TRAXENS
real data for logistics excellence

UN/CEFACT Conference on "Internet of Things (IoT)"–Smart Containers".

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UNECE International Conference

The Missing Link in the Digitalization of the Supply Chain

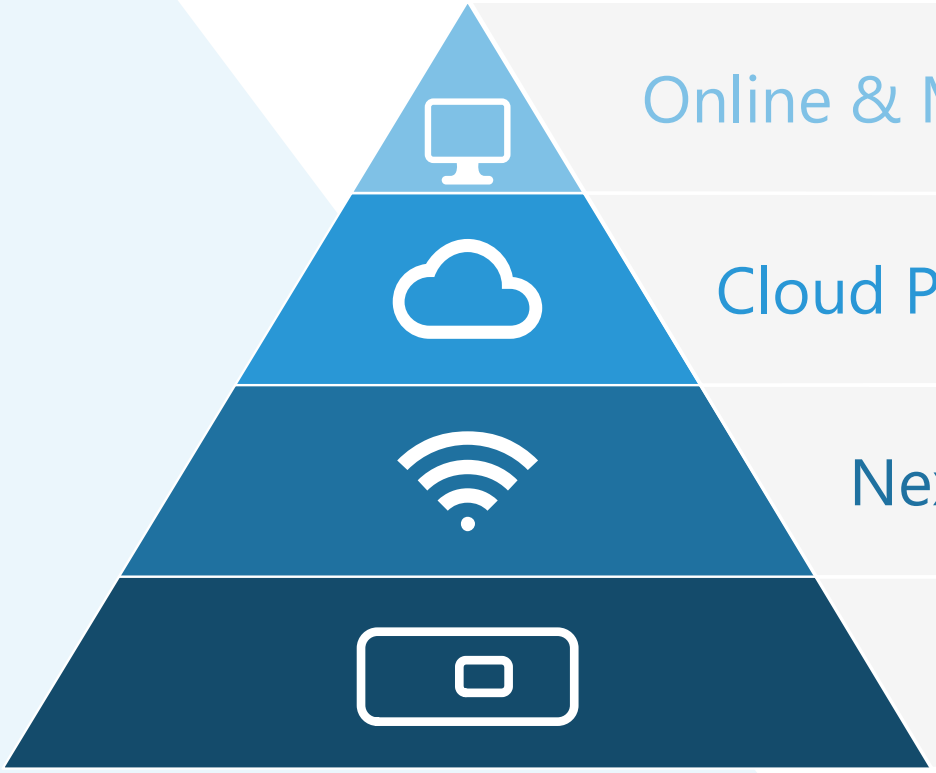
Digitalized Supply Chain

Digitalized Supply Chain

Going beyond paperless and embracing IoT technologies for logistic excellence!

Solution Details

Fully integrated IoT solution designed to be the industry standard



Online & Mobile Applications

Cloud Platform & Analytics

TRAXENS·HUB

Next Gen Connectivity

TRAXENS·NET

Electronic Device

TRAXENS·BOX

Smart Containers

https://vimeo.com/155658816

The Smart Container

A standard container permanently fitted with TRAXENS device

External device generates a wide range of data

- **Position**
- **Movement**
- **Ambient Temperature**
- **Door Opening**
- **Shocks**

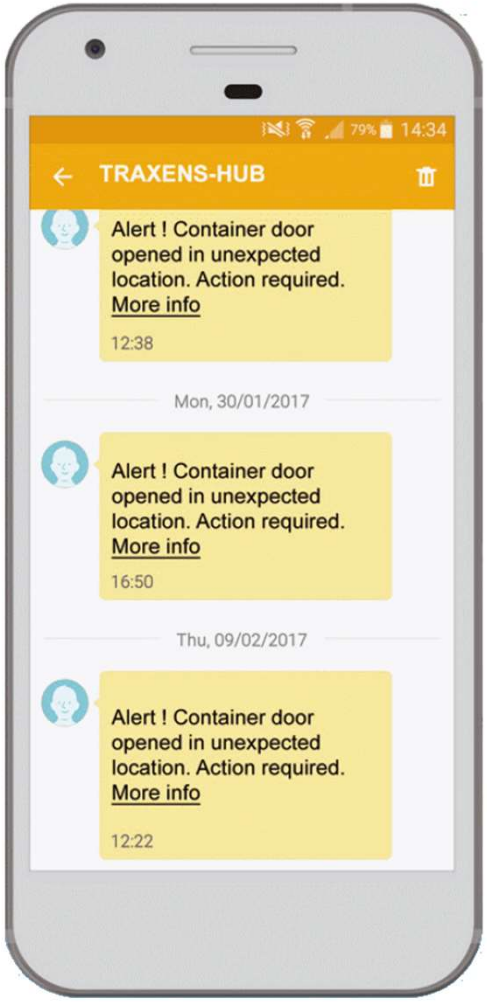
Additional remote sensors can be placed inside the container

