



P&G in Europe

Present since

1930

730 Million
Consumers

18 Millions pallets moved / year
> 500 000 FTL loads / year

1/3 of Global
Employees



Present in **50** Markets

24 % of Total
Company

Fiscal 2015 data



On-the-ground operations in:

European Economic Area

Austria
Belgium
Bulgaria
Croatia
Czech Republic
Denmark
Finland

France
Germany
Greece
Hungary
Ireland
Italy
Latvia
Luxembourg
Norway

Poland
Portugal
Romania
Slovakia
Spain
Sweden
Switzerland
The Netherlands
United Kingdom

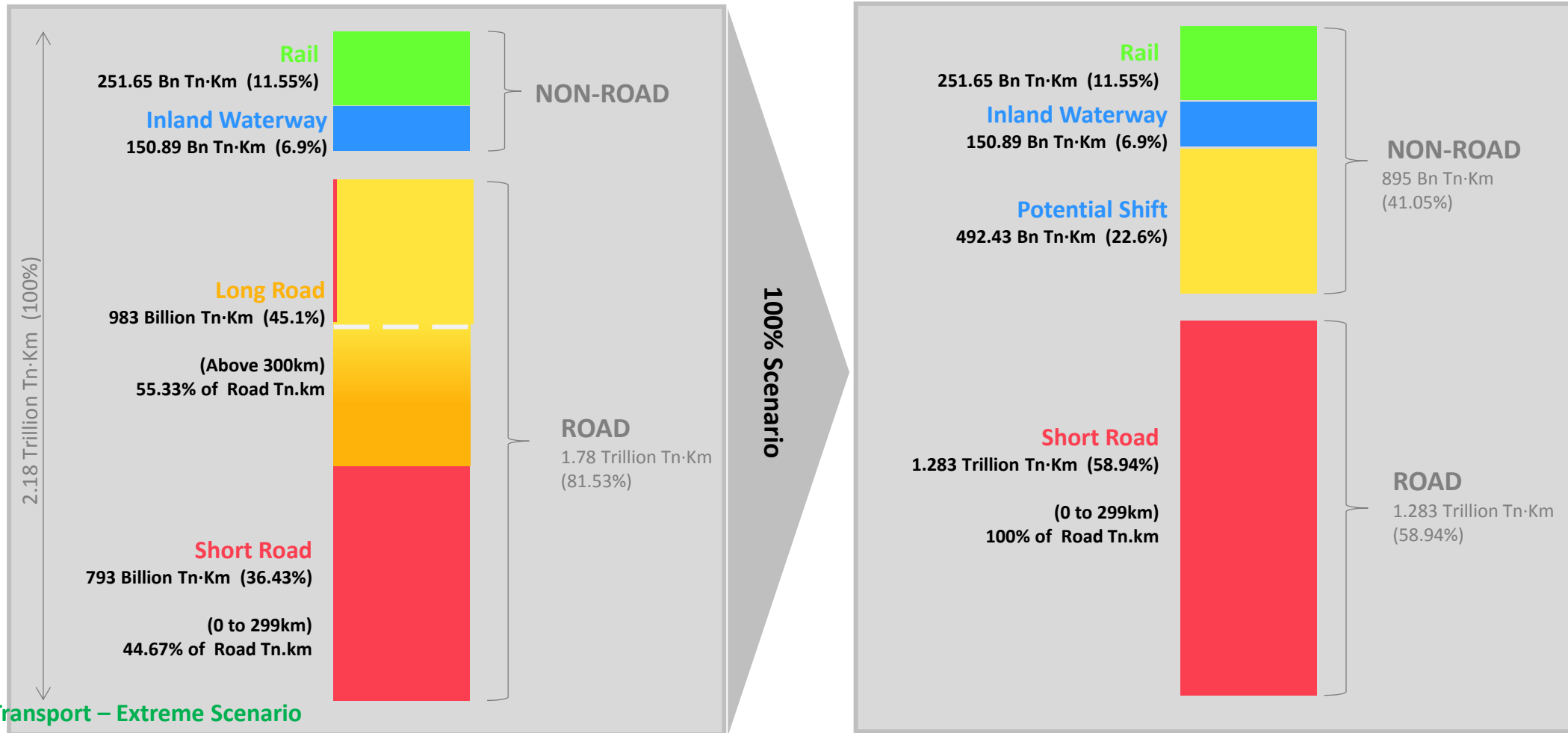
Eastern Europe and Central Asian Republics

