Use Case Description

LOGISTAR - Enhanced data management techniques for real time logistics planning and scheduling

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ahlers

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  - Living Lab 1: Backhauling & Co-Loading
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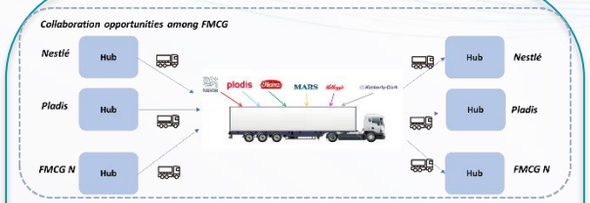
Living Labs

LOGISTAR services will be **tested under real operation environment** in three Living Labs



Backhauling and Co-loading

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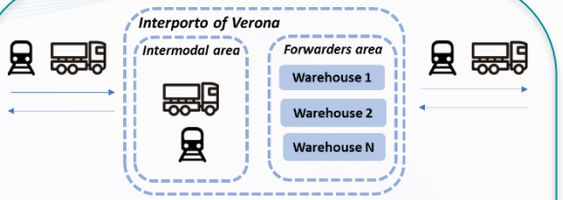
Overall overview of the status of the operations through the real-time dashboards and the real-time information on road transport system.



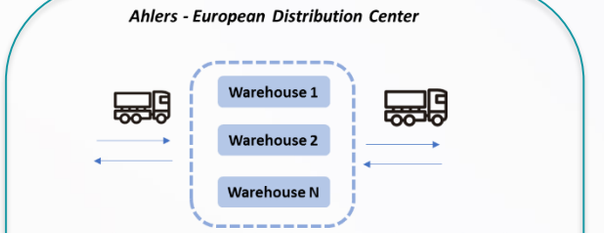
Synchromodality

Real time re-planning due to disrupting events: corrective and preventive

Planning of synchromodal routes basing on real time events.

Dynamic assignation of freight transport networks.

Real time status on goods movements: position of vehicles, arrival time of cargo fleets.



Real time logistics in Chemical Industries

Real time planning of resources looking for transport synergy and bundling opportunities.

Real-time alerts and recommendations to take action, facilitating the decision-making process.

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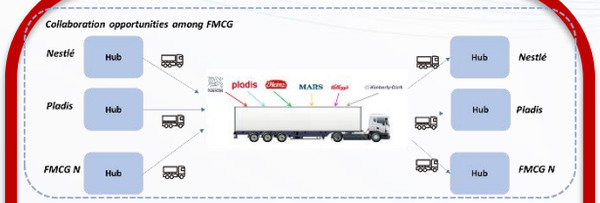

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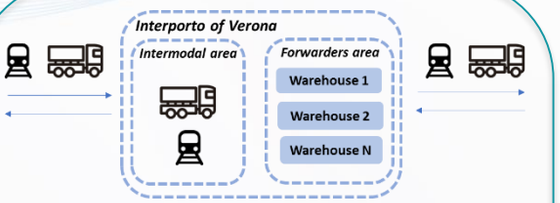

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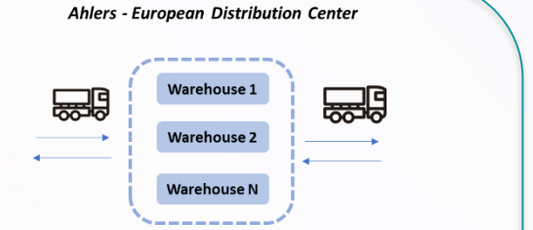

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Living Lab 1:Backhauling and Co-loading

pladis The story

About 12 years ago Nestlé had an issue with empty running. It was delivering over 15 loads per day from its factories in the North of England to its distribution centre in Leicestershire. However, only 80% of these loads could be tied to a return journey, so every day 2 or 3 trucks would return to the North empty. pladis was delivering loads on a daily basis to Yorkshire from its distribution centre close to Nestlé's in the Midlands and some of these loads presented opportunities for round tripping vehicles. Both shippers wanted to reduce cost, reduce CO2 emissions and maximise asset utilisation. Having met at an IGD event, Nestle and pladis decided they could share the use of trucks to create round trips and reduce empty running, saving over a quarter of a million kilometres per year.

