

WHITE PAPER

Community Of Interest End to End Goods
European Multimodal Green Corridors

Green Corridors for the *Transport* of goods *in Europe*



Powered by:



SOLVAY

MOVIN'ON

AN INTRODUCTION TO MOVIN'ON

Movin'On is an international co-innovation ecosystem, led by large public and private companies, and committed to sustainable mobility. Our goal is to foster strategic anticipation, drive collective change, and deliver integrated solutions. It is a Think and Do tank with Communities of Interest (COIs) that work for the common good.

In 2024, Movin'On conducted a COI on the subject of modal shift and intermodal transport, and European decarbonised corridors.

PROGRAMME DIRECTOR

ULRIKE RISTAU-HUTTER, MOVIN'ON

AUTEURS

BENOIT BAISLE DAILLIEZ, ORION CONSTELLATION
 PHILIPPE DE CARNÉ, GEODIS
 MAXIME SELLIER, SOLVAY
 ULRIKE RISTAU-HUTTER, MOVIN'ON

MOVIN'ON CONTRIBUTING MEMBERS AND PARTNERS



Table of Contents

Executive summary	03
What objectives are being addressed, and within what context?	06
Why are decarbonised corridors essential in Europe?	10
What are the major European challenges?	11
What would be a more fitting definition of a corridor in the European context?	12
Main characteristics of a Green Corridor.	13
What guiding star will lead the way to 2035?	14
How have we learned from on-the-ground experience?	16
What lessons can be learned from the opportunity of cabotage ("short sea shipping")?	17
What to learn from the challenge of international multi-stakeholder flows?	18
Insights from deferred large-scale flows among key groups.	19
What prerequisites are needed for an effective shift in the field?	20
1. How can the quality of service be improved in the face of infrastructure challenges?	22
2. Anticipated deadlines and acceptable impact on stocks, but at what cost?	24
3. How can we make the modal shift more competitive than road?	28
4. How can we make CO ₂ savings meaningful even without standardisation or traceability?	30
5. How to coordinate, share and operate in a fragmented logistics ecosystem?	32
Modal shift roadmap:	
What needs and actions are associated with it for faster progress?	34
Modernisation and infrastructure development	35
Harmonisation of regulations	36
Adapting to the need for flexibility	36
Reducing alternative mode costs	37
Logistics efficiency: digitalisation, automation and pooling resources	37
Awareness and economic incentives	38
Data exchange at a European level	39
Transition milestones:	
What steps could be taken on the path to 2035?	40
Conclusion	46

ACHIEVING EUROPEAN DECARBONISED TRANSPORT CORRIDORS IS VITAL FOR 2035.

WHY OPT FOR DECARBONISED CORRIDORS?

It is a response to the climate emergency and the need to reduce CO₂ transport emissions, while maintaining Europe's economic competitiveness and efficient logistics.

Challenges and issues:

- Ecological transition in response to the sector's carbon footprint.
- Harmonisation of the regulations among countries.
- Upgrading infrastructure and adopting innovative technologies.
- Coordination between many stakeholders and nations.

WHAT IS A DECARBONISED CORRIDOR?

An efficient and sustainable intermodal route, integrating rail, maritime and other «low-carbon» modes, with modernised infrastructure, optimized management and enhanced international cooperation.

Key features:

- Multimodality (rail, sea, road, rivers).
- Minimal environmental footprint (energy with a reduced carbon footprint).
- Digitalisation and automation.
- Public-private collaboration.

OBJECTIVE FOR 2035:

A network of fully operational intermodal corridors, enabling a modal transition on a massive scale and significant CO₂ reductions.

Concrete initiatives from the field:

- Harness short-sea shipping to alleviate road traffic.
- Enhancing multi-stakeholder coordination in international flows.
- Facilitating the redirection of large companies' regular logistics to alternative solutions.

Prerequisites for deployment:

- Service quality: reliability and traceability of logistics flows.
- Competitive prices: support and cost-cutting measures for alternative transport options.
- Environmental gains: measurable emission reduction.
- Flexibility and cooperation: harnessing the potential of resource sharing and joint efforts.

Our roadmap:

- Modernising infrastructure (in particular ports, rail).
- Harmonizing European regulations.
- Investing in digitalization and automation.
- Raising awareness among companies and offer financial incentives.
- Sharing reliable environmental data.

KEY STEPS UNTIL 2035:

By 2025-2030:

Strengthen infrastructure and technologies.

2030-2035:

Scale up intermodal corridors.

IN BRIEF

European intermodal corridors are essential for sustainable and competitive mobility. Their success depends on investment in infrastructure, technological innovation, and international collaboration between the public and private sectors.

1.

**WHAT OBJECTIVES
ARE BEING
ADDRESSED,
AND WITHIN WHAT
CONTEXT?**

**Europe faces a major challenge:
reducing greenhouse gas emissions
in the transport sector by 55% by 2030,
and 90% by 2050 compared to 2019*.**

At present, fossil fuels dominate European transport, making up 94% of its energy mix**.

Of course, trucks will evolve and use the proportion of biofuels allocated to them, turn largely to electric power, or even convert to hydrogen if available one day.

But at the same time, intermodality, which combines all modes of transport (road, rail, inland waterways and «short sea»), will contribute very significantly to the challenge of decarbonising land transport in Europe, thanks to a modal shift towards transport options with the lowest emissions.

In 2024, a Movin'On COI was formed on «End-to-End Goods – European Multimodal Green Corridors», with the support and active participation of GEODIS, SOLVAY and MICHELIN.

The goal of the COI is to accelerate the race to lower transport emissions by showcasing the practicality of intermodal corridors and facilitating modal shift.

The COI describes, tests and works on the effectiveness of multimodal corridors in Europe through three modal shift initiatives on the ground.

- The first initiative to explore the benefits of cabotage, promotes local and responsible transport, by shifting a major group's planned road traffic to maritime («short-sea» shipping).
- The second initiative is to learn from the challenges of small- and medium-sized, multi-stakeholder one-off flows involving electric trucks, boats, trains and barges.
- The third initiative is to learn about the success of the modal shift factors involved in massive and recurring flows between large companies, with, in this specific case, the shift of an established flow of 600 trucks per year between Italy and Spain.

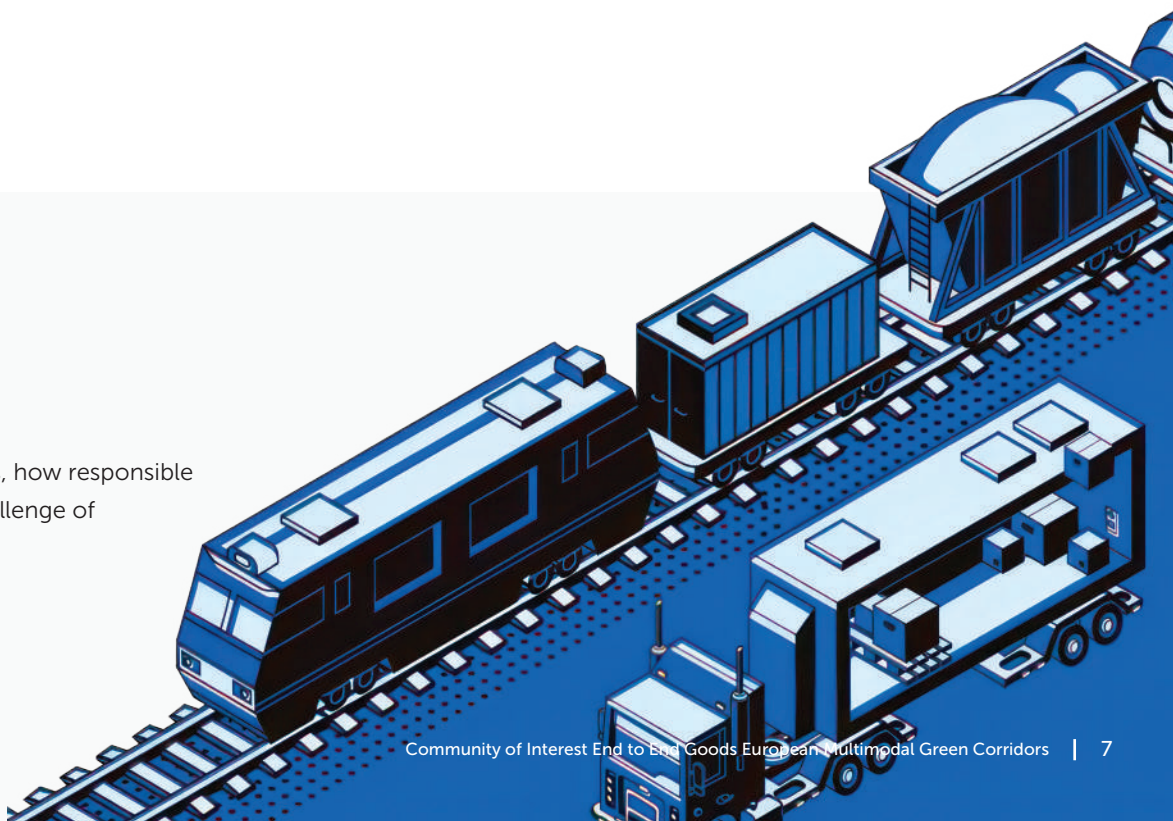
* «Fit for 55» reference framework – European Union

** Farm Europe : farm-europe.eu, International Transport Forum: itf-oecd.org



SCAN THIS QR CODE

To find out, in 2 minutes, how responsible goods will meet the challenge of intermodality by 2035.



Based on representative modal shift opportunities. On the ground, the COI has identified emblematic territorial bottlenecks and seeks to transform them for European-level initiatives.