Russia
Ukraine
Kazakhstan

Turkey and Caucasus

Turkey
Azerbaijan

Modal shift : 40% maximum



Inland Road Transport – Extreme Scenario
100% mode shift to non-road

SOURCE: Eurostat ([rail_go_typeall](#)), ([iww_go_atygo](#)) and ([road_go_ca_c](#)) – 2014 EU-28 Data.. For ([road_go_ta_dctg](#)) - Averaged Data from the year 2008 to 2014 and SNIC calculations
Assumption: Modal shift does not cause increase in the total Tn-km of a journey

P&G Europe (WE/CEE) Intermodal flows : 27%

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Truck Transportation

As one of the world's largest consumer products companies, we ship a significant amount of product. To help ensure we are driving efficiency, our 2020 goal is to reduce truck transportation kilometers by 20% per unit of production versus our 2010 baseline. Our global teams have made great progress and we have reduced over-the-road truck transportation by approximately 25% since 2010 by improving vehicle fill rate, optimizing distribution routes and driving increased use of multi-modal transportation.

As P&G completes work on significant supply chain transformations in North America, and innovative efficiency projects in other regions, we will look for additional opportunities to improve our transportation footprint.



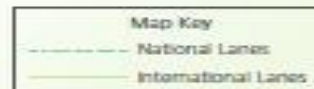
New Intermodal Network Approach

One example of improvement is P&G's innovative New Intermodal Network Approach (NINA) program in Europe. P&G launched a focused group of projects in 2008 with an ambitious goal of moving 30% of our Western Europe freight transportation from over-the-road trucks to intermodal rail and shipping lines by 2015. The team worked to find or often create new rail networks between our manufacturing plants and distribution centers across the region, reducing both emissions and congestion on local roads.

The regional program exceeded our initial target, reaching its 30% goal two years early in 2013. To continue building on our progress, we have expanded our intermodal rail networks across Europe. To drive efficiency, we also continue to add additional manufacturing and transportation partners to improve collaboration and amplify the sustainability impact to not only P&G, but also other companies in the area.

Some of our newest partnerships include:

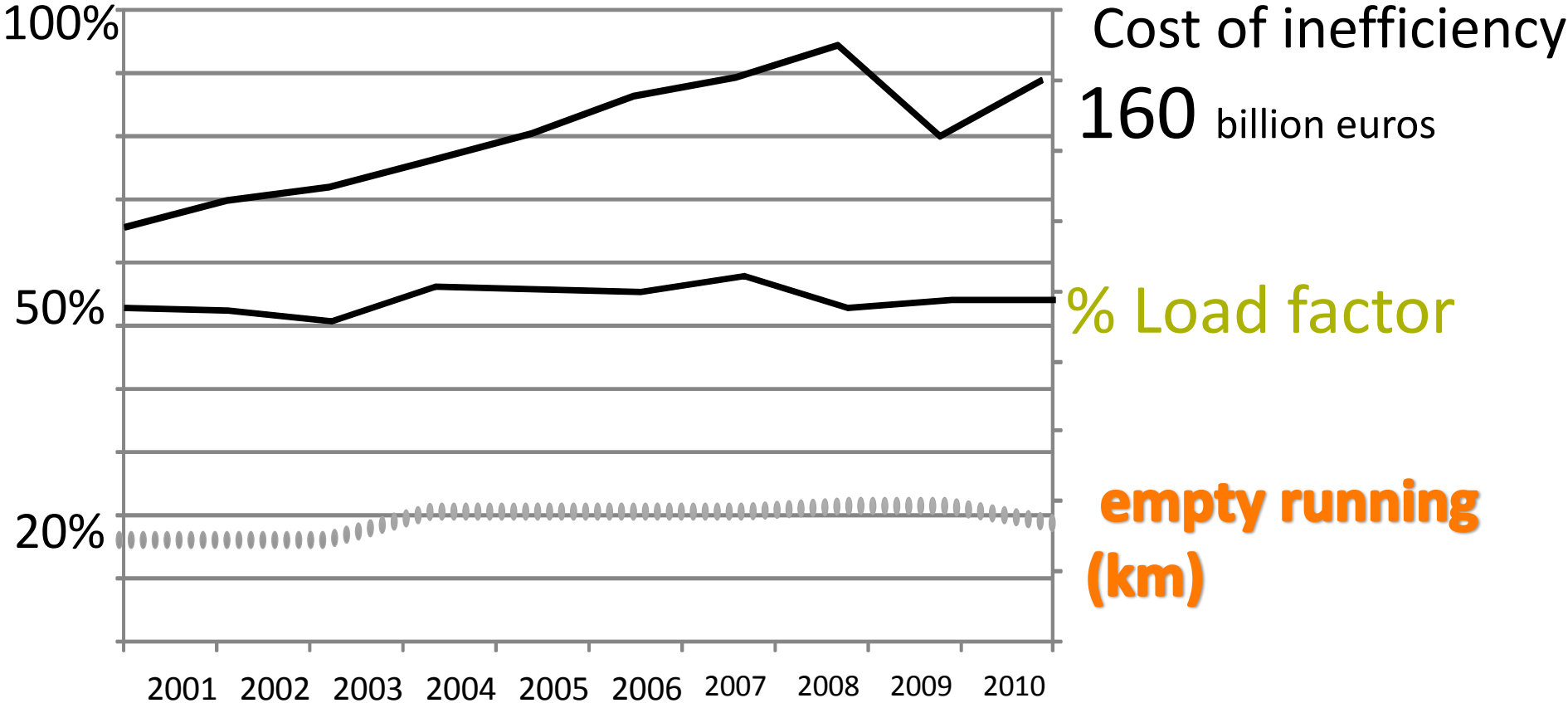
- An innovative overnight shuttle train between our main manufacturing and distribution hubs in France and the U.K. using the Eurotunnel and available capacity on the U.K. High Speed (HS1) line. This highly efficient approach is one of our most sustainable and fastest rail connections to date, combining freight and reducing emissions for P&G and other companies.
- A high-frequency connection for customer deliveries along the main Italian North-South trade axis. This collaborative approach with [ETN Europe](#) provides enough volume for up to five intermodal trains per day, making transit and delivery times competitive with traditional over-the-road options while providing lower emissions per case.



New intermodal shipping routes implemented as part of the NINA program.



Truck Asset utilization issue / 50% empty



Source: Eurostat Data compiled by F Cruyssen
www.co3-project.eu

How to better use truck capacity & the
different types of modality?

1.Modular trailer initiative

TRANSFORMERS



VOLVO

DAF
A **PACCAR** COMPANY

Truck Manufacturers

SCHMITZ
CARGOBULL
The Trailer Company.