- **Cargo Temperature**
- **Cargo Humidity**

Open 2018

Alerts & Notifications

- Significant events
  - Arrival at warehouse
  - >1 hour stop on truck
  - Door open
  - >8°C
  - Running late
  - Etc.
- Delivered to the right person at the right time
  - Web interface
  - Email
  - SMS



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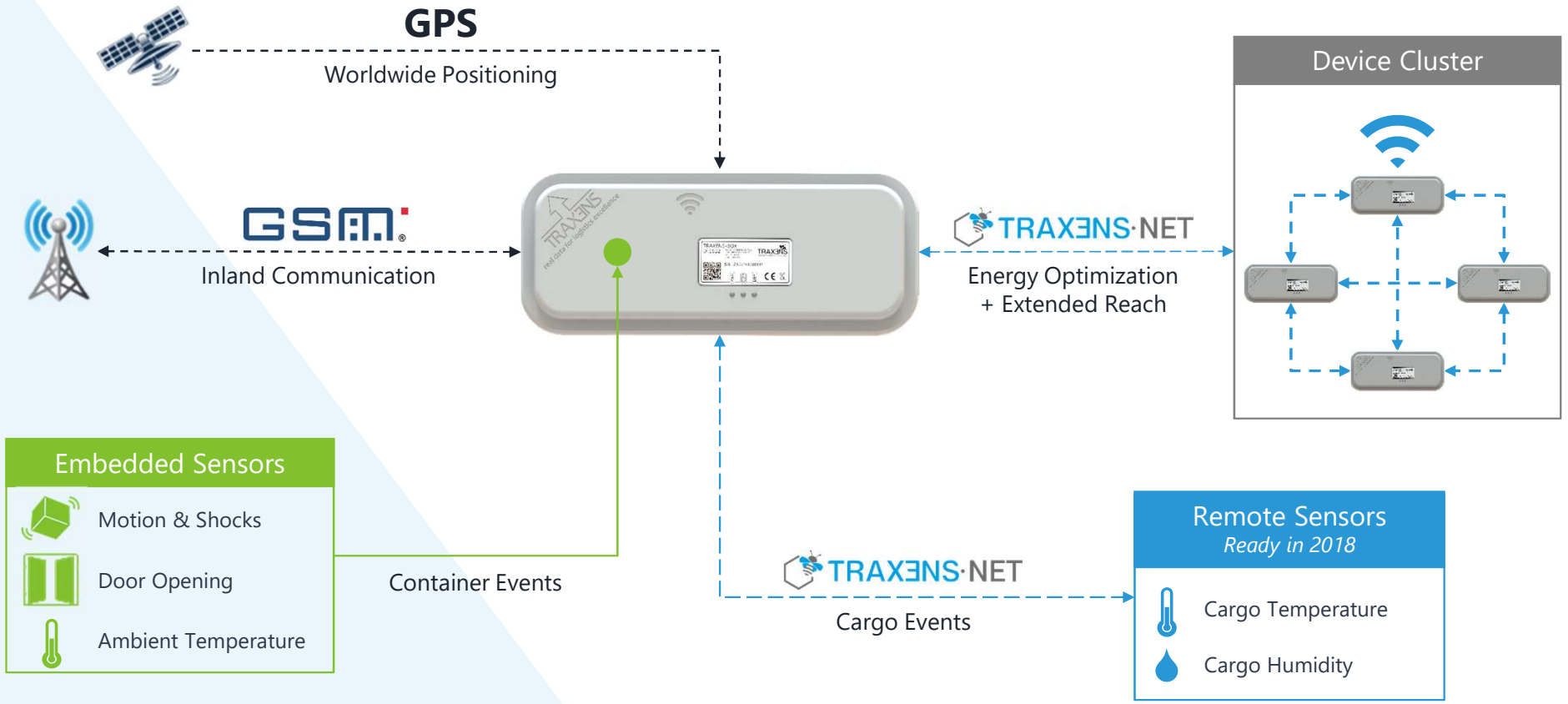
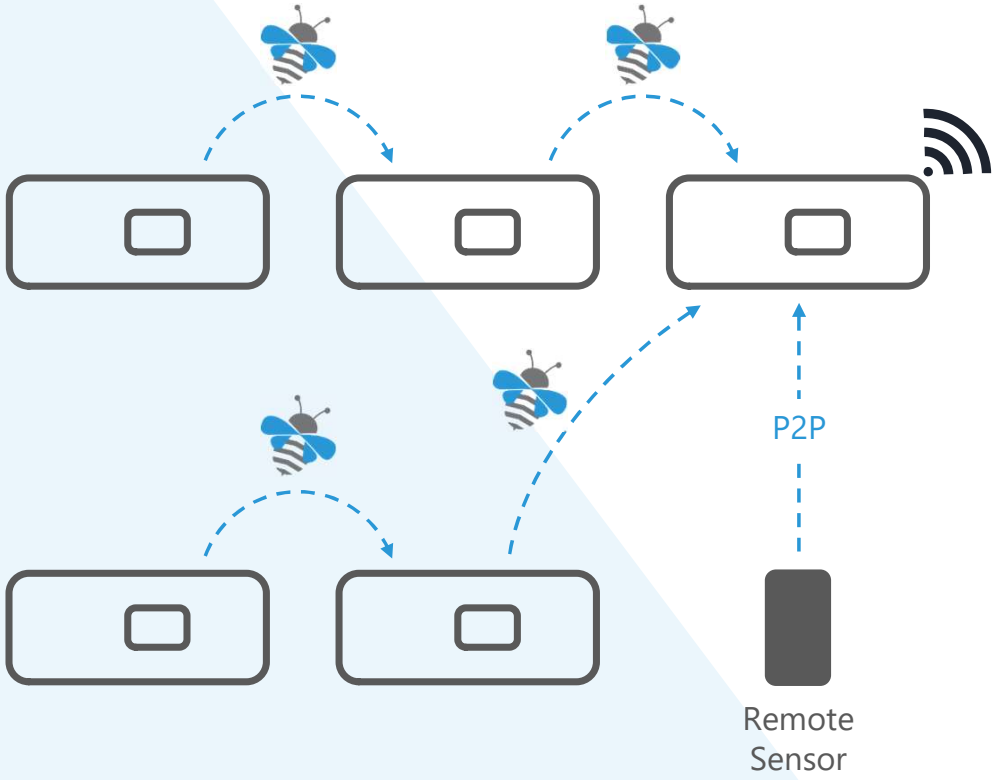
Versatile device for extreme conditions with a 3 years lifespan