In other words, here are the questions that drive us:

- What are the actual obstacles on the ground?
- What needs to be in place at the European level for it to succeed?

Our strength is to respect the facts on the ground so as to learn and understand!

Our philosophy is to be in a state of exploration and continual learning.

Our relevance for these 3 initiatives stems from a modal shift:

- We start from points proposed by stakeholders in the field.
- We experiment with what works, what doesn't work, what needs to be done differently ... In short: we walk the path together.

We take pride in our collective approach, turning concrete insights into actions scalable at the European level for the common good.

We will tell you all about this below...



KEY TERMS

- **End-to-End** transport is used to describe a process that covers all stages from «door to door».
- **Intermodal** (or multimodal) transport is when several modes of transport are used in a row for an end-to-end journey.
- We speak of **modal shift** when we change from one mode of transport to another, from truck to train or boat, for example, in order to reduce emissions.

Community of Interest

BURNING QUESTION

How can we accelerate the decarbonisation of European freight transport through modal shift and intermodal corridors?

What impacts are we aiming for?

- Demonstrating feasibility and identify key levers to achieve modal shift ambitions, and thus decarbonise freight transport.
- Accelerating and improving the efficiency of options and measure their impact (in time, service level, cost, CO₂).
- Making transport more resilient (increasing options, anticipating social changes, fostering digitalisation and automation).

What do we create?

- Designing and implementing European intermodal corridors to demonstrate their feasibility.
- Three learning paths differentiated by distance, type of goods, recurrence, key players.
- A white paper for sharing knowledge and identifying key success factors.
- Attractive business models.
- Key infrastructure set-up and adaptation, data sharing, contracts, standards & norms, impact calculation models, fill-rate optimization.
- Key actor & stakeholder map.

Who's on board?



What is our roadmap?

- Three proofs of concept for concrete collective learning:
- **May 2024** Study the transfer to maritime shipping (short distance, large companies, chemical products).
- **July 2024** Establish Corridor 1 (long-distance, non-recurring flows, manual implementation, SME).
- **September 2024** Establish Corridor 2 (long-distance, recurrent flows, large companies, bulk).
- **Q4 2024** Identification of key success factors and showcasing of COI results at the Movin'On Summit in Brussels, November 2024.
- **Q1 2025** Publication of a white paper in French and English.

2.

WHY DECARBONISED CORRIDORS IN EUROPE ARE ESSENTIAL.

WHAT ARE THE MAJOR EUROPEAN CHALLENGES

Trans-European networks include railways, inland waterways, short sea shipping routes and roads linking urban centres, sea and inland ports, airports and terminals and stations.

These trans-European networks are based on the idea that European integration can only be achieved through efficient routes and commercial links between the member states.

Behind this apparent obviousness lies an enormous complexity that requires cooperation between all stakeholders in the value chain and coordination between logistics operators across Europe.

For example, railway complexity is linked to the history of its networks created by each national company.

Key disparities between these networks include:

- Electrification: different voltages, frequencies...
- Maximum train length: 450 m in Spain, 650 m in France, 750 m in Germany
- Signalling
- Crew training and language
- Tunnel clearance
- Tack gauge (e.g., in Spain).

The EU's Trans-European Transport Networks policy is a key instrument for the advancement of a coherent, efficient, multimodal and high-quality transport infrastructure.

The aim is to succeed in offering an operational and efficient end-to-end service on the identified corridors, by gradually harmonising standards.

The trans-European challenge is threefold:

- Connecting the different infrastructures.
- Making it easy for different modes of transport to communicate with each other.
- Managing costs.

The strategic challenges are also threefold:

- Meeting the EU's climate objectives.
- Supporting economic competitiveness through more efficient logistics solutions.
- Reducing energy dependence on fossil fuels.

IN BRIEF

Crucial to the European Green Deal «Fit for 55», these corridors aim to drive transformation across all sectors, including transport.

WHAT WOULD BE A MORE FITTING DEFINITION OF A CORRIDOR IN THE EUROPEAN CONTEXT?

Low-carbon corridors encourage the use of less CO₂-emitting modes of transport, both at sea and on land, such as maritime links, inland waterways and rail.

It should be noted that there is no single academic definition of what a «green corridor» is and on those grounds, we acknowledge that each stakeholder in the value chain defines it differently. By extension, these «green corridors» often integrate first-and last-mile solutions for **end-to-end carbon-free transport**.

A European freight «green corridor» is therefore an initiative aimed at creating sustainable transport routes across Europe, integrating decarbonised transport solutions to minimise the environmental impact of goods flows.

The major benefits of these modal shifts and corridors include reduced greenhouse gas emissions, easier road traffic management, reduced dependence on fossil fuels and improved logistics efficiency for all.

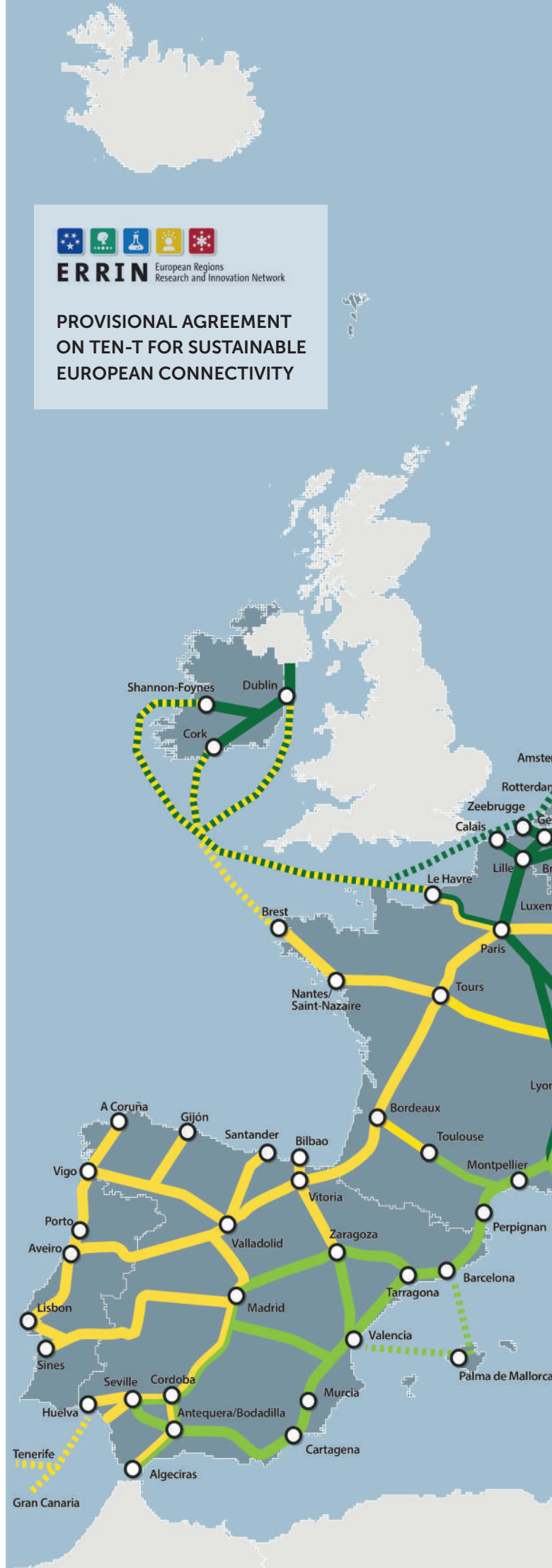
These corridors are part of European policies for energy transition and decarbonisation of transport, in particular for the **TEN-T network** (also referred to as the **Trans-European Transport Network** or **TEN-T**).

TEN-T is the official European name. TEN-T corridors primary aim to increase transport efficiency and their capacity, with the express desire to expand rail's modal share.



ERRIN European Regions Research and Innovation Network

**PROVISIONAL AGREEMENT
ON TEN-T FOR SUSTAINABLE
EUROPEAN CONNECTIVITY**





MAIN CHARACTERISTICS OF A GREEN CORRIDOR

The trans-European challenge is threefold:

- Making it easy for different modes of transport to communicate. Priority is given to the least polluting modes of transport such as rail, sea or river transport.
- Integration of electric, alternative fuel or hydrogen vehicles for road transport.
- Aligning CO₂ quotas with offsets and mitigating remaining emissions through green initiatives.

Renewable energy infrastructure:

- Establishment of infrastructure for the supply of alternative energies (charging stations, hydrogen stations, etc.).

Digitalisation and innovation:

- Use of digital technologies to improve the efficiency of logistics flows (intelligent management, real-time tracking of goods).
- Use of artificial intelligence and data to reduce empty runs and optimize the consolidation of transported goods.

Transnational cooperation:

- The Green Corridors cross several European countries, which implies coordination between member states and non-member states, both at the public and private levels.



IN 2035, RESPONSIBLE GOODS WILL MEET THE INTERMODALITY CHALLENGE.

WHAT GUIDING STAR WILL LEAD THE WAY TO 2035?

Faced with the need to decarbonise transport, the logistics and freight transport sector has been able to go beyond its particular, individual interests and is now focusing on the «elementary particle» that brings them together: the goods transported. It is this good that centralizes the responsibility of all the stakeholders who are in charge of it. We now talk about «responsible merchandise».

EN ROUTE FOR 2035!

This transformation is the result of converging movements:

Firstly, a significant increase in the price of CO₂ has made it possible to shift attention to low-emission energies on a mass scale.

Secondly, the emergence of new attractive business models allows companies in the transport, energy and infrastructure sectors to remain competitive while **collectively investing in shared transport and energy infrastructure and technologies** to optimize goods transfer.

