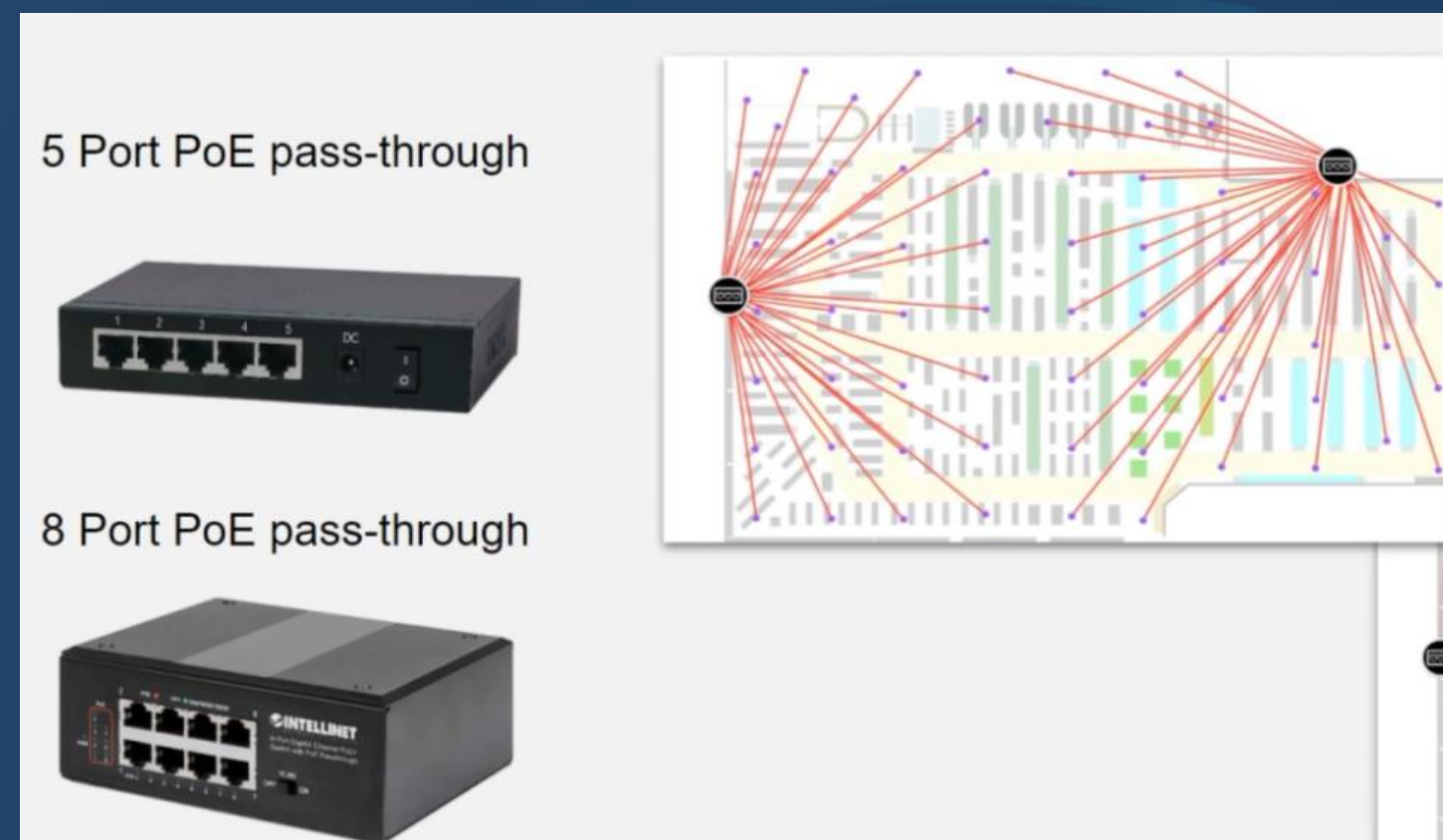
IMAtack – building blocks



Quuppa
Approved



blueup



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IMAtack by Quuppa – Why?