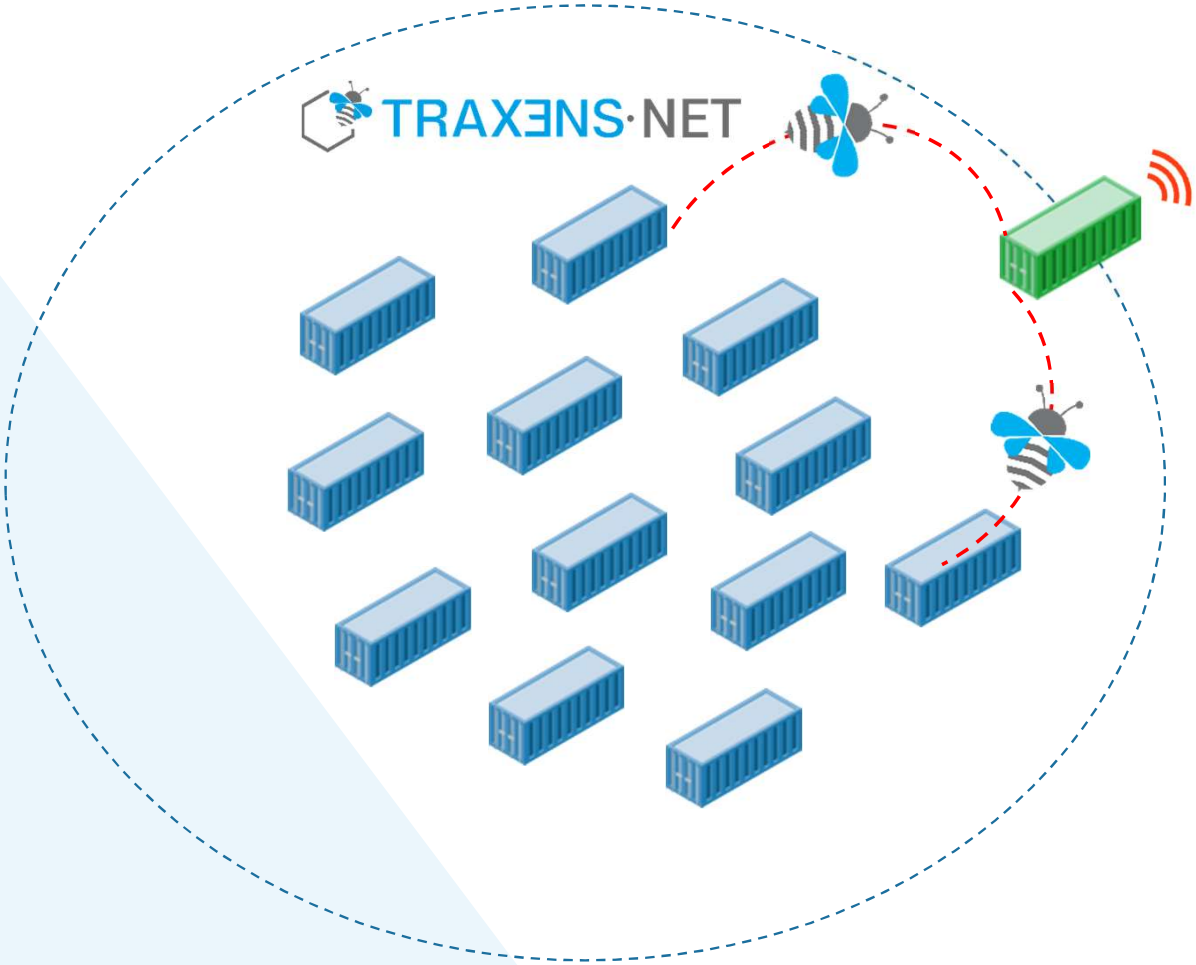
TRAXENS·NET

Connectivity for optimized energy consumption and extended reach



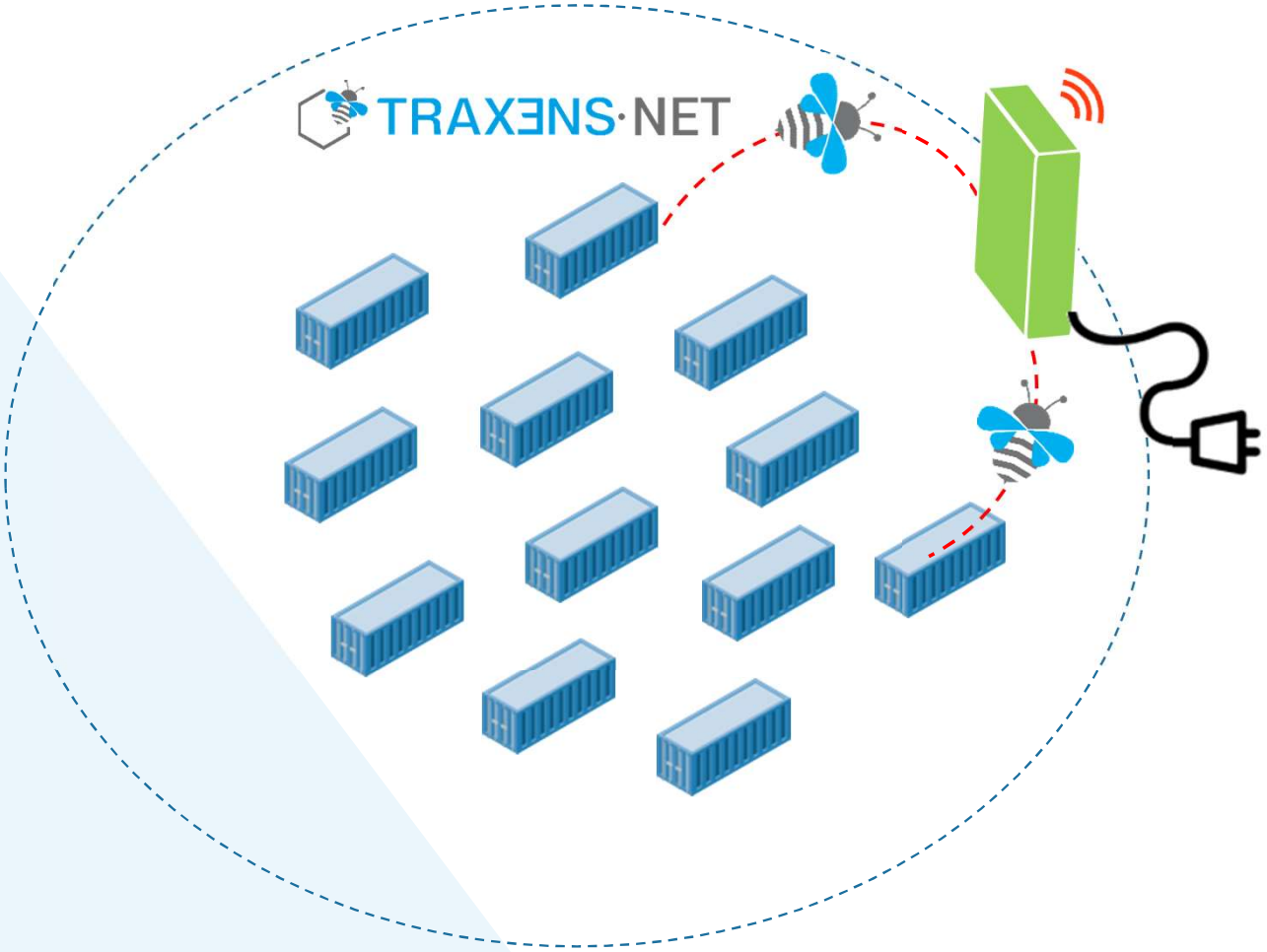
- Mesh radio network
- Very low energy consumption
- Creation of clusters to elect best positioned device
- Extreme reach to the deepest level of the largest ships
- Direct pairing of remote sensors