Empty running reduction

York	→	Bardon	96,500 kms
Halifax	→	Bardon	27,000 kms
Melksham	→	Midlands	157,250 kms
Total			**280,750 kms/yr**

1. Nestlé traffic called pladis on day 1 to offer loads for shipping on day 3
2. pladis then planned the deliveries to collect
3. pladis transport spreadsheet showing delivery location, time and collection time sent to Nestlé's dispatch warehouse
4. Standard trailers were provided enabling operational flexibility
5. Vehicle collected and delivered, and drivers telephoned confirmation
6. pladis collated POD's and returned to Nestle

Living Lab 1:Backhauling and Co-loading

The incentive

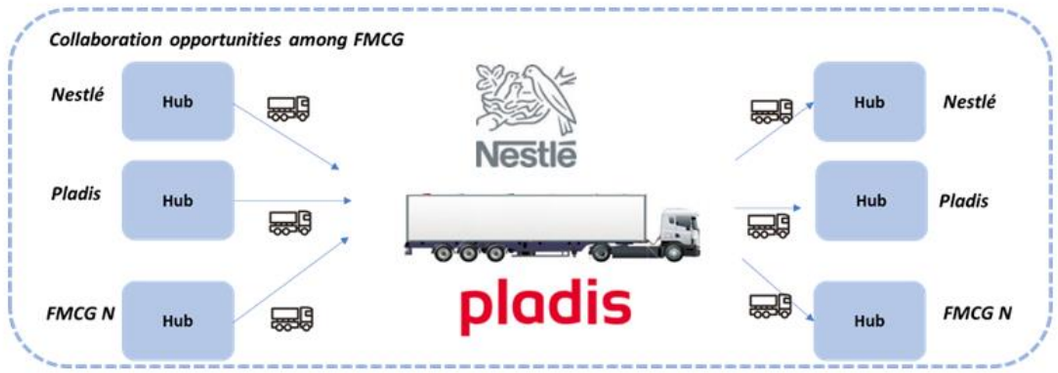
"We need to collaborate more, we compete on the shop shelf, not in the back of a lorry"

Richard Hastings - Nestlé

1	24 % of Food truck miles are empty
2	The Fiss (Defra) commits Nestlé and pladis to 20% reduction in environmental cost
3	Transport collaboration is a key action in the FDF 10 point checklist for greener transport
4	Wasting a scarce resource and a lot of money

Living Lab 1:Backhauling and Co-loading

The plan



Real time backhauling in the FMCG sector

Process of various information coming from the different companies (*schedules, resources, constraints, truck, positions, empty return legs…)* to improve backhaul management.

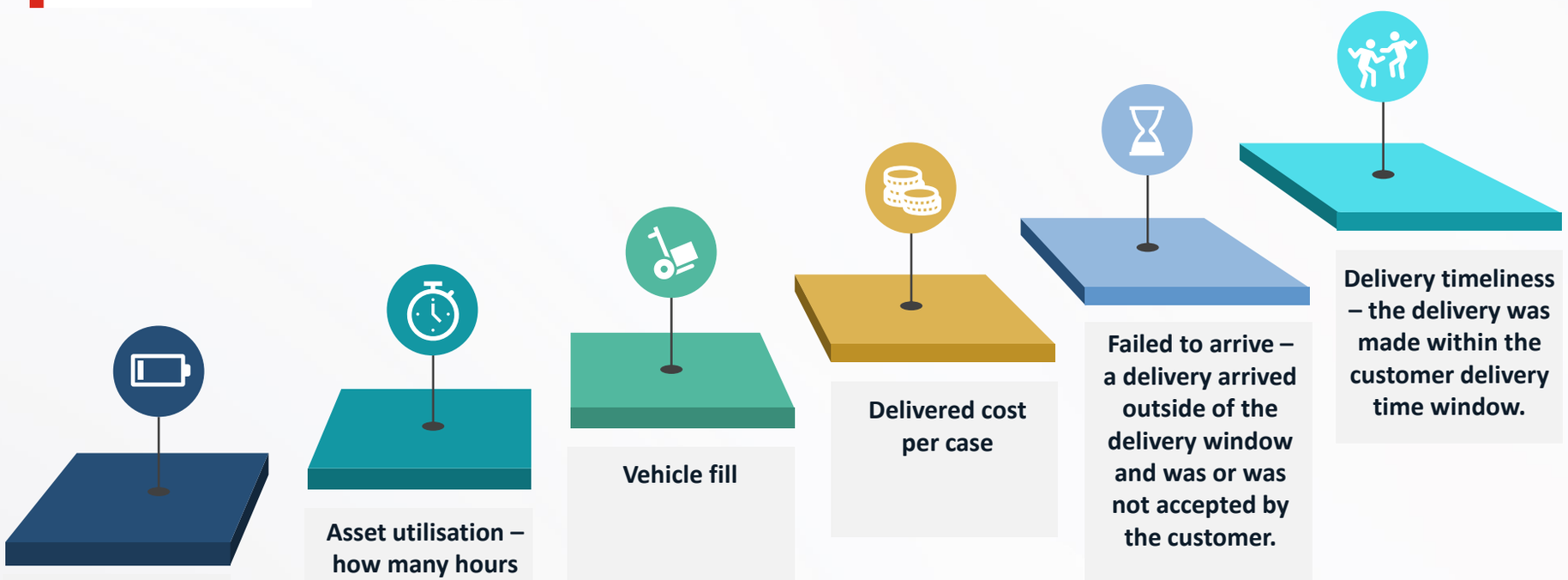
Co-loading opportunities will also be considered, plus any cost-effective alternative modes of transport.