This convergence meets the expectations of all the players in the transport chain, **including the end consumers**, who now possess the tools to assess the carbon impact of freight transport and to make optimal choices regarding modes of transport.

Despite continued growth in global trade, the world of logistics and freight transport is managing to align with the decarbonisation trajectory set for 2050.

**PHILIPPE
DE CARNÉ**

GEODIS

**ULRIKE
RISTAU-HUTTER**

MOVIN'ON

**DEEPAK
MEHTA**

MCA

MOVIN'ON 2035 TODAY

INTERMODALITY OF GOODS



SCAN AND WATCH MOVIN'ON 2035 TODAY,
THE SHOW INSPIRED BY THE MOVIN'ON SUMMIT

Hosted by Ulrike Ristau-Hutter, meet Philippe de Carné from
GEODIS and Deepak Mehta from Movin'On. They share with
you their vision of 2035 when responsible merchandise will
have won the challenge of intermodality.

WATCH IT ON **MOVIN'ON** Play

3.

HOW HAVE WE LEARNT FROM ON-THE-GROUND EXPERIENCES?

HOW HAVE WE LEARNT FROM ON-THE-GROUND EXPERIENCE?

The starting point of our COI learning path:

- Our Ambition to transfer road freight to a maritime flow between the Michelin factories of Bassens and Cholet (approximately 400 km).

Our guiding question:

- Can we show the desirability, feasibility and viability of business opportunities allowing a modal shift from road freight to carbon-free coastal maritime and/or river transport.

What we have done:

- Connecting stakeholders to explore and test.
- This postponement hinges on service quality, deadline and stock impacts, cost control, CO₂ reductions, and streamlined stakeholder interfaces (see the next chapter for more details).

Members who contributed:

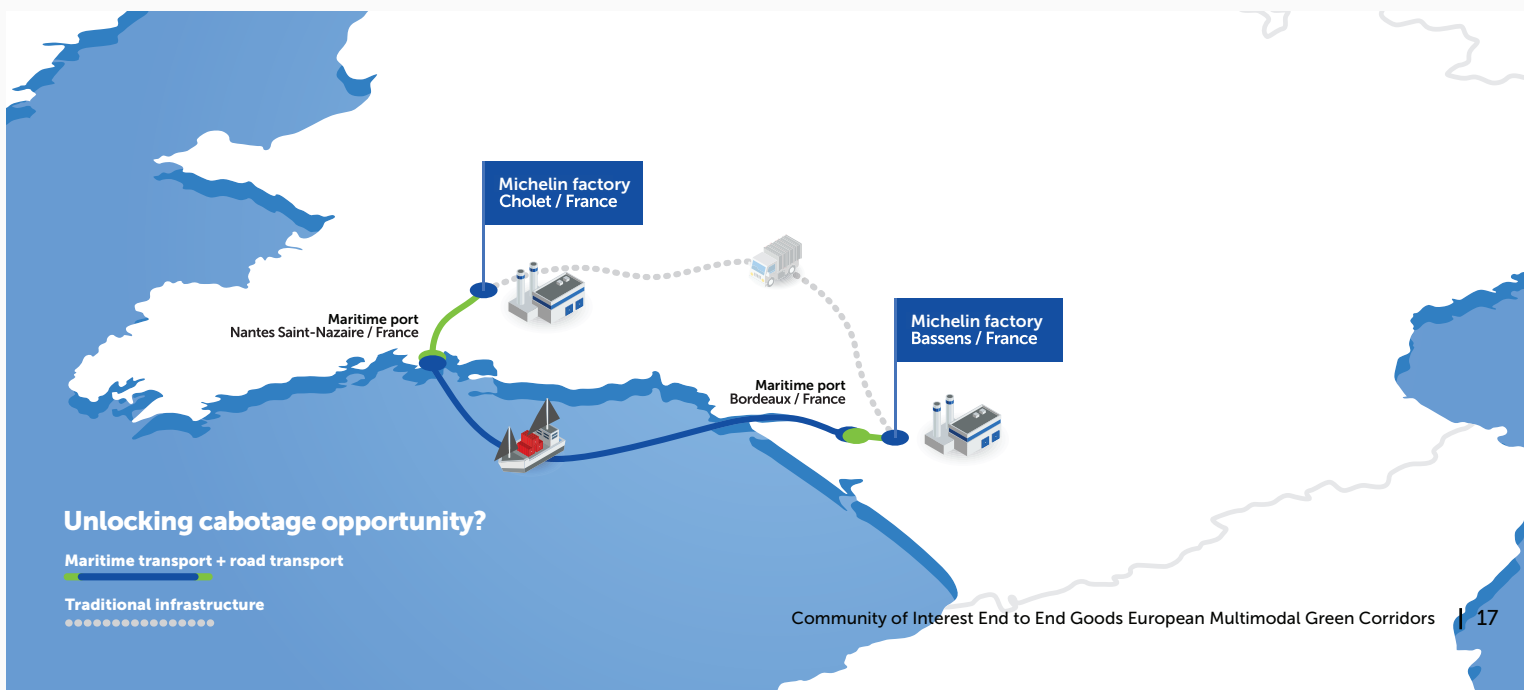


Our GPS (Go Pivot Stop) point of arrival:

While waiting for the cost of CO₂ to further increase, reaching an economic tipping point (>300 €/T CO₂ in our case), We identified opportunities over longer distances (>1.000 km) to compensate for deferred costs with CO₂ gains per ton-kilometre. For the time being, the most painful disruptions in the logistics flow occur at border crossings, often involving historical modes of transport, such as the English Channel, via the sea, the Alps, or in areas of road congestion.

KEY TAKEAWAY:

Short sea shipping (medium-distance maritime transport, generally between European ports or geographically nearby) is a strategic option for more sustainable transport despite obstacles still encountered today (and detailed in the rest of the document) but which can be overcome by 2035 (via the strengthening of land-sea interactions and the growing role of the seaports of the future).



WHAT TO LEARN FROM THE CHALLENGE OF INTERNATIONAL MULTI-STAKEHOLDER FLOWS?

The starting point for our COI learning path:

- Our ambition to create of a 100% carbon-free multimodal flow for the transfer of organic products (wines, oils, seeds from the Mama-Grana company) from Palermo (Sicily) to Antwerp (Belgium), via St-Tropez, Marseille and Paris for Michelin-starred restaurants.

Our guiding question:

- What are the criteria for successfully upscaling a multi-stakeholder flow?

What we have done:

- Connecting stakeholders to explore and test.
- Co-definition of the necessary conditions (see the next chapter).

Members who contributed to the learnings:



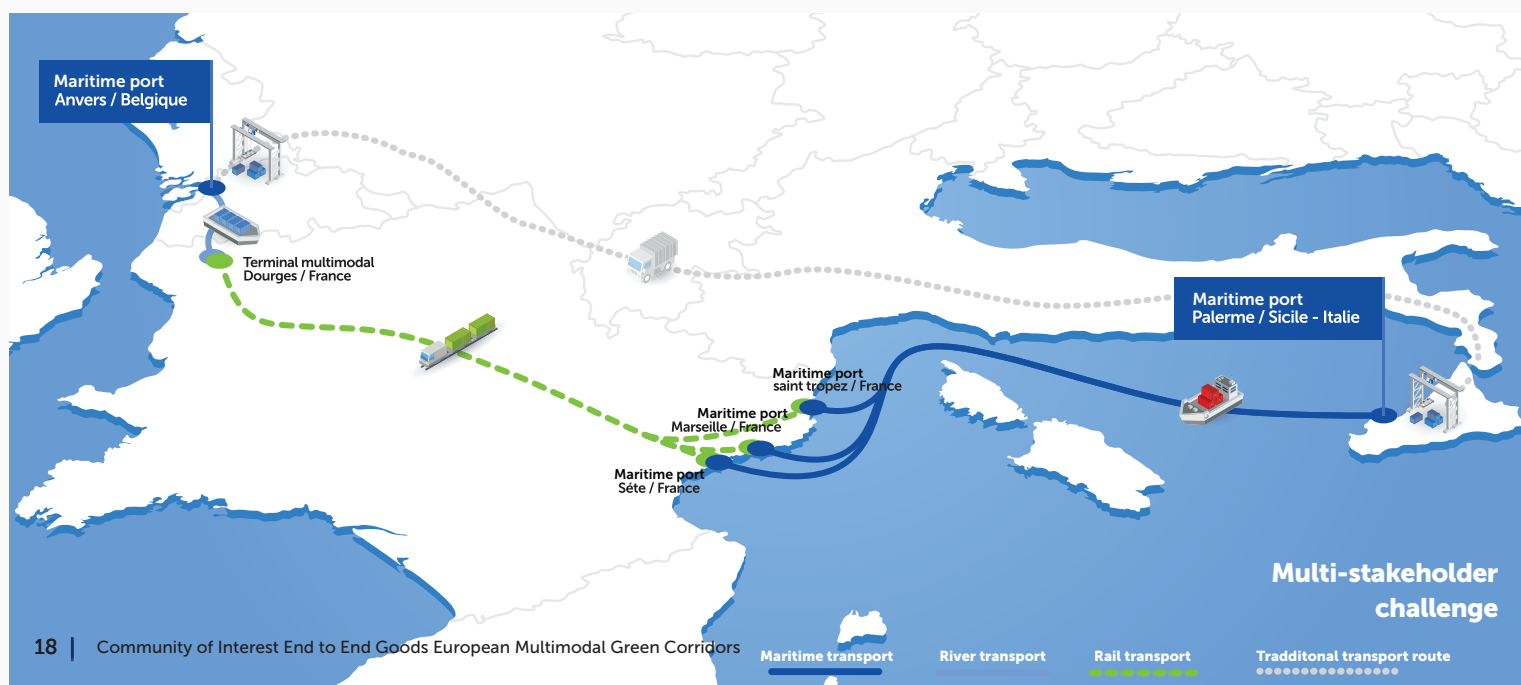
Our GPS (Go Pivot Stop) point of arrival:

Mama-Grana initially proposed retrofitting carbon-free freight boats to expedite rotations, but this approach was set aside in favour of new strategies and more structured programmes.