IoT Cluster for Power Sharing

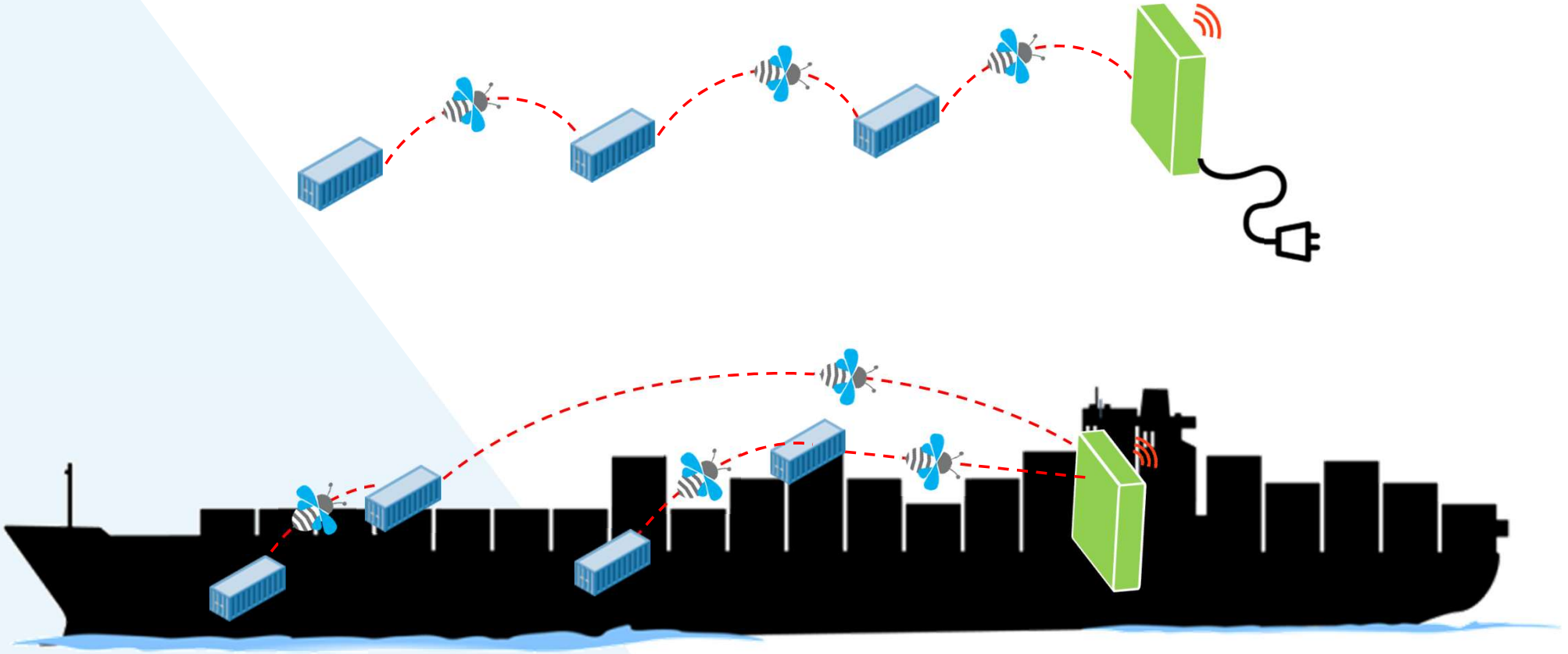


GSM

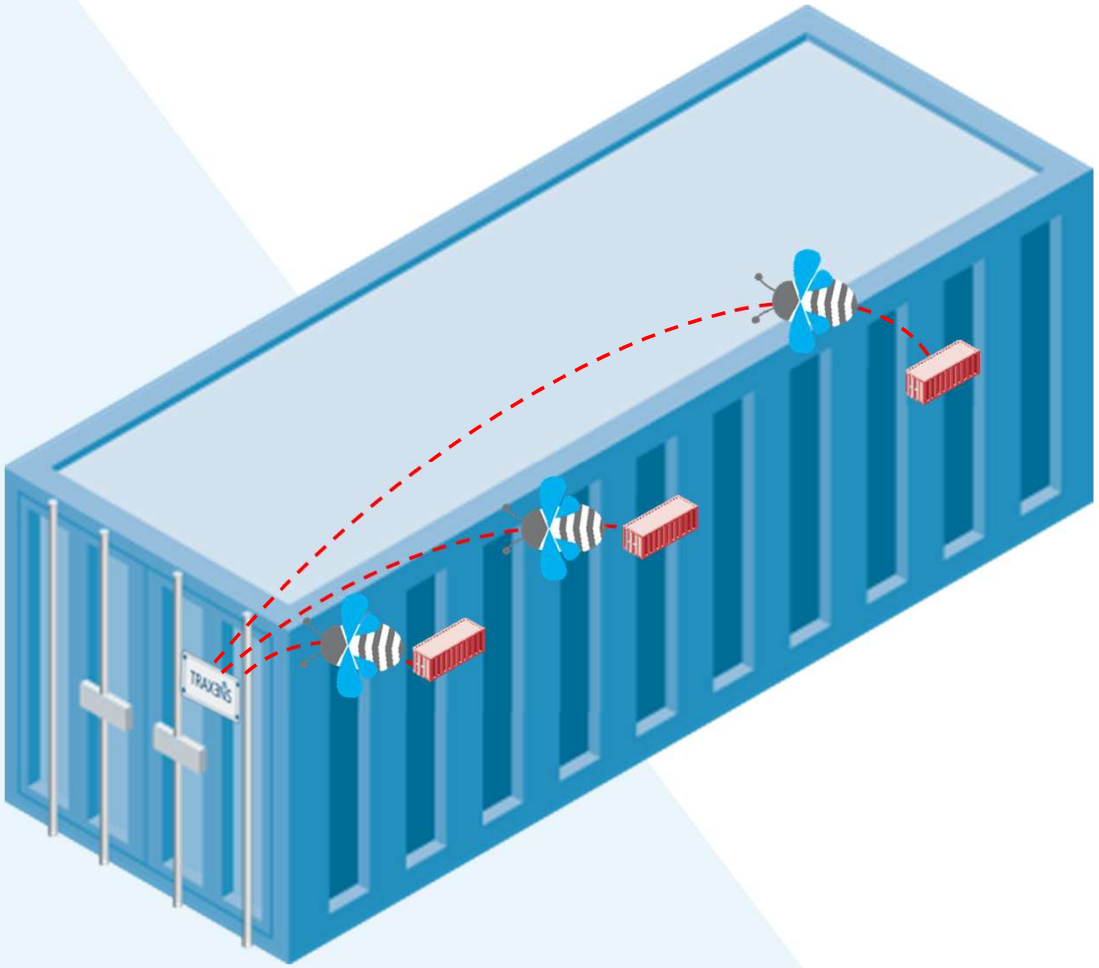
IoT Gateways



IoT for an Extended Reach



IoT for Sensor Extension



- Cargo Temperature
- Humidity
- Pressure
- Gas detection
- Human presence detection
- Specialized Sensors

