IPIC 2019

INNOVATIVE IOT SERVICES FOR A RAIL FREIGHT CONNECTIVITY

9th-11th July, 2019

TRAXENS
connecting the dots

TRAXENS DIGITAL TRAIN SOLUTION

Based on Industry know-how and expertise

Designed to work worldwide, in severe environment and manage any type of assets

Fast Time-to-Market: 2 years from design to implementation

Designed for multimodal containers and already adopted by MSC, CMA CGM and SNCF Logistics

Building a turnkey solution on existing not powered logistic asset

INNOVATION 2030
CONCOURS MONDIAL D'INNOVATION

18e Prix de l'INNOVATION LOGISTIQUE
LAURÉAT
MEILLEURE INNOVATION
SERVICE TRANSPORT ET LOGISTIQUE
SITL

La FRENCH TECH
ERCI EURAILCLUSTERS
CMA CGM
msc
SNCF LOGISTICS

TRAXENS RAIL

CONNECTED FREIGHT TRAIN

EUROPE'S FIRST FREIGHT TRAIN TO USE INNOVATIVE IOT-BASED SYSTEM

BOX

STRENGTHEN EVERY LINK OF THE SUPPLY CHAIN

- More reliable and cost-effective Rail Freight Transport
- Mutualization of the energy consumption & solution cost

EASY IMPLEMENTATION

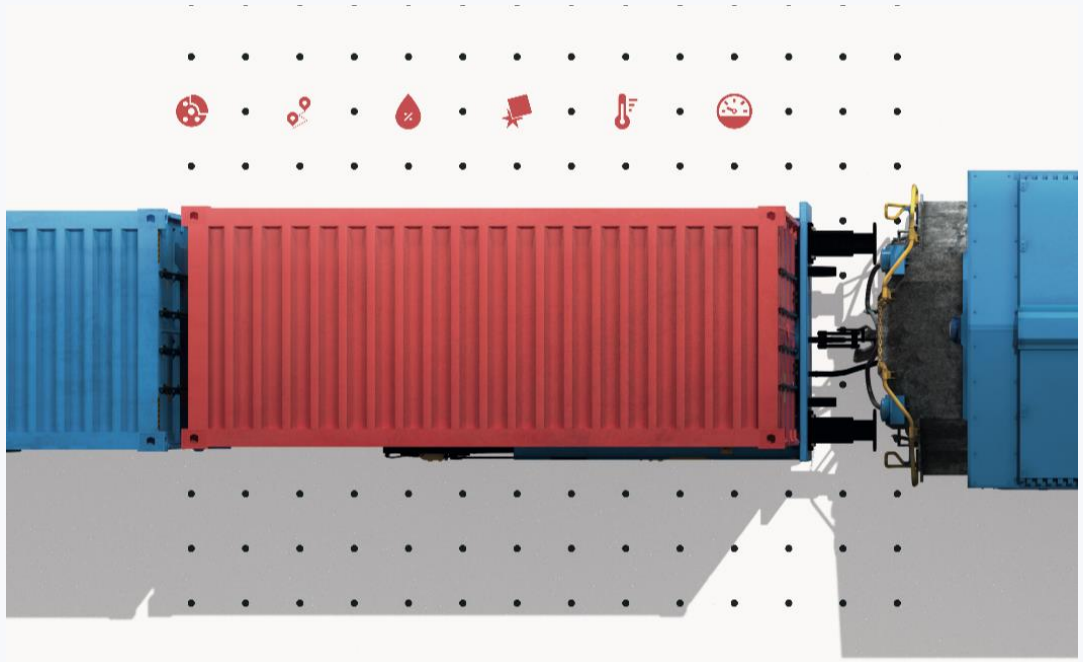
- Connect, Collaborate, and Scale
- Composed of smart devices capable of communicating with each other using wireless digital network creating a mesh network

OPTIMIZING OPERATIONS AND BETTER RAIL TRANSPORT SAFETY

- Automating train preparation operations
- Each box can be paired with specific sensors installed on the wagon

https://vimeo.com/217955948/2811ddcdda

5000 wagons equipped with TRAXENS-BOX
135 wagons equipped with Break Test Sensor in 2018



Performance, Reliability, Safety and Security while optimising cost over the full life cycle.