We then confirmed the importance of players such as MedLinkPort, alliances such as ALICE, or foundations such as AI-Cargo that contribute to the coordination of the value chain, particularly in terms of data, their connection with shippers and innovative land-sea-port solutions. We also confirmed the opportunity for shippers to ensure commitments and volume pledges for modal shifts spanning more than five years, supporting the funding and advancement of innovative solutions ready to scale. All this without forgetting to support the pioneers who inspire change, such as the Hisseo scoop.

KEY TAKEAWAY:

Multi-stakeholder logistics challenges involve collaboration between different carriers, shippers, ports, public authorities, customs, etc., which generates complexity, but nothing is insurmountable thanks to available technology. In parallel with the political and regulatory impetus at a European level, the most important thing is to raise awareness of the possibilities of modal shift to make it visible, adopt and maximise adoption.



INSIGHTS FROM DEFERRED LARGE-SCALE FLOWS AMONG KEY GROUPS

Starting point of our COI learning path:

- The ambition is to shift a bulk flow from Sicily (600 trucks per year) between the SOLVAY factories in Livorno (Italy) and Michelin in Valladolid (Spain). A total of 1,600 km.

Our guiding question:

- How can the transfer of large flows be evaluated from various perspectives, such as operational feasibility, decision criteria, and other impacts? (See the next chapter.)

What we have done:

- Connecting stakeholders to explore and test ideas.
- Co-define actionable and necessary conditions.
- Testing these conditions.

Members who have contributed:



Our GPS (Go Pivot Stop) point of arrival:

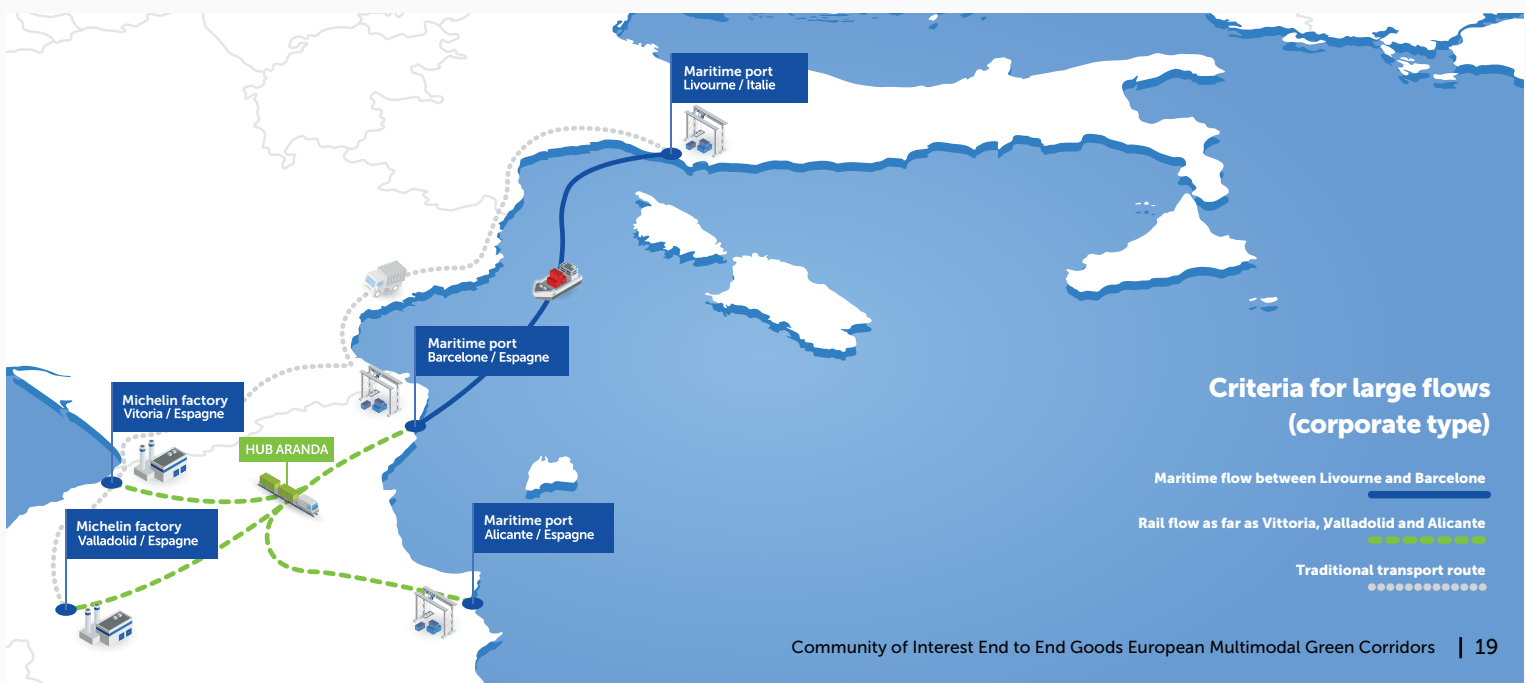
The modal shift of this flow is appealing to SOLVAY, which is eager to ensure attractive pricing and sustainable solutions within the tender processes. The solution chosen is a flow connecting lorry + train + lorry that goes from Livorno > Turin > Bayonne > Valladolid.

The train gauge difference in Spain results in a load transfer at the border. This solution offers a total CO₂ saving of more than 50%. The potential is -80% by sea but this option will only be put in place in a second phase because there are still too many barriers to be overcome (accessibility of ports). This gain has a significant impact on the CSR KPIs (>10% gain) between these two partners.

KEY TAKEAWAYS:

The shift towards a decarbonisation of logistics flows among major stakeholders is essential in today's ecological transition, but it faces several structural, financial, organisational, technological and contractual obstacles. Ecosystem-based actions can overcome these obstacles, as our COI work has shown. A modal shift cannot be achieved alone: it is a process of cooperation and co-innovation between customers, suppliers and partners.

These exchanges show a potential additional benefit with better working conditions for truck drivers (a job currently facing challenges in recruiting new drivers.) Over the long term, these options contribute to a better robustness of the supply chain.

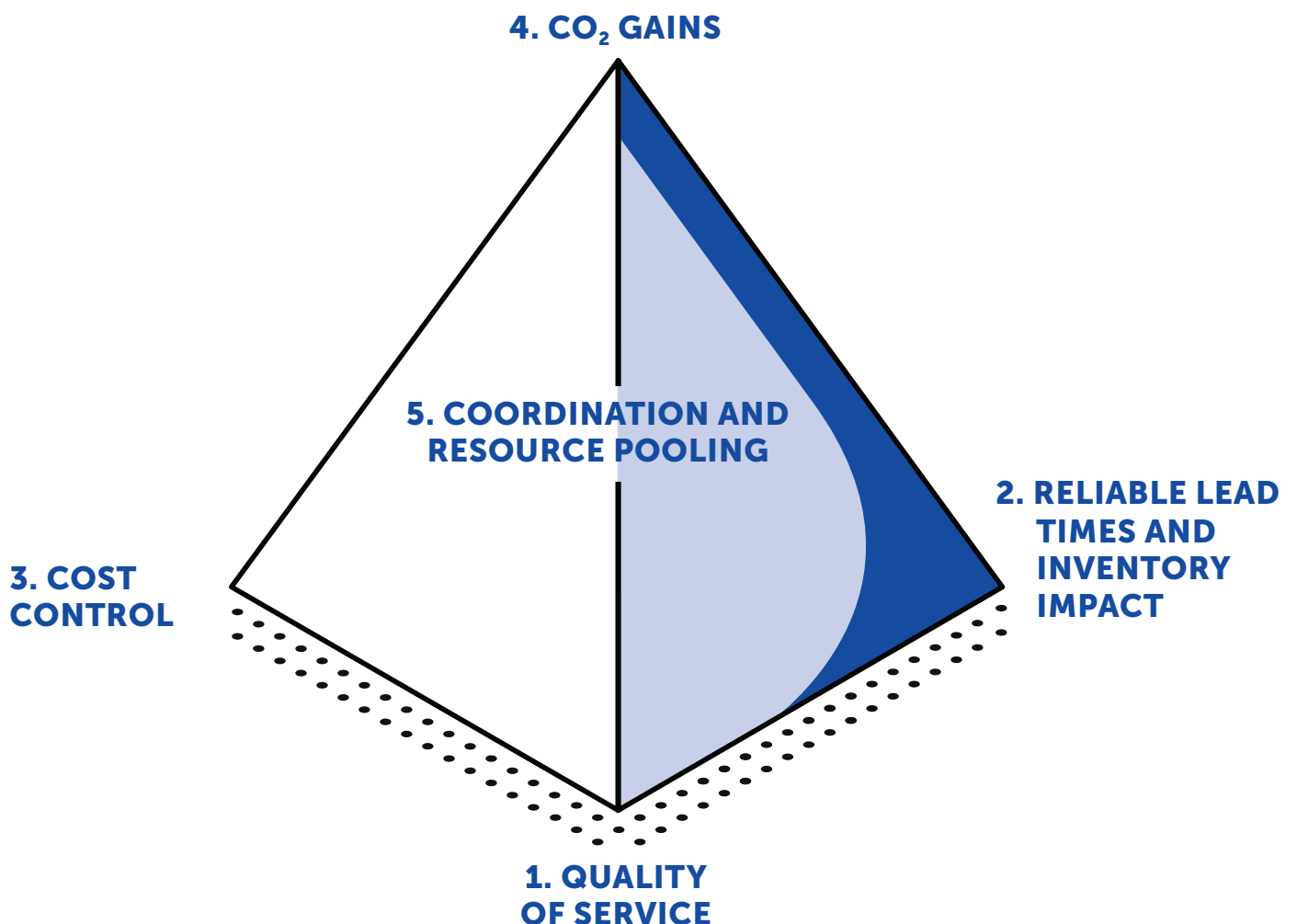


4.