Overview of the status of the operations through real-time dashboards and real-time information on road transport system.

The execution of the living lab will be split into several phases starting with the collection of historical data from both Nestlé and pladis. A strategic analysis will be conducted in order to understand the current logistic networks of both companies. This data will be used to set up and test the Logistar system, prior to the go live of the use case.

Living Lab 1:Backhauling and Co-loading

The outcome



Empty running

Asset utilisation – how many hours the vehicle is used compared to the maximum available hours

Vehicle fill

Delivered cost per case

Failed to arrive – a delivery arrived outside of the delivery window and was or was not accepted by the customer.

Delivery timeliness – the delivery was made within the customer delivery time window.

Living Labs

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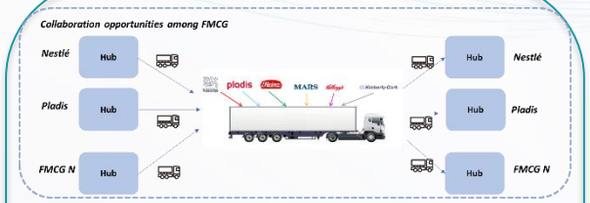

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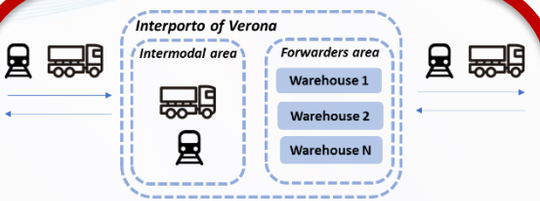

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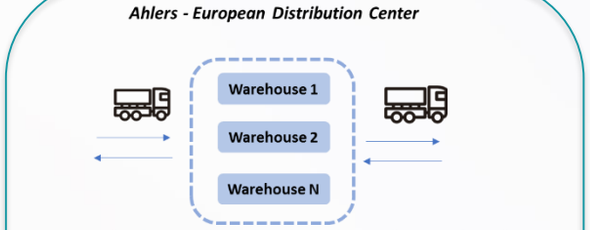

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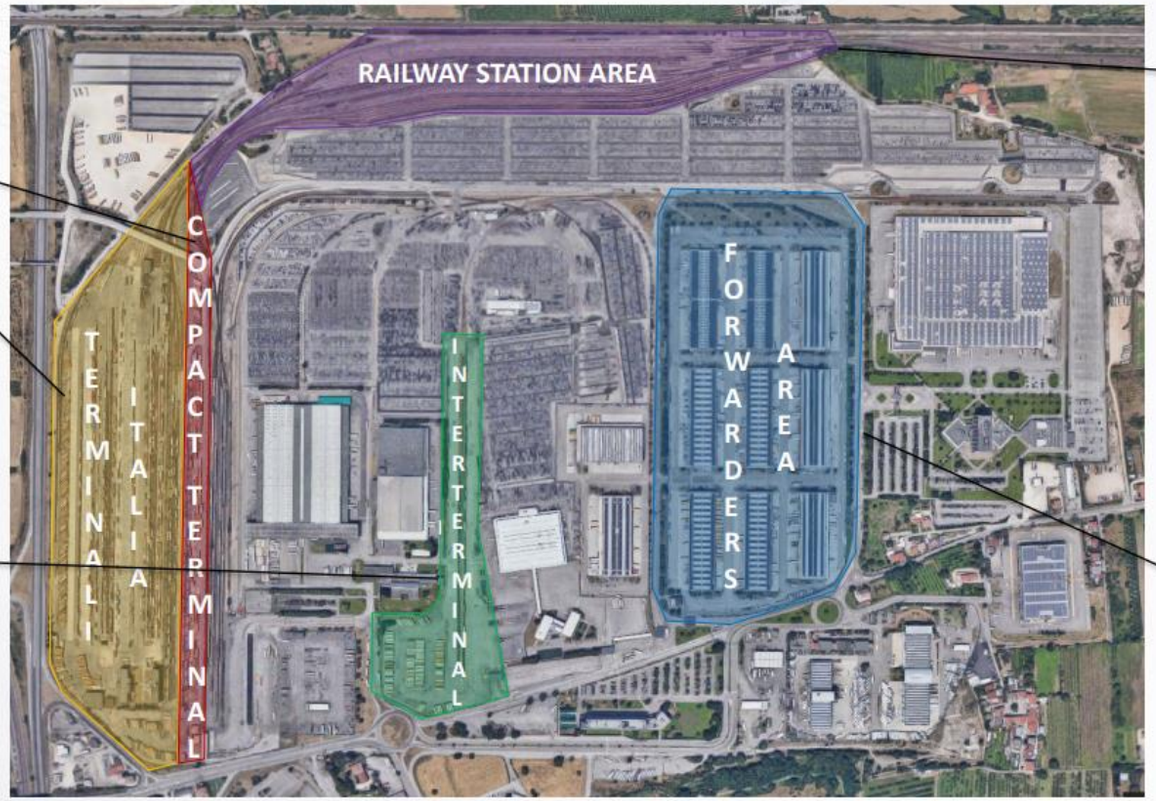
Living Lab 2:Synchromodality

Actors involved

1° TERMINALS

TERMINALI ITALIA is the manager of the two biggest terminal in the area. It is the first choice given the high level of technology of its equipment but is own by RFI (the national railway infrastructure manager) so it is not simple to arrive to shared decision. If it is not possible to reach an agreement with TERMINALI ITALIA, we will involve Quadrante Servizi that is the terminal manager of Interterminal and it is owned by Consorzio ZAI which is the same holding of ZAILOG.