ECK

Trailer Manufacturers

P&G

IRU International
Road Transport
Union

End Users



BOSCH

Suppliers

Fraunhofer

virtual vehicle

TNO innovation
for life

IFSTTAR

Research Institutes

FEHRL

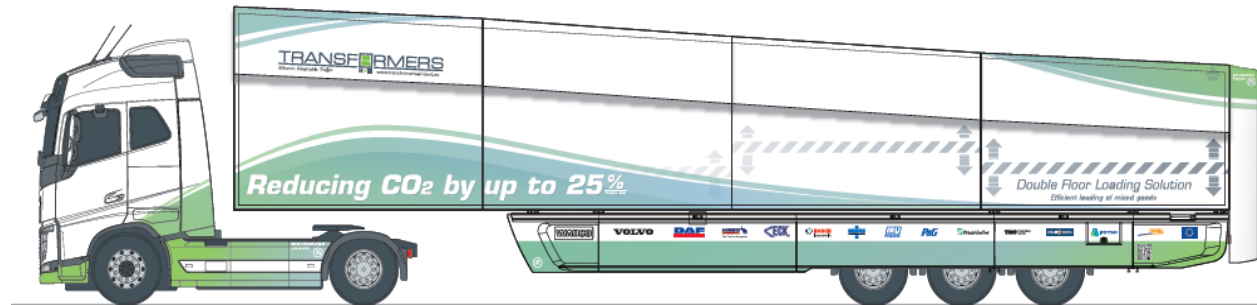
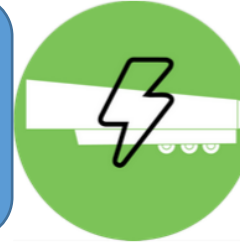
UNIRESEARCH

Service Supplier



TRANSFORMERS Innovation Areas

Trailer Mounted
Electric Driveline
“Hybrid on Demand”



Whole Vehicle
Combination
Aerodynamics

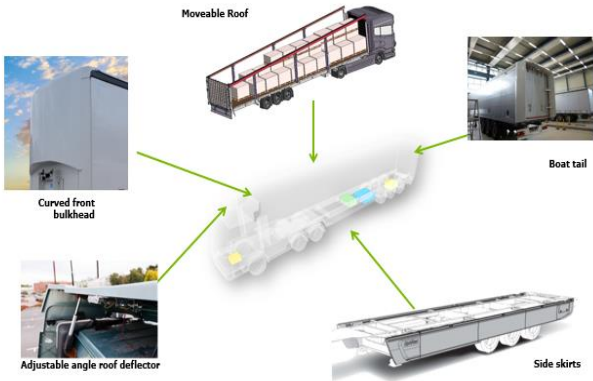


Load Capacity
Optimisation

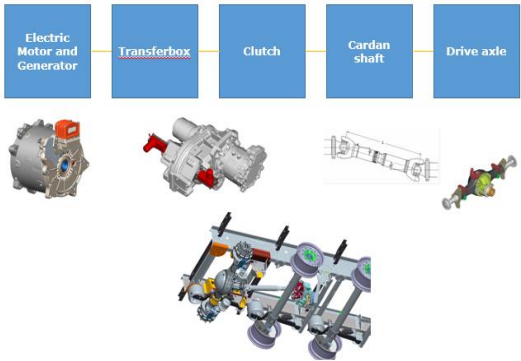
TRANSFORMERS Innovation Areas



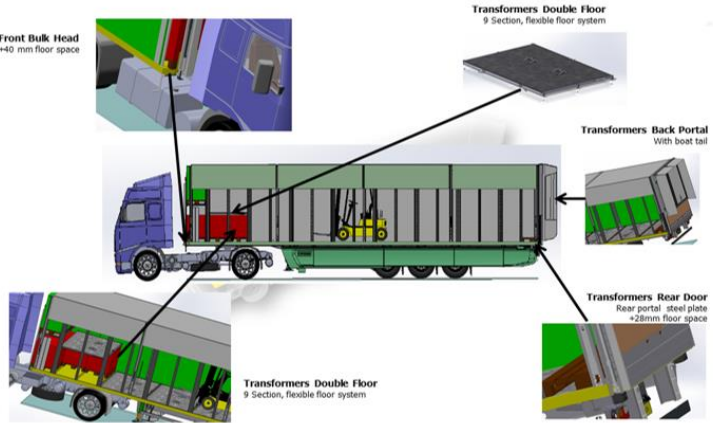
Aerodynamic Features



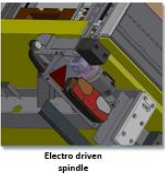
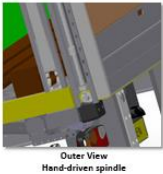
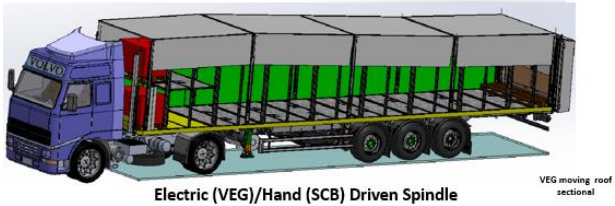
Hybrid Engine in Trailer