WHAT PREREQUISITES ARE NEEDED FOR AN EFFECTIVE SHIFT IN THE FIELD?

**A DEEP DIVE INTO
OUR EXPERIENCE**

OUR EXPERIENCE ON THE GROUND CONFIRMED 5 ESSENTIAL PREREQUISITES



HOW CAN THE QUALITY OF SERVICE BE IMPROVED IN THE FACE OF INFRASTRUCTURE CHALLENGES?

Multimodal hubs are currently insufficient in number, and medium-or small-sized port or rail infrastructures are not always suited to combined transport.

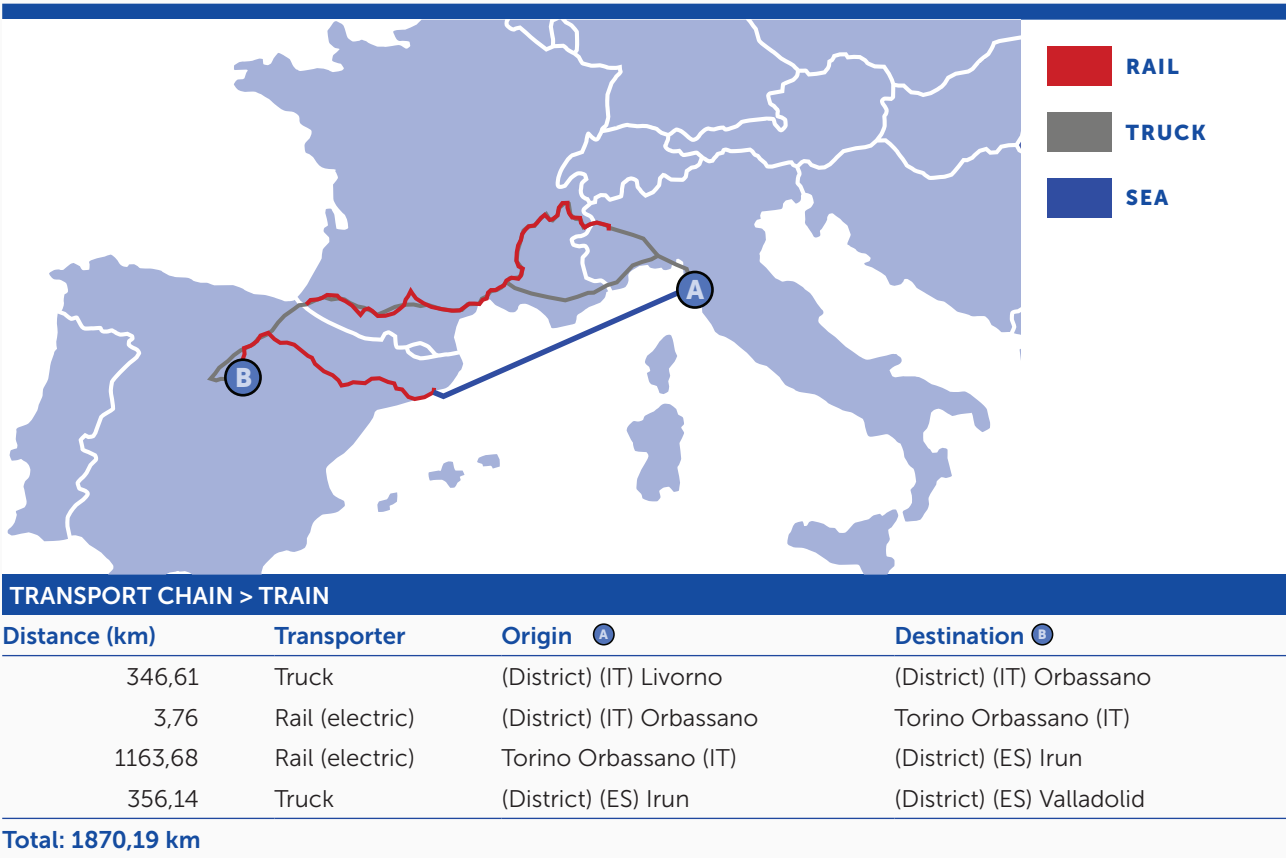
Typical examples:

- **Unequipped seaports:** Many medium- and small-sized ports do not have the necessary infrastructure to effectively manage large volumes of cabotage, nor the specific packaging associated with the sector (e.g., the pallet format used by neo-shipowners in carbon-free shipping).
- **Differences in railway gauges:** Railway standards vary between European countries. In terms of loading profile, some countries have tunnels and infrastructures limiting the height or width of trains (e.g., in France, GB gauge vs. GC gauge for modern lines). In terms of rail gauge, the standard (1.43 m) coexists with wider gauges, as in Spain or Finland, which complicates exchanges.
- **Specific wagons needed for piggyback transport:** Once on the train, some trailers or semi-trailers (not designed for multimodality) do not pass through tunnels or under overhead lines. High cube containers (2.9 m) cause problems on older lines. The new T3000 or Modalohr wagons are practical but not available everywhere (because they are expensive).

A DEEP DIVE INTO OUR EXPERIENCE

For example, we have found that:

- **Between Bassens and Cholet**, on sail-assisted freight vessels, packaging consists of pallets or open bins such as «Goodpack MB5» (1.4 m x 1.5 m x 1.3 tons), but the freight ports on our route operate almost exclusively in bulk such as using 20- or 40-foot containers. As a result, customized handling would need to be implemented, currently at a high cost, which has ultimately proven unfavourable.
- **Between Livourne and Valladolid**, our modal shift scenario for rail transport halts at Irun due to a change in rail gauge between France and Spain. From there, we switch to trucks for the remaining 356 km to Valladolid to avoid further breaks during the journey. Similarly, in Italy, the first accessible multimodal freight rail hub to cross the Alps is located 346 km from the SOLVAY factory. We succeeded in shifting 1,167 km to rail out of an original 1,870 km by truck, achieving a 62% modal shift for the initial route — an impressive step forward despite room for improvement.



ANTICIPATED DEADLINES AND ACCEPTABLE IMPACT ON STOCKS, BUT AT WHAT COST?

End-to-end transfers currently lack multimodal connectivity, flexibility and resilience, resulting in timeline uncertainties. This, in turn, affects stock levels needed to mitigate anticipated risks.

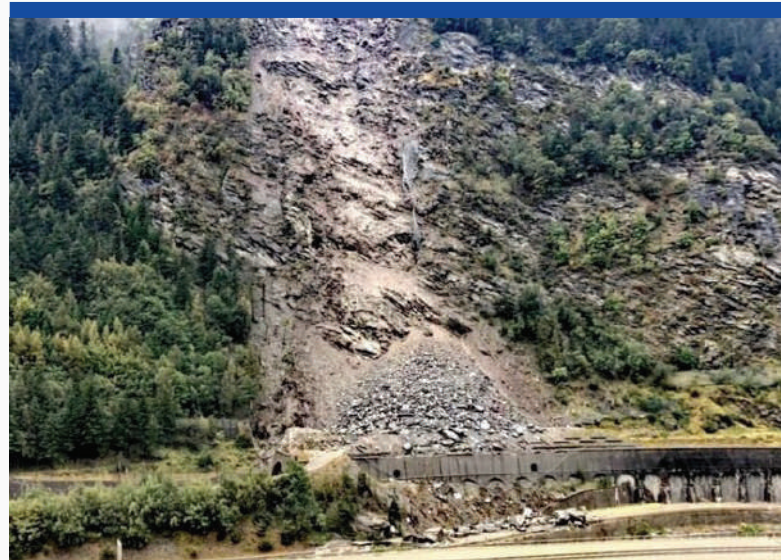
Typical examples:

- **Load breaks** (the transfer of goods between different modes of transport) increase costs and slow down the logistics chain. Connections between ports and rail or road networks are rarely optimized in a multimodal logistics.
- A modal shift usually leads to **an increase in inventory levels and associated storage capacity investments**. In addition, intermodal rail transport is often slower, which increases inventories in transit time. Also, the schedules and frequency of maritime or rail services are not always adapted to the needs of shippers (e.g., a lack of flexibility, possibility of working at night) which increases the need to hold additional inventory (buffer stocks).
- **For rail transport, commitments are rigid in terms of capacity**. A shipper must effectively commit to a certain amount of rail capacity and that capacity is paid for whether it is used or not. Transport schedules are not always respected, reliability sometime is low.
- **The risk of delays due to climate hazards** or port congestion is also an obstacle. We are seeing freight bottlenecks in the Alps, on some rivers and in some ports.
- Despite its complexity, **modal shift is an essential building block of resilience** in the face of driver shortages, the risks of road blockages linked to climate impacts and the fluctuation of energy prices (alternative to diesel and CO₂ taxes). The need for redundancy and flexibility is strong in Europe: the management of crisis scenarios shared between all the actors in the multimodal chain («Plan B»).