2° RAILWAY UNDERTAKINGS and SHUNTER

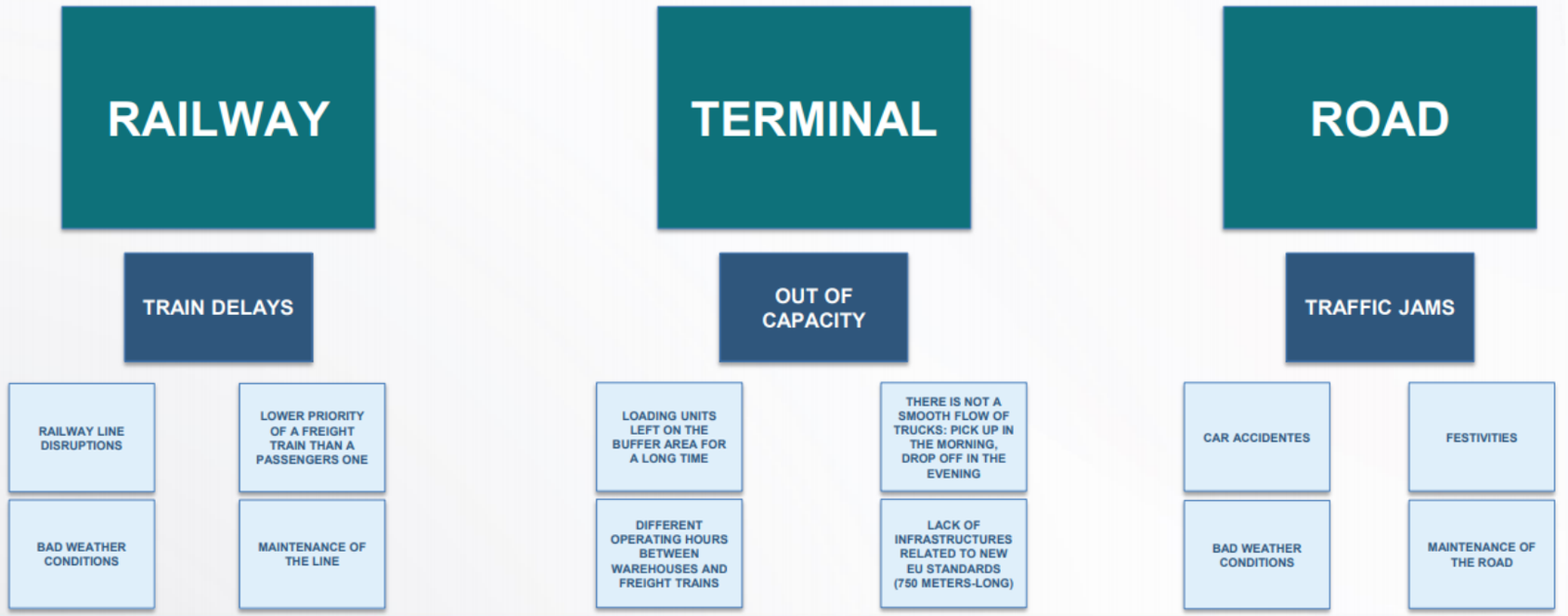
On the 24 tracks of the Verona freight village's railway station operates 8 railway undertakings. Their involvement could be necessary to know in advance train delays or problems on the railway line. However, there is a unique shunting operator in the area (Quadrante Servizi) and its involvement is mandatory.

3° ROAD OPERATORS

FORWARDERS, CARRIERS, SHIPPERS and LOGISTICS OPERATORS must be involved because LOGISTAR can give them some ICT tools that will improve their working procedures.