Technology stacks:

- GPS
- RFID
- Wi-Fi
- Ultrasonic
- Infrared
- Ultra Wide Band (UWB)
- Bluetooth „classic“
- Bluetooth 5.1 AoA

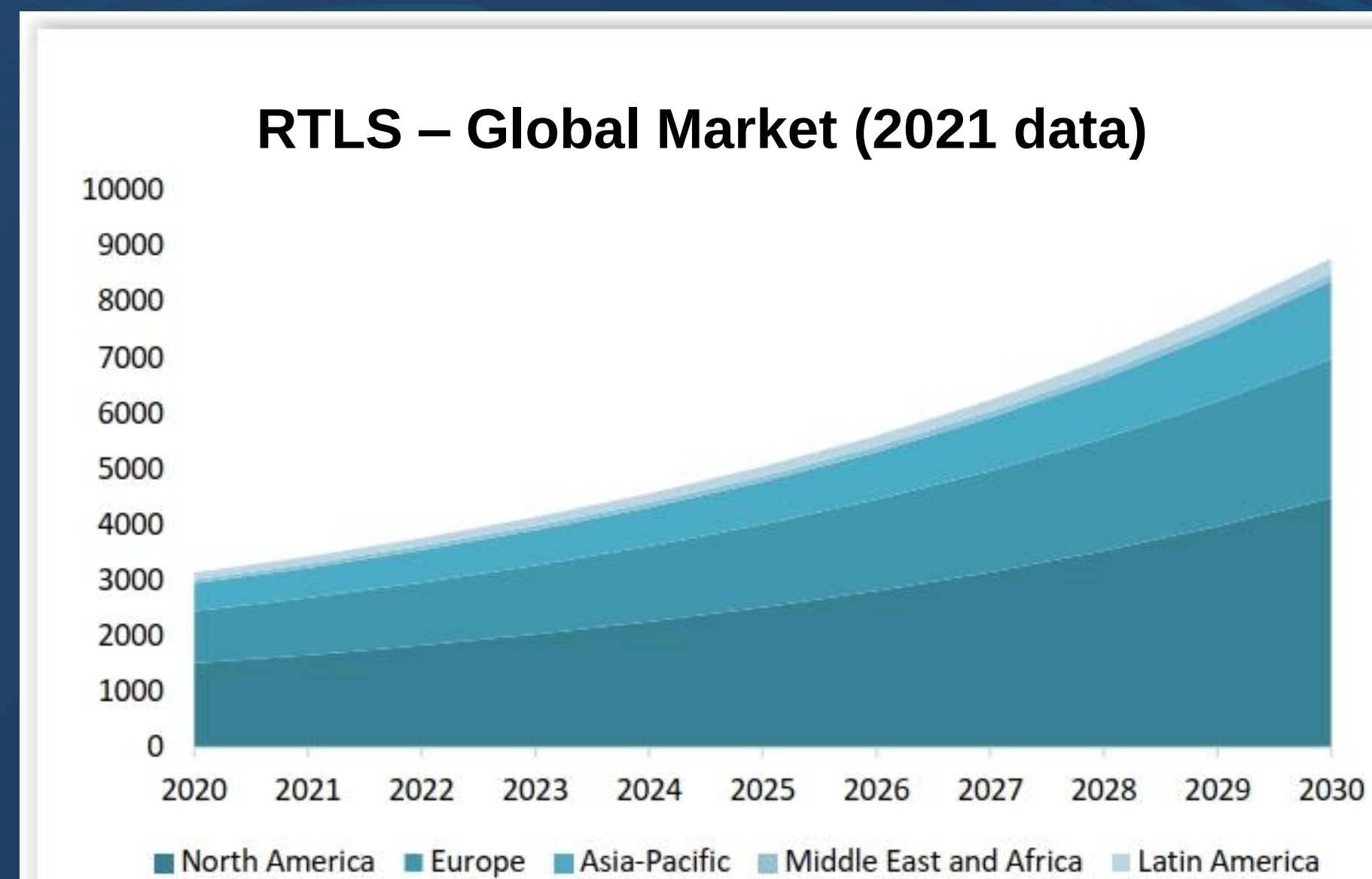
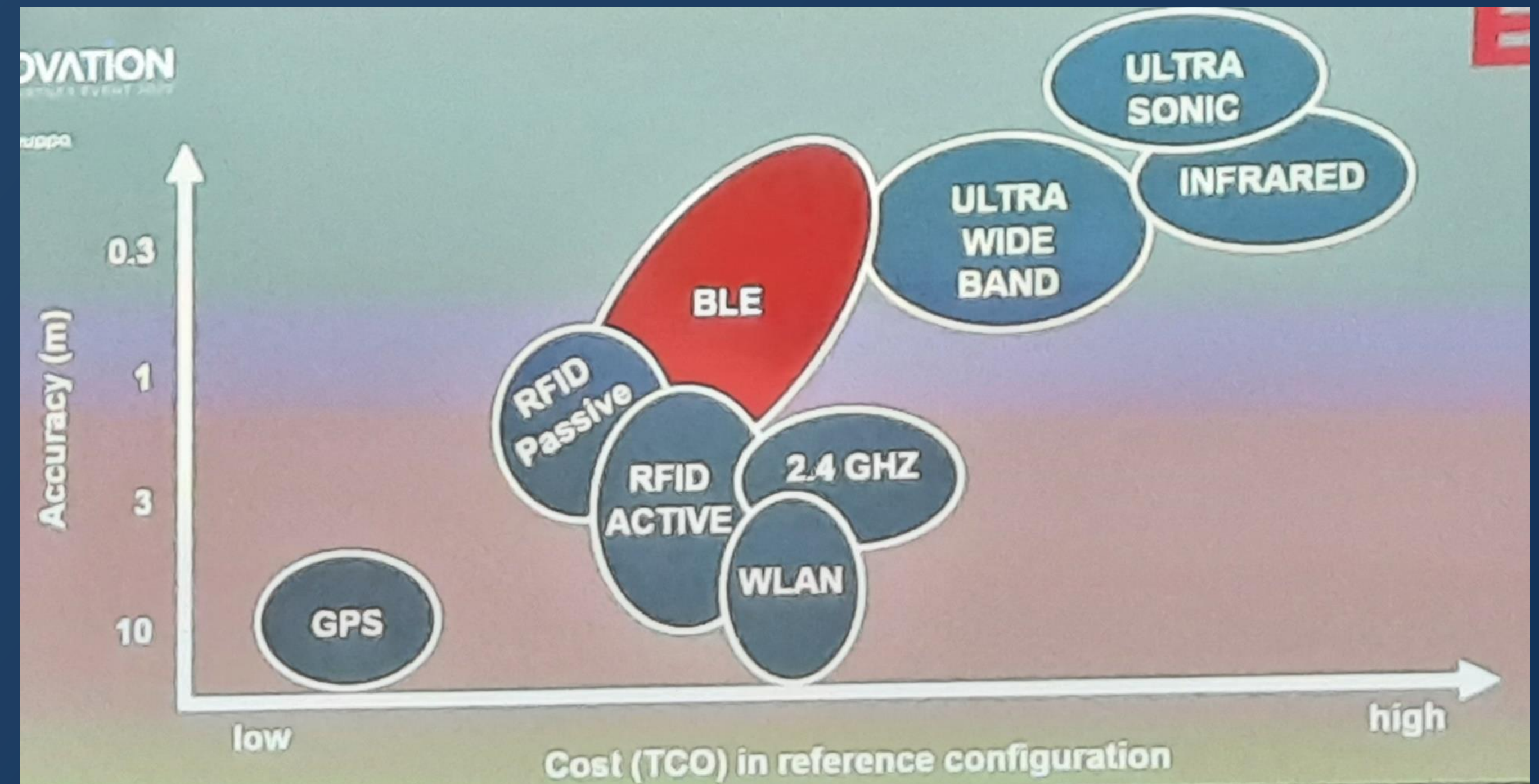
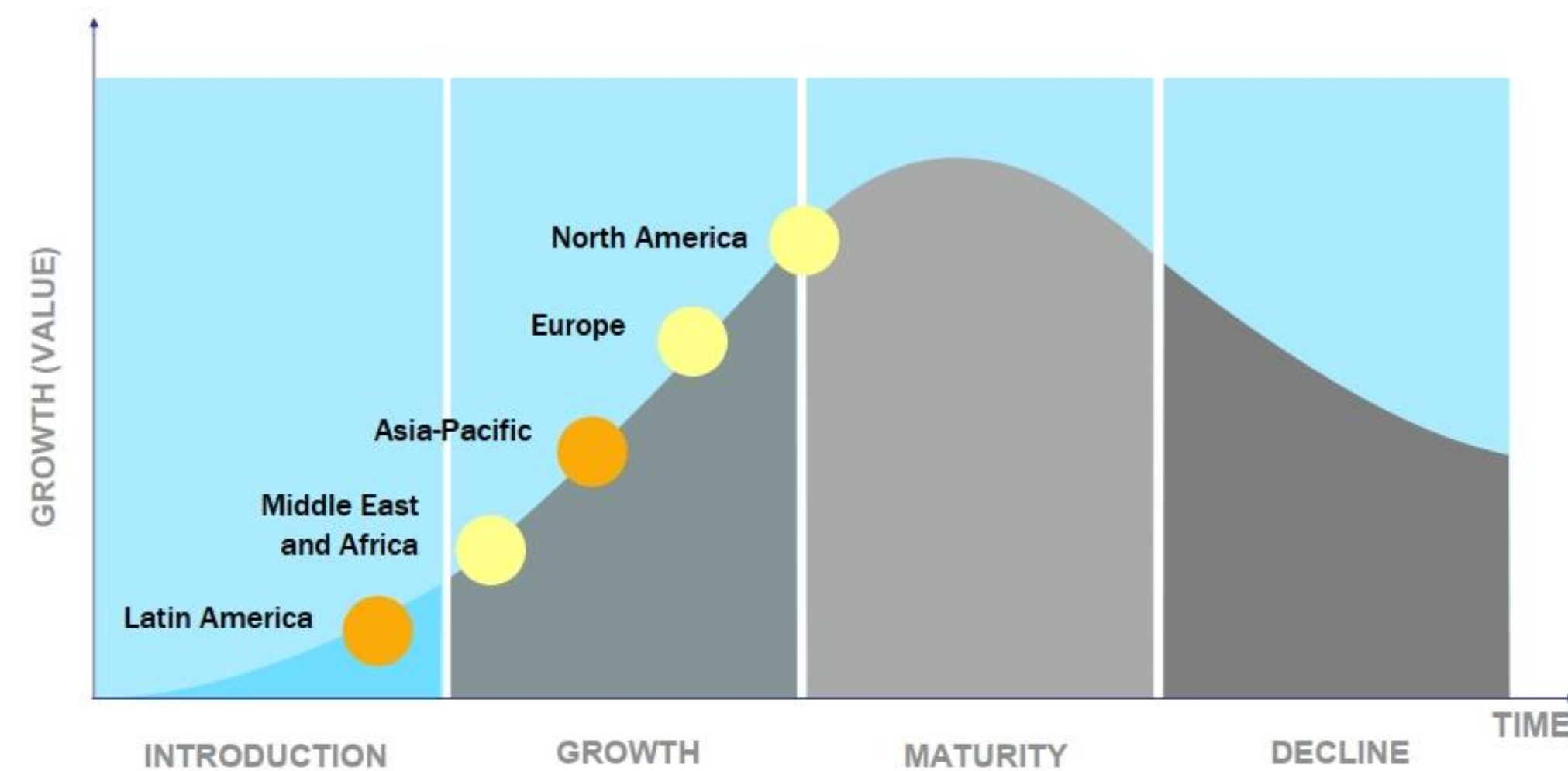


FIGURE 15 PRODUCT LIFE LINE



IMAtack by Quuppa – What?

- **Sub-meter precision**
- **AoA robustness** in Faraday-like environments
- **Real-time API**
 - **Latency** down to $< 200\text{ms}$
 - Tag frequency up to 50 Hz (ice-hockey)
 - Tag frequency up to 9 Hz for collision avoidance
- **Long battery life** (up to 5 years in normal usage)
- **IoT network** – ready infrastructure for any BLE IoT sensors
 - Gateway for iBeacon, Ruuvi, Edystone,
- **SAP API**
- **Logistics API**

Reference installation and case studies

- Industrial plant – 40k tags
- French Army's urban combat training facility (300 buildings, 4k locators)
- Stavanger University Hospital – smart hospital with IoT over Q
- EJOT with Indutrax API – screw manufacturing
- Kloeckner Metals Corporation
- Dyer Engineering cut cost to save 10.000 USD per Month
- Morita Fire Engine (Japan)

Smart Hospital



Kloeckner Metals Corporation





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