DIGITAL FREIGHT TRAIN

DIGITAL ASSISTANCE TO ALL RAIL STAKEHOLDERS

Delivering personalized journey information and strengthening the Supply Chain, the Digital Freight Train offers Added Value for all stakeholders:

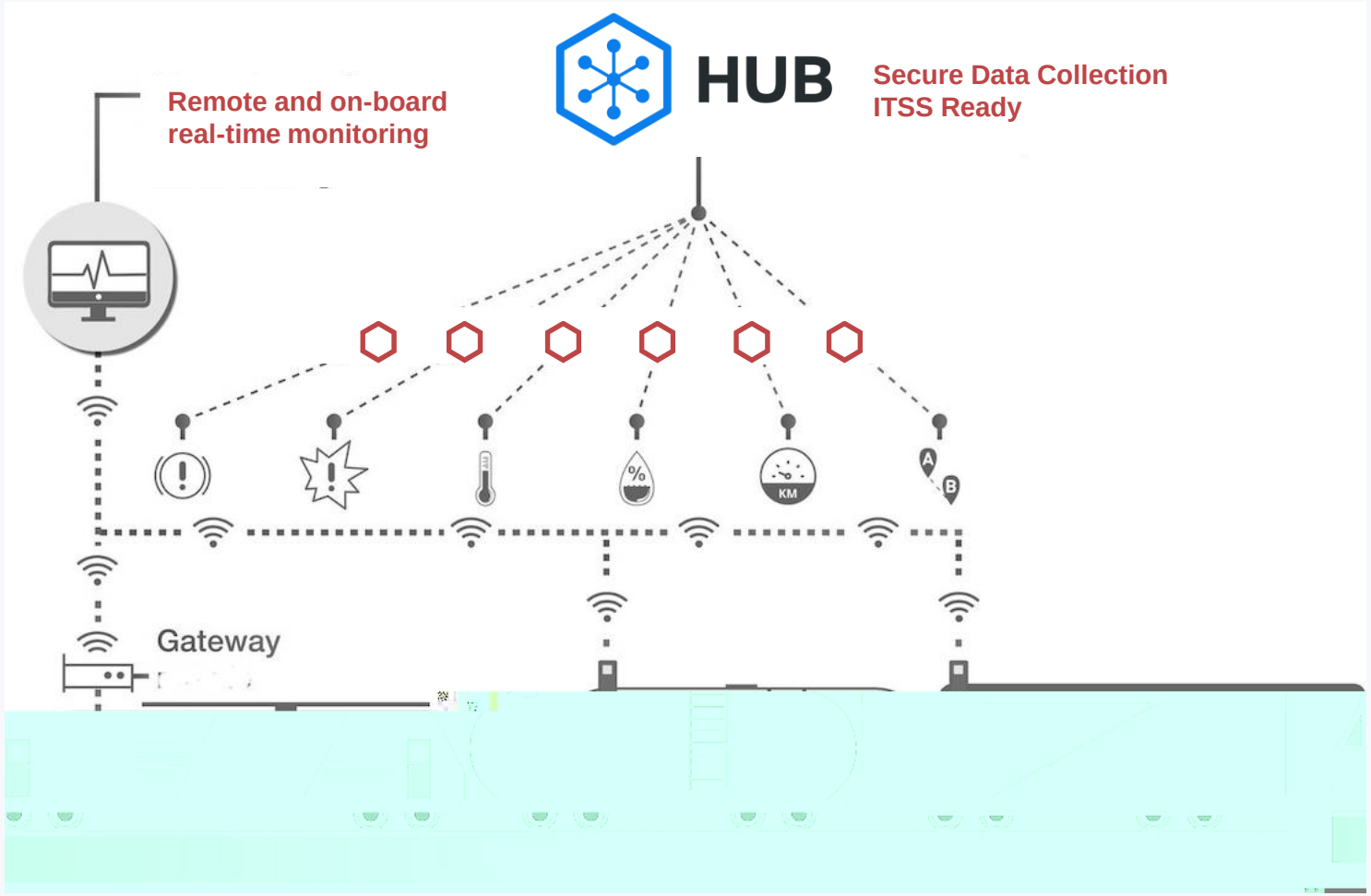
- Railway Undertaking Companies
- Wagon Keepers
- Cargo Owners / Shippers
- Car manufacturers

In the future, with transport schedules integrated into digital devices, railway undertakings will be able to advise shippers of the specific consequences of hazards on the route.