Living Lab 2:Synchromodality

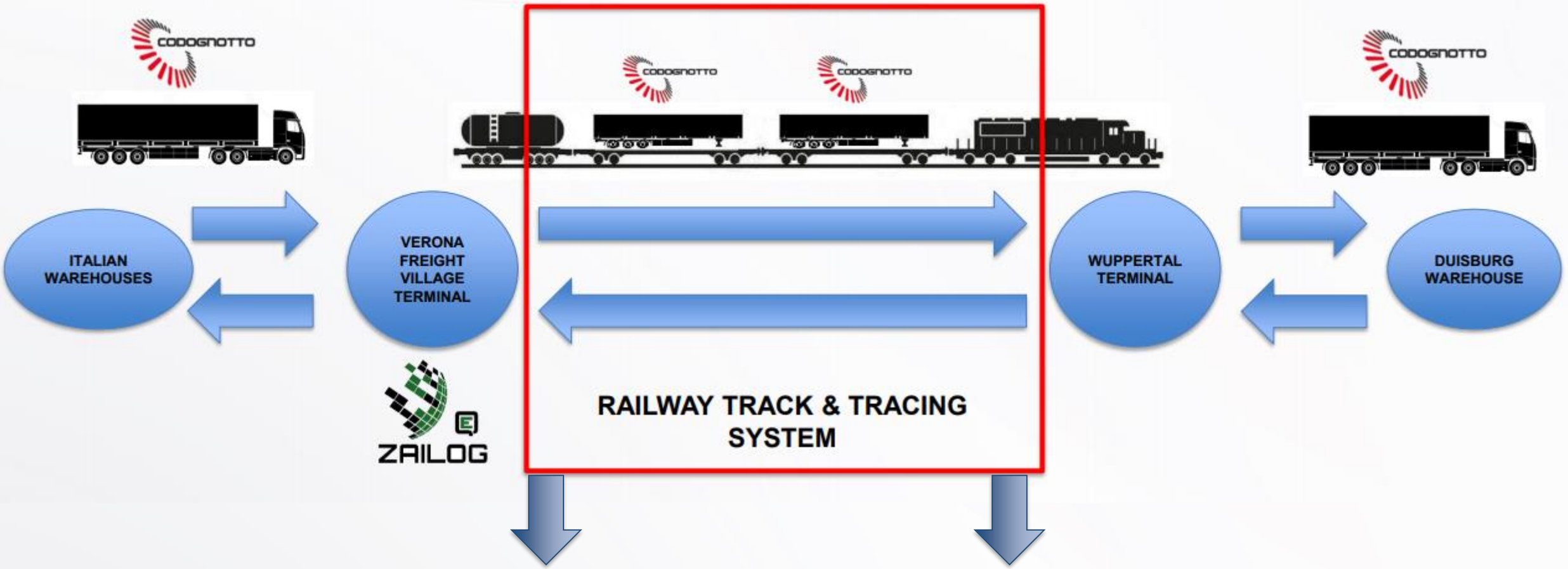
Problem statement



1	Train delays caused by railway disruptions,bad weather conditions, etc …
2	Terminal delays are caused because of slow flow of trucks, lack of infrastructure and a mismatch in opening hours
3	Delays on the roads are caused by accidents and unforeseeen circumstances

The solution

Living Lab 2:Synchromodality

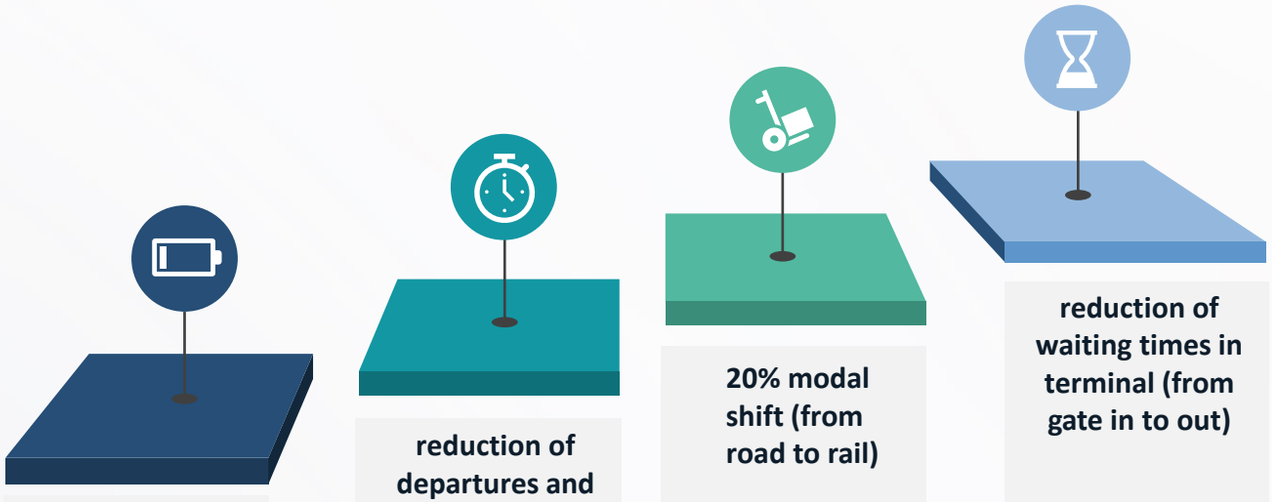


A control panel to understand delays

Info in railway standard language so that stakeholders can benefit from logistar info