Load Optimized Trailer Concept



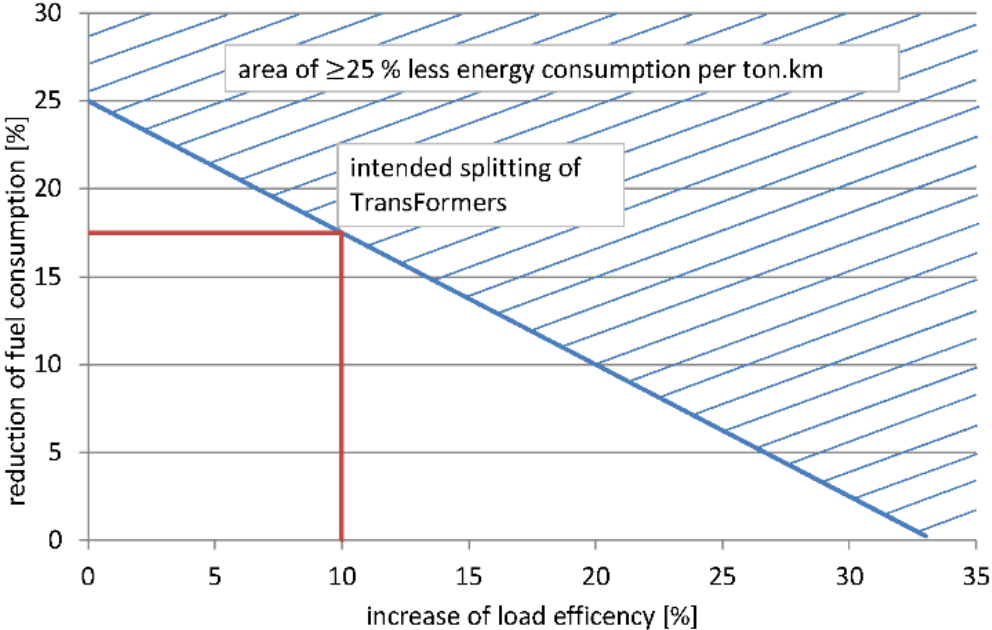
Movable Roof



How we plan to achieve this efficiency?

Concept / Component	Fuel consumption reduction potential*
Hybrid-on-demand concept	8 % - 12%**
Downsized truck diesel engine	2 %***
Mission-based configurable aerodynamic over all truck-trailer design (toolbox)	
- Liftable roof	
- Automatic adjustable front deflectors	2 %
- Introduction of (flexible) underbody deflectors	4.5 %
- Closing the gap between truck and (semi)trailer, e.g. by using a retractable drawbar in case of the truck-trailer combinations;	2.5 %
Total	18 %****

Vehicle Efficiency



$$i_e = 100 \left(1 - \frac{100 - i_f}{100 + i_l} \right)$$

$$25.5\% = 100 \left(1 - \frac{100 - 18}{100 + 10} \right)$$

Total load efficiency expected

Concept / Component	Load efficiency increase potential
Loading efficiency optimized trailer inside design (toolbox)	
- Change front bulk head and backportal of the semitrailer to facilitate the loading of 1 extra Euro pallet	3 %
- Trailer with a 500 mm extended inner floor in combination with a retractable drawbar to facilitate the loading of extra cargo (+5% to 2 extra Euro pallets (+10%))	5 - 10 %
- Introduce an flexible extra floor in (semi)trailers to allow a double stacking	Up to 40 %
Total	10 - 15%