High Value-

EXTENDED REACH & ENERGY SHARING

TECHNOLOGY DEVELOPED TO BE EMBEDDED IN MOBILE PHONES CONTROLLERS, 5 PATENTS PCT



Extended reach capacity on board trains allows messaging via GSM

Very low power communication through TRAXENS-Net Gateways

Enhanced Reach and power economy by sharing communication through the device having the best connection to GSM and the best battery

Cargo Monitoring by pairing a comprehensive range of secure, on-demand sensors to the smart wagon

NET

DIGITAL FREIGHT TRAIN ASSISTANCE BENEFITS

NEW WAY OF OPTIMIZING WAGON FLEET MANAGEMENT

Data collection and analysis enables optimization of wagon rotations, offering a direct economic benefit:

Mileage monitoring

Whether empty or loaded, the distance travelled by the wagons is monitored, facilitating a preventive maintenance approach.

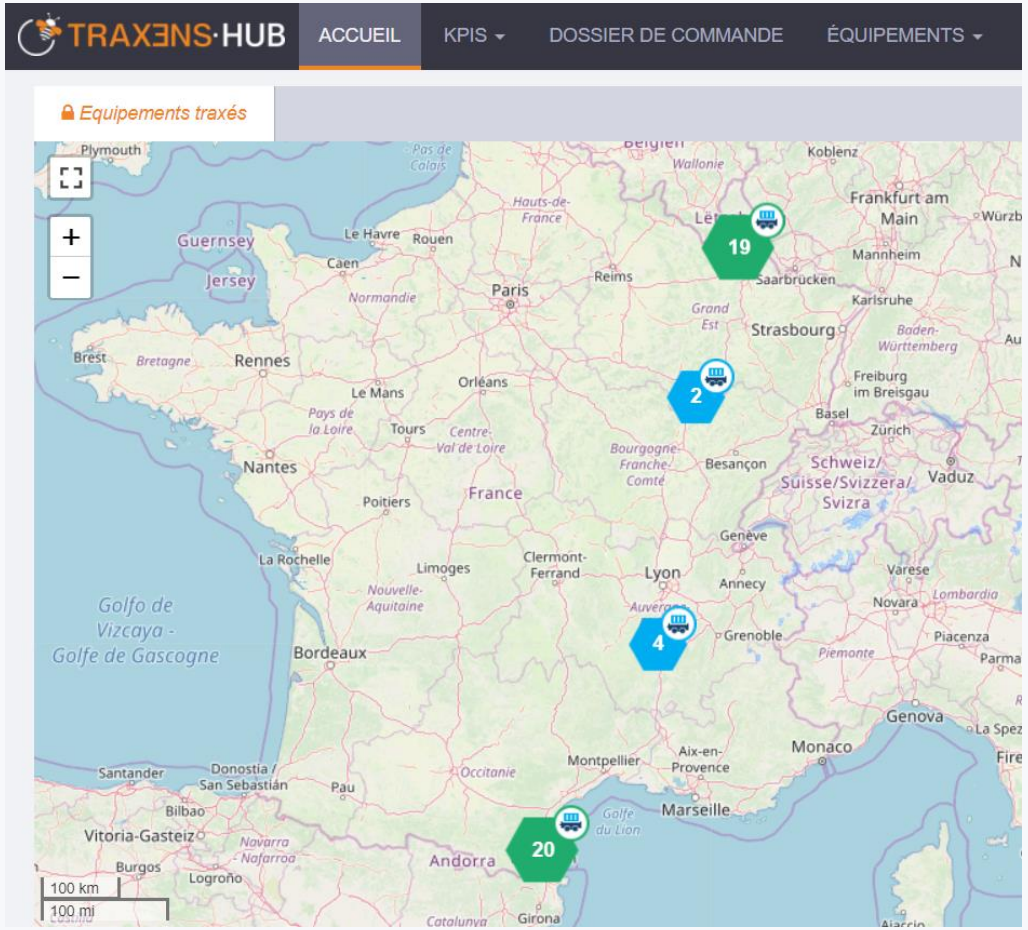
Maintenance

Monitoring of critical wagon components and optimization of maintenance scheduling