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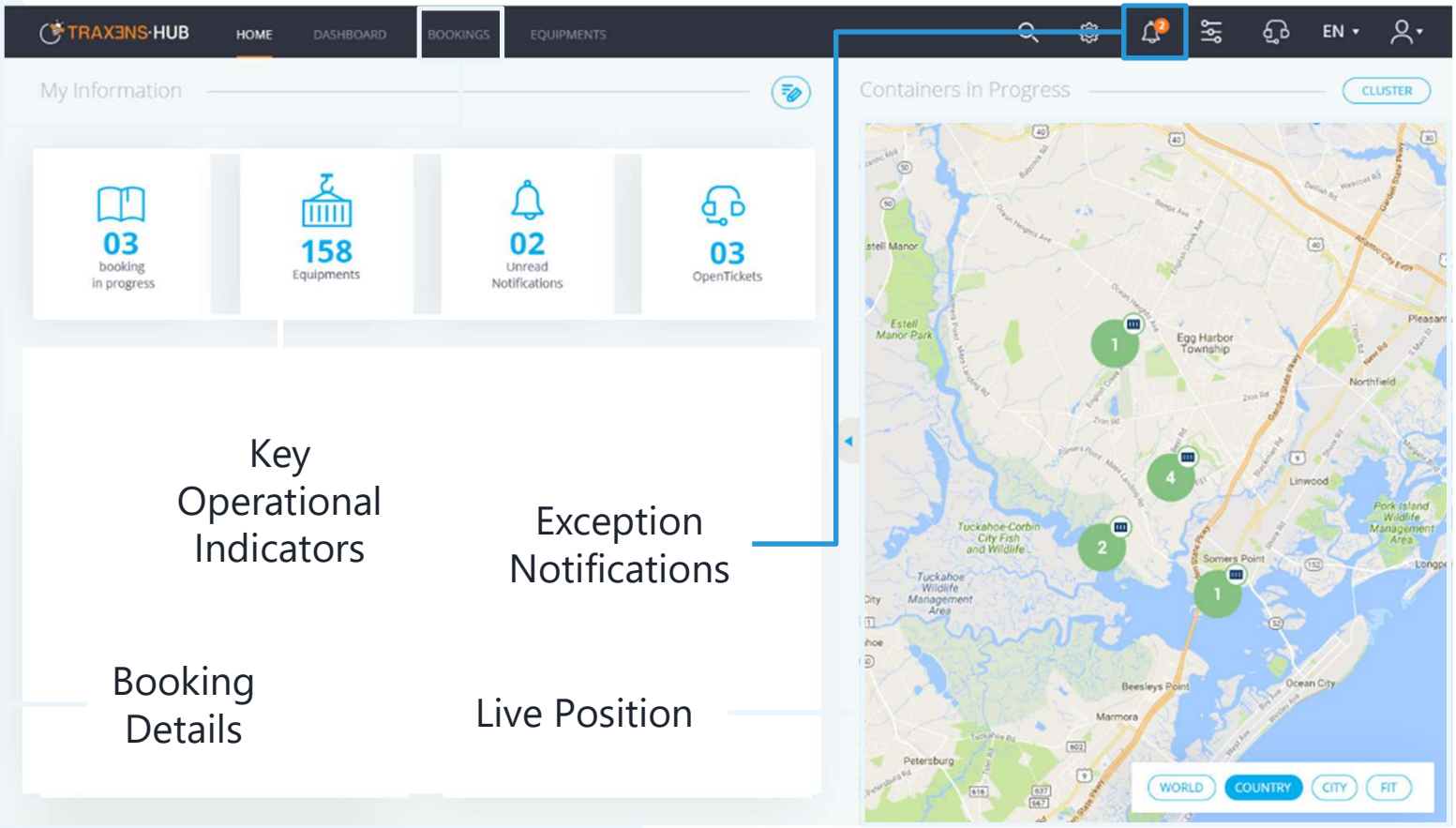
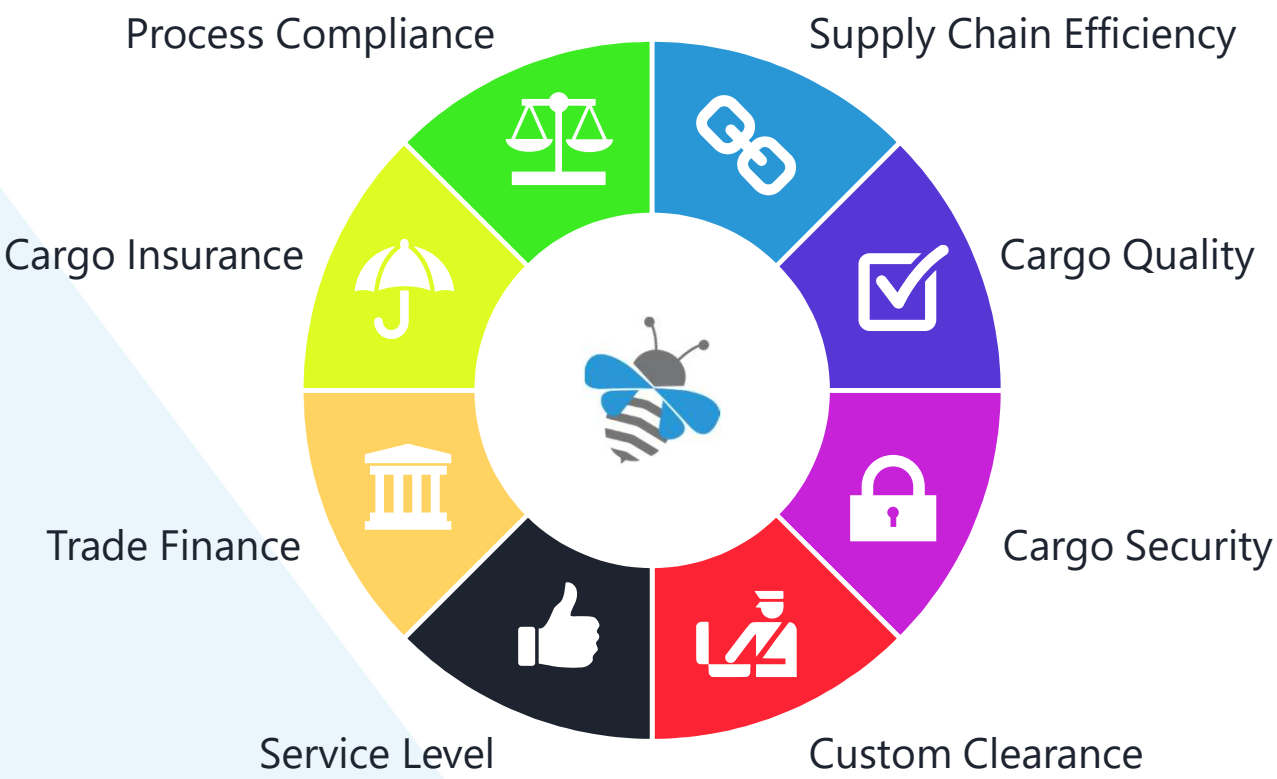
Combined cloud platform and web portal for efficient data management and daily operations



TRAXENS Addresses Many Supply Chain Issues…

Most clients experience challenges in at least one of these categories



Examples of Diagnostic Outcomes

Value created is rarely envisioned in the first place and must be iterated

Key Learnings	Corrective Actions	Value
Containers arrive too early at Port of Loading (POL)	Adjust Stuffing location process	Reduce average Lead Time / Reduce In-transit inventory
High Variation of Post-Carriage transit time on one route	Adjust Post-Carriage process	Reduce variability of Lead Time / Reduce Safety Stock
Significant delay between unstuffing and empty return	Analyze and correct	Negotiate with Shipping Line Free time Vs Rate
Different routes show range of transit time and variability	Choose best cost / transit time / variability compromise	Reduce safety stock
Container temperature levels are acceptable at certain seasons	Adopt seasonal packaging	Reduce packaging costs without loss of cargo quality

Smart Containers Project at the T&L Domain

- The purpose of this project is to define the information that could be exposed by tracking and monitoring devices to all the stakeholders of within multimodal transport and logistics operations including Shipping lines, beneficial cargo owners, terminal and ports, any cross-border agencies, etc..

Thank You

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