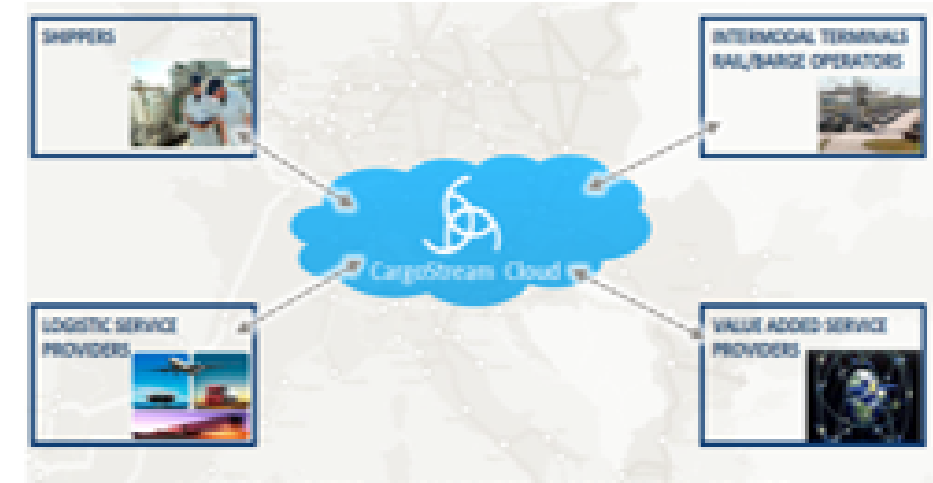
Load Efficiency

2. Digital collaborative platform



Secure, Standard & Neutral Data-Sharing Cloud Platform with ...
...Broad involvement across shippers, hauliers, terminals

Objective to improve volumes, connectivity, synchromodality, lead-times, frequencies & costs



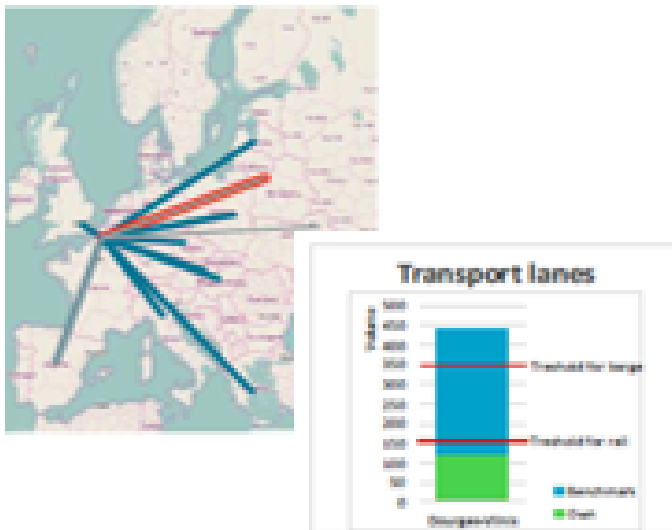
Benefits:

Shippers can **visualize opportunities** for flow combinations_& provide framework for connections

Logistic Providers can combine shippers volume for **new connections**, make **attractive proposals** and **share capacity** on existing lanes

Ability to use Trusted “**Value-Add Service Providers**” for further **Optimisation** (optional)

Commercialization opportunity via Co tender process (ie **Supernova**)





Vincent MOAL

Logistics Innovation / Purchases

Education: Engineering School Agrocampus Rennes – Supply chain

Career : P&G (10 years)

- Customization Manager (2006) - Paris
- Transport Manager(2007-2009) – Amiens
- Customer Service Manager (2009-2011) – Paris
- Braun/Oral B/Duracell Supply Chain Manager (2010-2011) – Paris
- Senior Logistics Account Executive (2011-2013) - Paris
- Senior Logistics Buyer (2013-2016) - Brussels
- Senior Innovation Logistics Buyer (2016) - Brussels