A DEEP DIVE INTO OUR EXPERIENCE

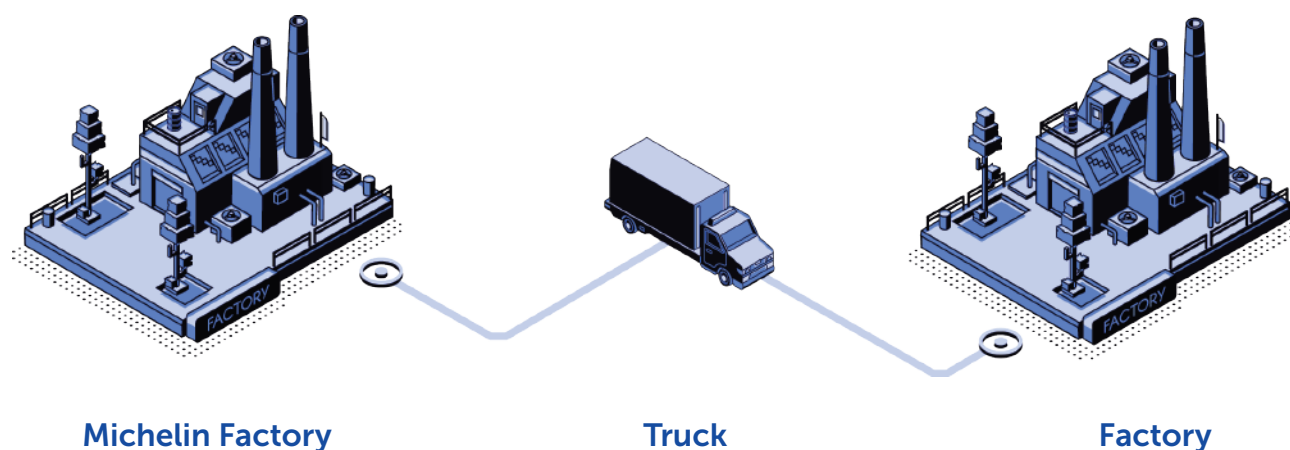
We have found that:

- **Our Livorno–Valladolid scenario** cannot pass through the Mont Cenis tunnel, nor through Menton. The Maurienne Valley, between Italy and France, remains closed to rail freight since a landslide occurred in 2024. Navigation on the Rhine River remains delicate and hazardous when water levels fall below navigability thresholds during heatwaves. In winter, floods regularly prevent navigation on the Rhône.
- **In Cholet, even though a railway line historically arrives at the Michelin factory**, and consequently unloading on the Loire at the Nantes/Chantenay SNCF station may seem ideal over the last 60 km, the cost of rehabilitating the line, as well as building the 200 m connection separating the Loire Quay and the SNCF Platform make the project obsolete in terms of CAPEX, authorizations for a solitary initiative.
- **Between Bassens and Cholet**, the «external» risks on our route are quantified. To maintain factory delivery reliability at iso-maturity, additional stocks are required. This leads to a 4.2-fold increase in stock levels, which severely undermines the economic balance of the business model when evaluated against the performance indicators set for logistics buyers.

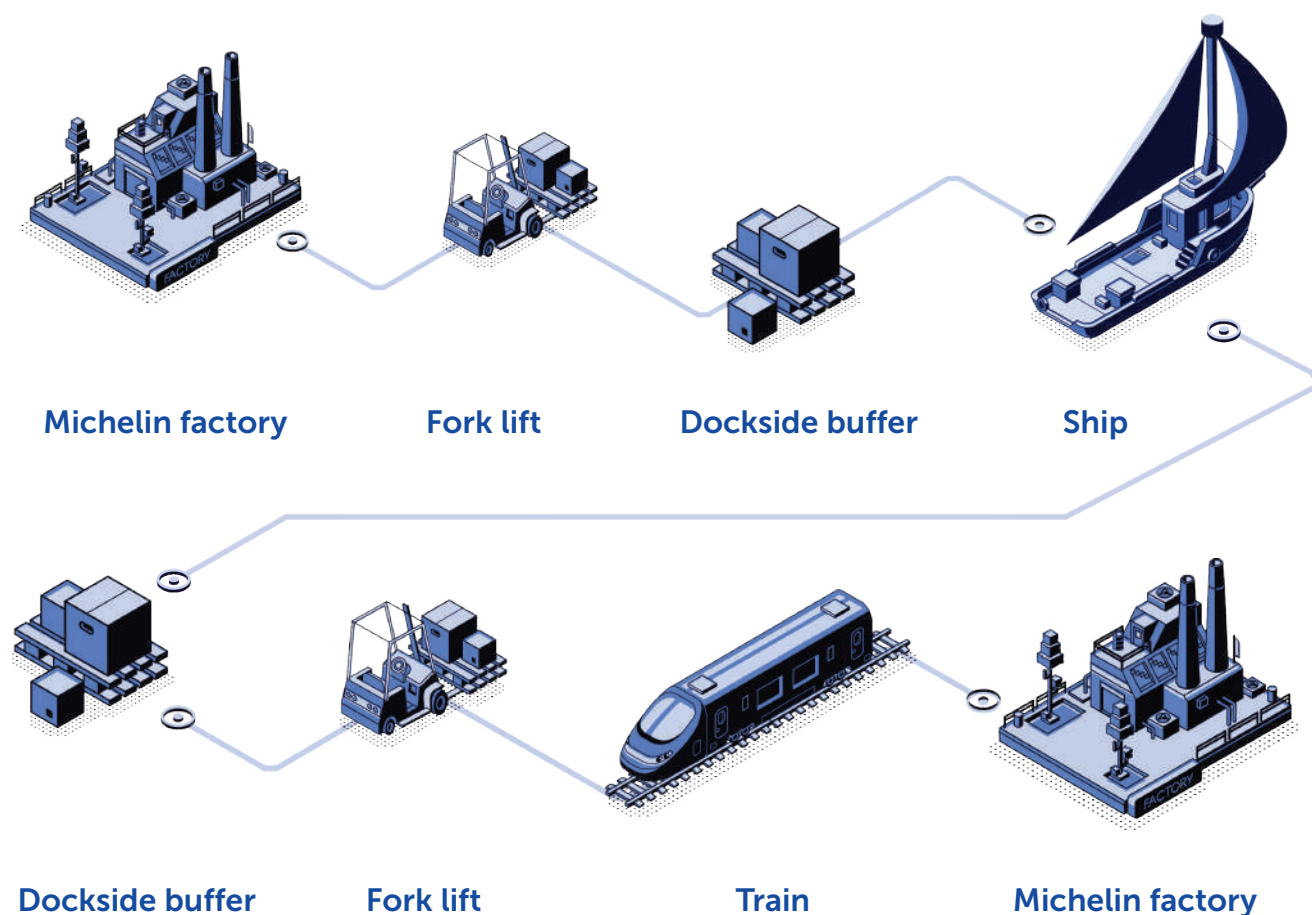


View of the landslide of La Praz in Maurienne. The departmental road, the railway line – safeguarded by a specialised gallery that reflects the railway engineers' longstanding awareness of landslide risks – and finally, the A43 motorway all suffered significant damage.