Living Lab 2:Synchromodality

Outcome



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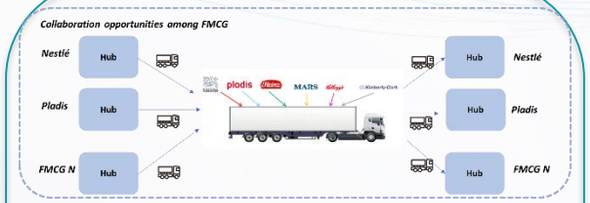

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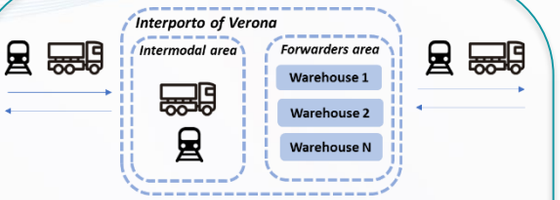

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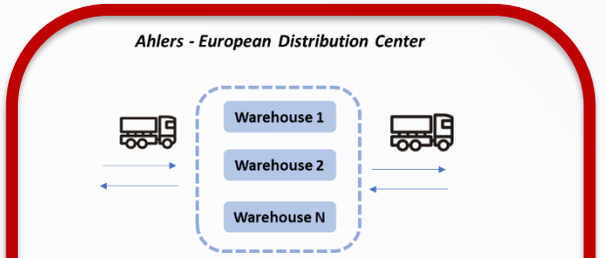

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Living Lab 3:Real time logistics in Chemical Industries

Actors involved

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Supply Network Innovation & Analytics

- Analysis and visualisation of supply chain data
- Scenario building & forecasting
- Constant improvement to your supply chain

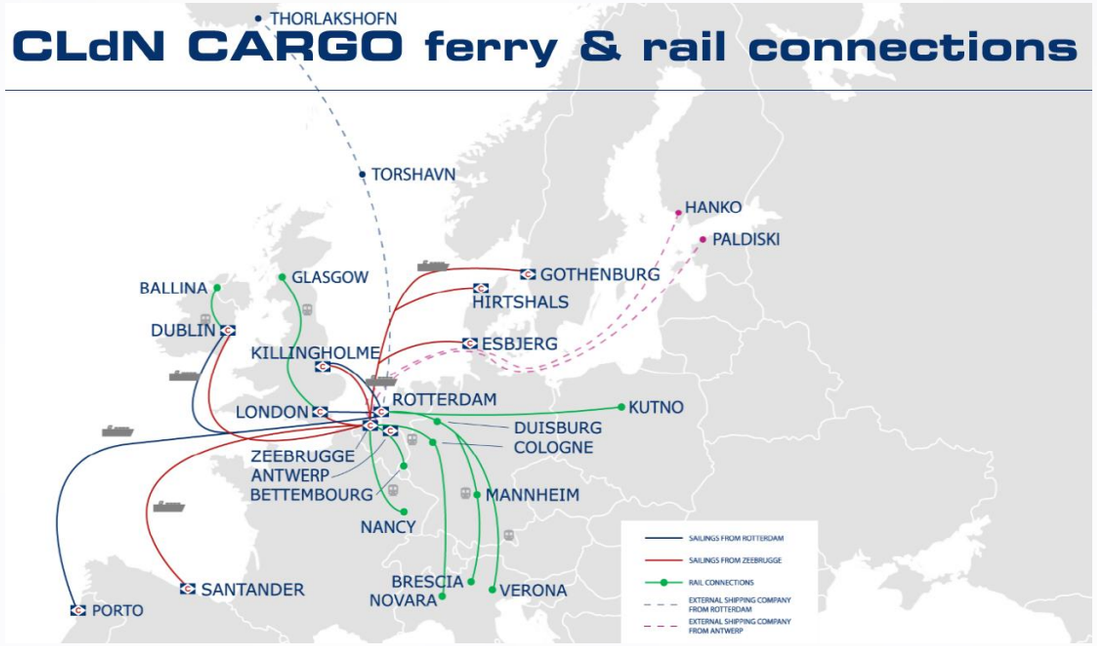
Supply chain solutions

- Forwarding in full transparancy through access to specialized data platforms and dashboards
- Customers service experts with pro-active mindset and strong advisory skills