Online information on rolling stock behavior helps wagon Fleet Managers to:

Improve Wagon availability and rotation for its traffics

Optimize maintenance engineering and avoid -



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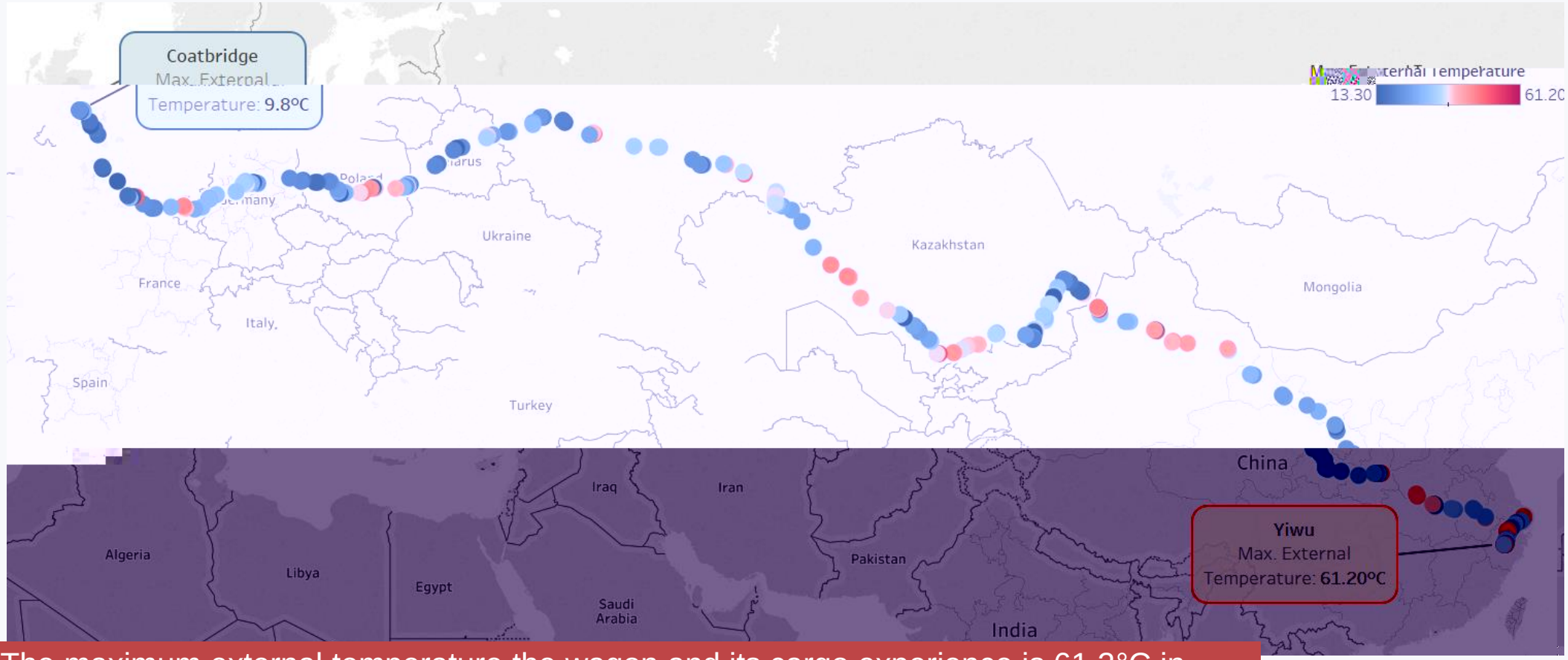
DOOR TO DOOR BENEFITS

Extreme External Temperatures



The maximum external temperature the wagon and its cargo experience is 61.2°C in July in Yiwu, China, while the minimum Maximum External Temperature was of 9.8°C in Scotland.

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Q & A

Thank you for your attention

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