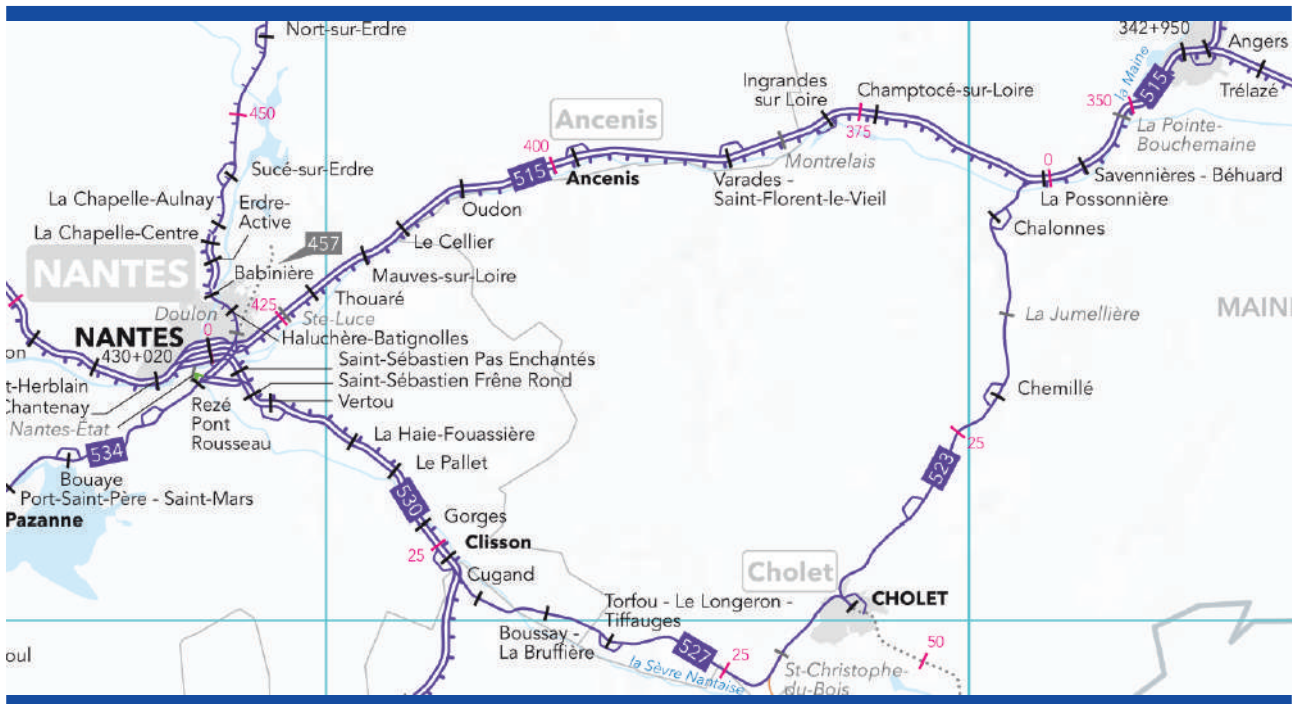
THE CURRENT ROUTE



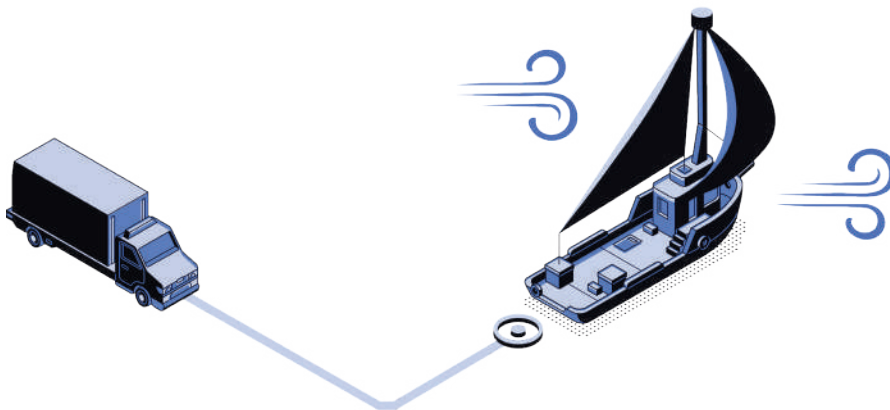
THE MODAL SHIFT IN ROUTING REQUIRES TWO TRANSFER OPERATIONS AND TWO EXTRA BUFFER STOCK ALLOCATIONS.



RAIL NETWORK LINKING THE CHOLET FACTORY



BENCHMARKING EXTERNAL RISK FACTORS



Travel time:

- Traffic jam
- Puncture
- Truck breakdown
- Strike

Travel time:

- Tide and weather
- Poor handling
- Boat docking / entanglement of rope

Product degradation:

- Temperature (sun/freezing at dockside storage)
- Long storage time (rubber expires)

Theft:

- Theft of stock at the dockside

HOW CAN WE MAKE THE MODAL SHIFT MORE COMPETITIVE?

The modal shift is currently coming up against problems of cost and competitiveness compared to road transport, especially for short distances, because it introduces additional costs of handling and storing goods.

Typical examples:

- **Road infrastructure:** as it is often subsidized by the government, users do not always pay the real costs related to road maintenance. Rail and inland waterways pay proportionately higher infrastructure costs.
- **Rail is less competitive for small volumes or short distances.** The key point is to offset the additional cost of terminal infrastructure and handling (known as «pinch points») over the distance transported. Rail often starts to be competitive above 500 km (with the exception of large convoys and very heavy loads (>300 kg/m³), and chemicals unsuited for road transport. Full train transport (equivalent to >40 semi-trailers) is financially more competitive. Ideally when a return flow is possible.
- For short distances, «**short sea shipping**» can lack the cost-effectiveness of road transport, much like rail transport, particularly when compared to the performance of Bio-NGV trucks.
- **Driver shortage and cost efficiency:** profitable utilization of driving time is vital. Any interruptions, such as load transfers or switching transport modes, adversely affect the total cost.

A DEEP DIVE INTO OUR EXPERIENCE

For example, we have found that:

- With fast door-to-door services **between Bassens and Cholet**, modal shifts are only feasible when surpassing the equivalent driving time of a «driver's log disc.» For our modal shift initiative, the minimum viable distance has been set at over 780 km. The extra costs associated with load breaks are successfully absorbed over the decarbonised distance, calculated to commonly range from 700 km to 1000 km, according to our assumptions.
- **Between Palermo and Antwerp**, port fees, specific handling costs, and maritime or river taxes can significantly increase the bill of a modal shift. A key point of our project was to find the right port of disembarkation. Sète turned out to be a very good option for our flow size.
- The fight for appealing ports has become our reality. **Port competitiveness is increasingly tied to their ability to expand their reach inland.** Tomorrow's successful ports must penetrate the hinterland extensively, handle goods and fluids seamlessly, and embrace their role as low-carbon energy hubs. Their transformation into efficient, modern multimodal hubs linking land and sea is critical for sustained growth.
- **Between Livorno and Valladolid**, the CO₂ savings potential is -80% of CO₂ via a «sea + train + truck» scenario on the Livorno > Barcelona > Aranda > Valladolid route. But the RORO (Roll-on/Roll-off ship for transporting all types of freight) on this line requires a truck driver's presence on the crossing, (i.e., 5 days' effective salary, which is not possible in this case).

TRANSPORT CHAIN > TRAIN

Distance (km)	Transporter	Origin	Destination	
8,25	Truck	(District) (IT) Livorno	(UN/LOCODE) (IT) Livorno	
726,38	Sea	(UN/LOCODE) (IT) Livorno	(UN/LOCODE) (ES) Barcelona	
1,19	Rail (electric)	(UN/LOCODE) (ES) Barcelona	Barcelona	
624,65	Rail (electric)	Barcelona	42.33467 / -3.70506	
97,75	Rail (diesel)	42.33467 / -3.70506	(Station) (es) ARANDAD DUERO-MONTE	
93,98	Truck	(Station) (ES) ARANDAD DUERO-MONTE	(District)(ES) Valladolid	

Total: 1 552,18 km

HOW CAN WE MAKE CO₂ SAVINGS MEANINGFUL EVEN WITHOUT STANDARDISATION OR TRACEABILITY?

The measurement of gains is hindered by a lack of standardisation, traceability and comparability. If the ecological gain does not show a «sufficient» gap, the obstacles to change prevail: «I want something meaningful and visible, otherwise it's not worth it for me!» The same is true of their irrefutability: «How are you going to prove the gain to me? It depends on so many parameters!»

Typical examples of quantifying CO₂ gains:

- **Lack of accurate data and universal comparison calculators.**
 - The tools for measuring CO₂ emissions in multimodal transport are fragmented or inadequate.
 - There are very few platforms to accurately assess the CO₂ emissions of each logistics option.
 - Accurately comparing emissions between all-road and multimodal routes can be complex, which discourages low-carbon choices.
- **Shifting from road to rail freight can reduce CO₂ emissions by around 75% per tonne-kilometre.**

- In regions where electricity comes primarily from renewable or low-carbon sources (such as hydro, nuclear, wind or solar), CO₂ emissions associated with rail transportation are even lower.

- As a point of comparison with passenger transport: Transferring passengers from the car or plane to the train can reduce CO₂ emissions by around 50% to 90% per passenger-kilometre, depending on the initial mode of transport and the type of train used. (International Transport Forum: www.itf-oecd.org)

We often hope to achieve zero carbon at home... without having to go through the long and difficult path of learning ourselves. Overcoming the obstacles to change thus demands an introductory policy, a strategy of incremental steps, and enough time to make CO₂ reductions impactful and measurable.

Typical examples of barriers to initiation (related to the persuasiveness of CO₂ gains):

- **Pre- and post-transport trucking:** road transport is often still needed to connect terminals, generating an additional carbon footprint.

- **Inefficient transshipment:** energy-intensive handling in terminals as well as waiting times (in ports or rail terminals) increases indirect emissions (related to running truck engines, and the energy consumption of equipment).
- **Trains:** rail convoys or ships are not always filled to capacity, which reduces their energy efficiency. Trains that still use fossil fuels also reduce gains in decarbonization.
- **The use of fossil fuels for short sea shipping continues to deter individuals hesitant about modal shifts,** especially for small ships, which are often less modern.

If we talk about the transition of maritime transport to alternative fuels (LNG, hydrogen, electricity), this process is slowed down by the technological cost and a lack of refuelling stations, especially in medium-sized ports.

For sail-assisted boats, the equation obviously depends on the wind and its orientation as long as leadtime remains a priority.

A DEEP DIVE INTO OUR EXPERIENCE

For example, we have found that:

- **A key driver is the price of recovery per tonne of CO₂.** At €100/tonne, critics focus the project's framework ... whereas at €400/tonne, discussions are no longer necessary – a scenario projected 2030 with the arrival of ETS2. Today, some companies committed to CSR (e.g., Michelin) are already overvaluing the CO₂ tonne saved at €200/tonne. For our tests, simulations were carried out at 300€/tonne. This seems to be a good benchmark for an economic shift towards large-scale multimodality.
- **EcoTransIT** is a widely used tool to assess the environmental impact of transport chains, particularly in terms of CO₂ emissions and other pollutants. **We used EcoTransit for our 3 learning paths. Despite its current proven usefulness, it has some limitations:**
 - **Ease of use:** the tool requires training to ensure the quality of its results, as handling errors can lead to poor reasoning or conclusions.
 - **Understanding of the results:** the methodologies behind evaluations are not always understandable to non-specialists, making interpretation difficult.
- **Limited customization for SMEs:** for some users, the free or standard version of EcoTransIT offers little room to customize their advanced parameters (e.g., specific type of vehicles, fuels). This was our case 2 or 3 times, fortunately we had a mentor at Michelin who guided us.
- **The use of third-party organisations such as MedLinkPort,** which specialise in modal shift, remains quite rare. We have measured the extent to which there is a need for specialised support to proactively transfer established flows to new, still little-known multimodal offers, and to address operational intricacies.
- **In Europe, national bodies serve as references (e.g., ADEME in France):** in 2023, ADEME gave the following values, for France's energies combined (for emissions of grams of CO₂ equivalent per T.Km):
 - Road: 71 g eq CO₂ / T.Km
 - River: 30 g eq CO₂ / T.Km
 - Rail: 9 g eq CO₂ / T.Km

HOW TO COORDINATE, SHARE AND OPERATE IN A FRAGMENTED LOGISTICS ECOSYSTEM?