Project management

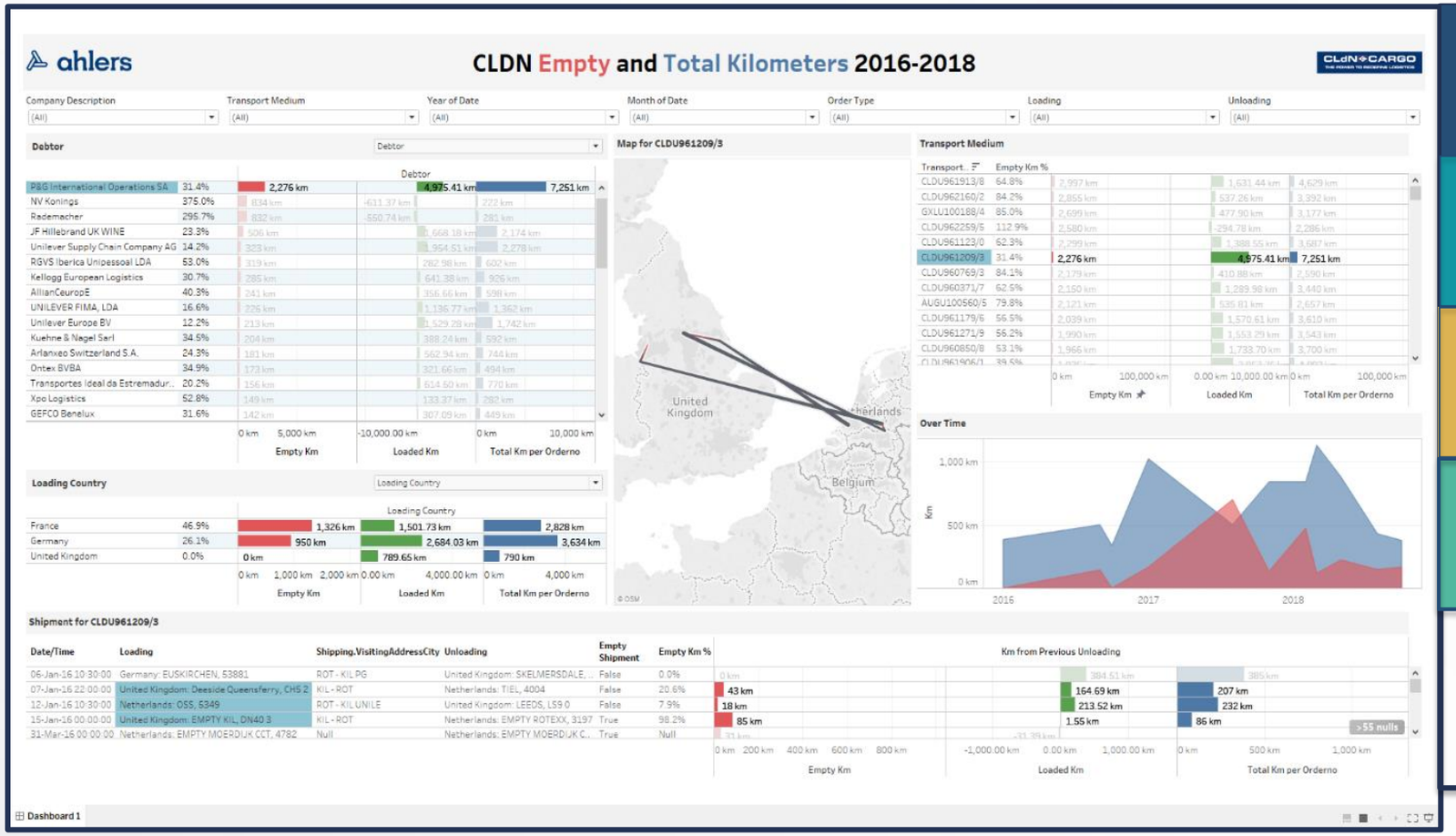
- Tailor-made solutions for every project
- Worldwide network of experts
- Fearless and hands-on attitude
- All-in approach: multimodal transport, custom clearance, project communication

CLdN CARGO
THE POWER TO REDEFINE LOGISTICS



Living Lab 3:Real time logistics in Chemical Industries

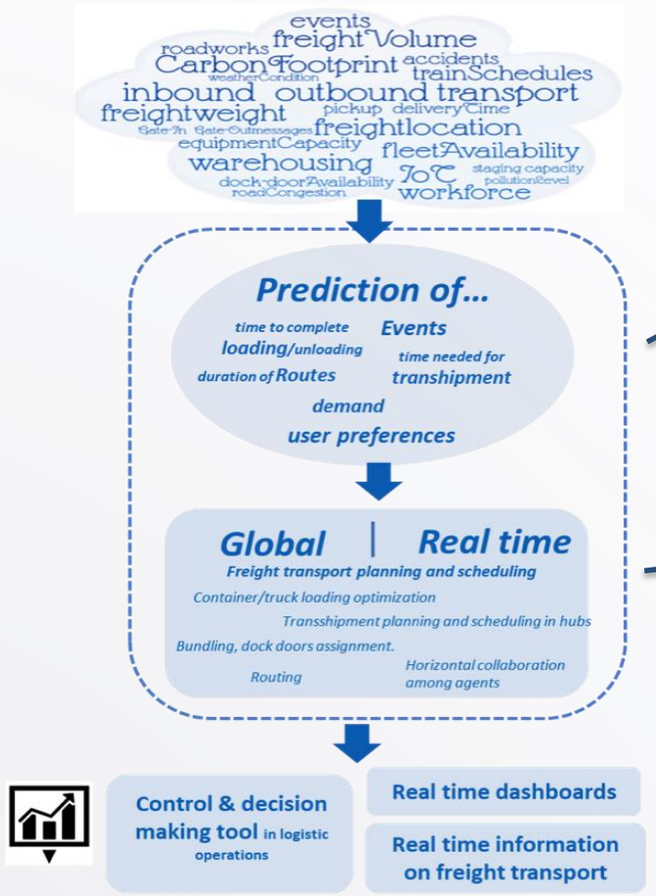
Problem statement



1	The large asset base of generates a huge amount of location and movement data
2	limited access to forecasting information about the future locations or movements of their units
3	had limited exposure to more advanced digital decision support systems
4	empty kilometres in the European FTL network are an issue and are top priority for CLDN

Living Lab 3:Real time logistics in Chemical Industries

The solution



The dispatching teams have no or limited access to forecasting information about the future locations or movements of their units, which makes it difficult to foresee and prevent empty running;

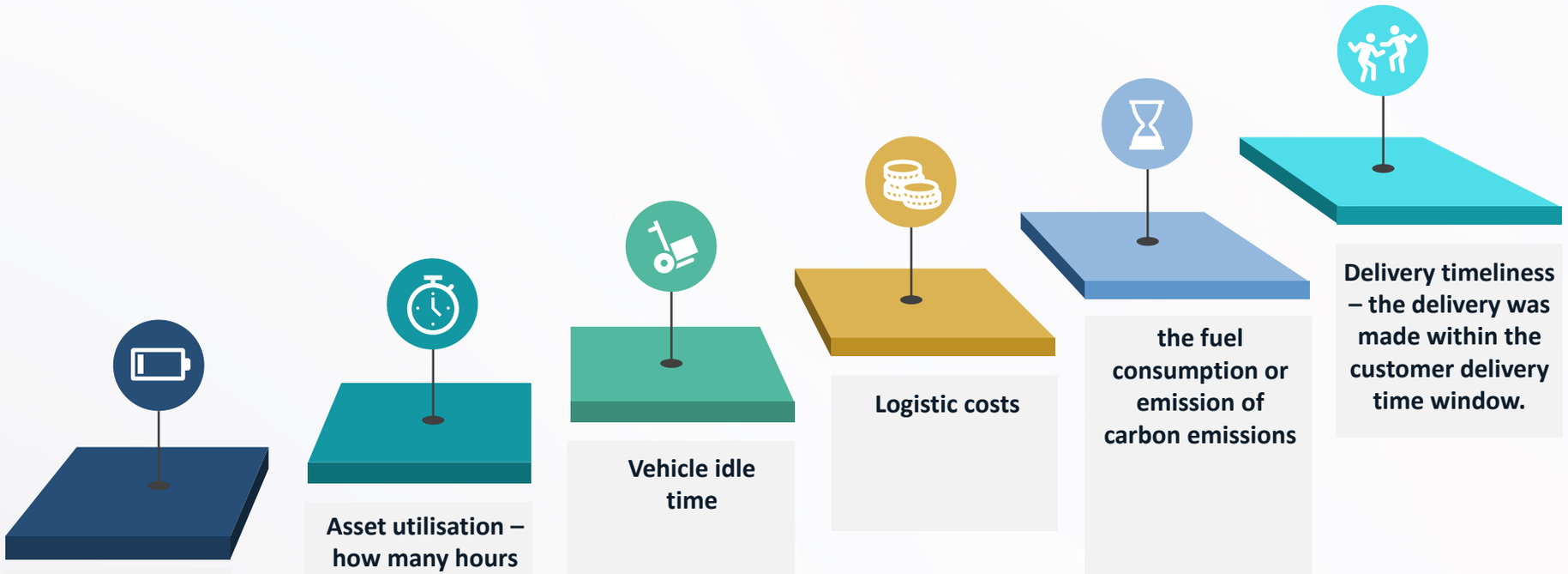
The large asset base of containers, trailers and flatbeds all over Europe generates a huge amount of location and movement data which is difficult to capture and interpret;

There is limited integration between the planning of the transport units and the planning of the intermodal terminals in the CLdN Terminal network, which causes bottlenecks or idle time of the assets;

The transport planners on CLdN Cargo can rely to a large extent on their practical experience and “gut feeling” to optimize the daily operations of their network, as well as on some computerized vehicle routing and scheduling systems, but so far they have had limited exposure to more advanced digital decision support systems;

Living Lab 3:Real time logistics in Chemical Industries

Outcome



Empty running

Asset utilisation – how many hours the vehicle is used compared to the maximum available hours

Vehicle idle time

Logistic costs

the fuel consumption or emission of carbon emissions

Delivery timeliness – the delivery was made within the customer delivery time window.

Contact information

Questions?

www.logistar-project.eu

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LOGISTAR project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 769142.