The logistical fragmentation between a multitude of stakeholders makes the task complex. We need standardisation and coordination within a context of numerous SMEs and subcontractors, that includes many small fleets.

Typical examples:

- **Fragmentation of responsibilities** and functionalities leads to inefficiencies in flow management, in decision-making and in the execution of processes. The usual lack of a real-time overview of logistics flows complicates coordination and the management of unforeseen events.
- In the event of a crisis, we see that **emergency plans are rarely shared** between stakeholders. Unforeseen events are therefore generally managed in isolation by each stakeholder, which slows collective responses.
- **Heterogeneous regulations degrade efficiency and complicate the user experience.** The standardisation of declarative data aligns with historical trends in multimodality adoption: not only in terms of differing rules between countries or regions (e.g., customs, environmental standards, taxes) that complicate cross-border operations, but also the lack of standards within a sector pose a problem.
- **Computer systems are regularly incompatible.** Multiple stakeholders in the value chain often use different tools, making it difficult to exchange data and synchronize it.
- **There is also a lack of digitalisation.** Some stakeholders (especially «small players») are still using manual processes or outdated technologies.
- **Cybersecurity problems are frightening and slow down the adoption of flow sharing tools.** Fear of data leaks or attacks can limit the integration of shared systems.
- **Finally, there is limited visibility regarding available modal shift options and the demand for them.** A lack of visibility of already existing options and of feedback, operational performance or solutions in use hinders development.
- **Academic research is encouraging:** The «Supply Chain of the Future» Chair at Ecole des Ponts ParisTech agrees with C-Logistics, Louis Vuitton, Renault and Michelin (as partners in Hannah Yee's thesis) that «collaborative shipping» is a concept of mutualisation that effectively makes it possible to massively scale up modal shift logistics operations. Many advantages to this have been identified, such as shared and co-financed infrastructures, storage areas, CAPEX, rail capacity reserved, which limits risks and costs and allows more flexibility. Lower costs are possible due to the effects of fixed-cost volumes, large night trains (>1km).

A DEEP DIVE INTO OUR EXPERIENCE

We have found that:

- **In Cumulus** - software for streamlining and consolidating flows within the «AI Cargo Foundation's» «Appel d'Air» programme – you have to upload your workload plan (past or planned Freight Orders) and compare it with the database, to use the «Transport Orders matching existing intermodal services» feature. However, there is a natural reluctance to share one's workload plan: companies fear losing a competitive advantage by disclosing strategic information (flows, costs, customers), even if confidentiality is guaranteed. An adoption phase will be necessary for stakeholders to test these systems and perceive their value, as well as the time required for these platforms to develop reassuring offers for companies.
- **Cumulus will integrate all existing European rail and river services in the summer of 2025.** Short sea shipping is not funded by the current European programme, but it would be possible to add it.
- **One of the objectives of the Appel d'Air programme** is to implement shippers' collaborations to consolidate flows to attain modal shift under acceptable economic conditions, based on participants' Transport Orders. By increasing the Transport Orders database, the programme will be able to identify, on specific corridors, communities of stakeholders who can potentially collaborate. In general, this principle of «asset saturation» in which the energy transition requires investment, could be applied to other assets: electric truck loops, charging stations, etc.
- **Between Livorno and Valladolid**, Cumulus has found no better way forward than the modal shift proposed by EcoTransIT. We remain at the innovation stage of these tools. The database still needs to be enriched with the workload plans of as many stakeholders as possible on this logistics route, to effectively compare options and service providers.
- **Between Palermo and Marseille**, we did not complete the ship's North to South return trip, nor did we find any assistance from the software because Cumulus doesn't yet integrate short sea shipping. It therefore seems absolutely necessary to us to continue to develop, standardise and deploy this type of software.
- **Regarding contract issues between Livorno and Valladolid**, SOLVAY owns the silica in buffer stock in the silos until it is consumed in the Michelin plant (VMOI contract). From a risk management perspective, this contract practice does not encourage the addition of multimodal intermediaries (the increased risk in this case is for SOLVAY only), unless there are well-adapted incoterms (sharing of costs and responsibilities in the supply chain).
- The strategy of the three **major maritime alliances** (to name but a few) is that of a fully integrated customer experience, a one-stop shop from end to end, even if it means vertically integrating all, or part, of the physical value chain, to «control everything».

5.

MODAL SHIFT ROADMAP

**WHAT NEEDS AND ACTIONS
ARE ASSOCIATED WITH IT
FOR FASTER PROGRESS?**

EXPECTED RESULT

A well-integrated, sustainable, competitive and efficient logistics network, where rail, inland waterway and maritime routes play a central role in limiting CO₂ emissions and congestion, and where road transport plays a relevant role.

To accelerate the end-to-end decarbonised transport of goods, via multimodal corridors and through modal shift, several key needs must be met, accompanied by concrete actions.

MODERNISATION AND INFRASTRUCTURE DEVELOPMENT

Needs:

- High-performance multimodal terminals, connected to facilitate transshipment.
- Joint coordination between transport infrastructure and energy installations.
- Rail and river networks adapted to freight transport (capacity, fluidity, connectivity).
- Removal of administrative and physical bottlenecks for European corridors (TEN-T).
- Rethink the multimodal circularity of the coastal strip (<100km of coastline) to revitalize medium-sized ports adapted to new coastal boats.

Actions :

- **Integrate an intermodal mobility and energy network strategy** into the development plan of each territory (managed in France by the Prefect), by creating a trunk, branches, ramifications and multimodal nodes of appropriate scale. Each sector and transport mode has its specific purpose: a barge for city centres with rivers, a cargo bike for the last kilometres within urban areas, hydrogen for regional use, and trains for long-distance journeys, etc...
- **Invest in multimodal terminals:** Develop strategic hubs with modern physical and data infrastructure to reduce transshipment costs and times.
- **Modernizing rail and river networks:** Electrification of railway lines, widening waterways to accommodate high-capacity and autonomous barges. Digitalisation and facilitation of data flows.
- **Complete TEN-T projects:** Accelerate funding to finalise transnational rail corridors – including the establishment of a maintenance network for trains and trucks, incorporating multimodal facilities, sidings and road-rail hubs.

HARMONIZATION OF REGULATIONS

Needs:

- Unified standards to facilitate cross-border operations (including rail, inland waterway, maritime).
- Consistency of the rules of weight, dimensions and types of transportable goods.
- Sharing of the additional costs and risks of a modal shift through contractualization.

Actions:

- **Improving rail interoperability:** Standardising signalling and electricity systems for rail (ERTMS, rail gauge, tunnel gauges, etc.). Standardising the gauges on the main end-to-end routes.
- **Align logistics regulations:** Create common standards for multimodal transport in the EU, limit administrative barriers to what is necessary (in terms of safety).
- **Create «green incoterms»:** Define a contractual balance between stakeholders in the transport chain, and thus prevent contracts, such as VMOI management, from slowing down the adoption of multimodal solutions due to a lack of sharing of the associated costs and risks.

ADAPTING TO THE NEED FOR FLEXIBILITY

Needs:

- Offering a more adjustable service than today to reduce the gap, with the flexibility offered by road (schedules, door-to-door delivery, capillarity). In terms of deployment schedule and being more modular in action.

Actions:

- **Create bundled offerings:** Ensure interconnected solutions to optimize end-to-end delivery.
- **Developing standardised wagons and containers:** To simplify the transfer between different modes (e.g., standard wagons such as T3000, Modalohr with adapted platforms and cranes).
- **Supporting collaborative shipping:** That brings economic performance, logistics massification and flexibility at the same time.
- **Define the «right place» for the truck:** And ensure a network for electric truck loading within each territory.

REDUCING ALTERNATIVE MODE COSTS

Needs:

- To create a collective, transparent understanding of the costs associated with the energy transition for freight transport, along with a review of the efficiency and impact of national and international incentive programmes.
- To make rail and inland waterway transport economically competitive compared to the «road» solution by minimising the additional costs associated with transshipments and access charges.
- To act on the entire chain, right down to the consumer, raise awareness and change purchasing practices by systematically giving a cost to transport. Offering home delivery to the end consumer, such as an «express» mode, has an associated cost for the community as long as it is carried out by carbon-based means.

Actions:

- **Define new infrastructure financing models** to manage the financial impact of transition (the purpose of the COI's «Financing the Transition» 2025).
- **Reduce rail tolls:** Subsidize or limit fees to encourage operators to shift to alternative transportation modes.
- **Optimize handling:** Invest in the automation and digitalisation of logistics processes.
- **Adapt subsidies:** Extend ecobonus-type programmes to support those opting for multimodality.
- **Pooling flows to the end consumer and engaging them in the process:** This includes optimizing mass journeys through concierge services, establishing centralised hubs or pick-up points, and introducing an ecological bonus-malus system for carbon-based delivery, based on the CO₂ footprint of goods. This approach diverges from free delivery models, and instead resonates with the insights frequently shared by SMEs, moving beyond our strict COI scope.

LOGISTICS EFFICIENCY: DIGITALISATION, AUTOMATION AND POOLING RESOURCES

Needs:

- A massification of flows and an optimization of routes.
- Reducing lead times with digital tools and integrated platforms.
- An increase in the occupancy rates of infrastructures and resources..
- Better coordination between the different modes of transport, thanks to digitalisation and automation.

Actions:

- **Automate processes:** Robotisation in ports and rail terminals to speed up transshipments.
- **Develop and deploy AI for sharing:** Such as Cumulus (by AI Cargo) at the European level, with the aim of making flows visible and allowing them to be shared.
- **Deploy digital platforms:** Real-time tracking solutions to coordinate multimodal supply chains.

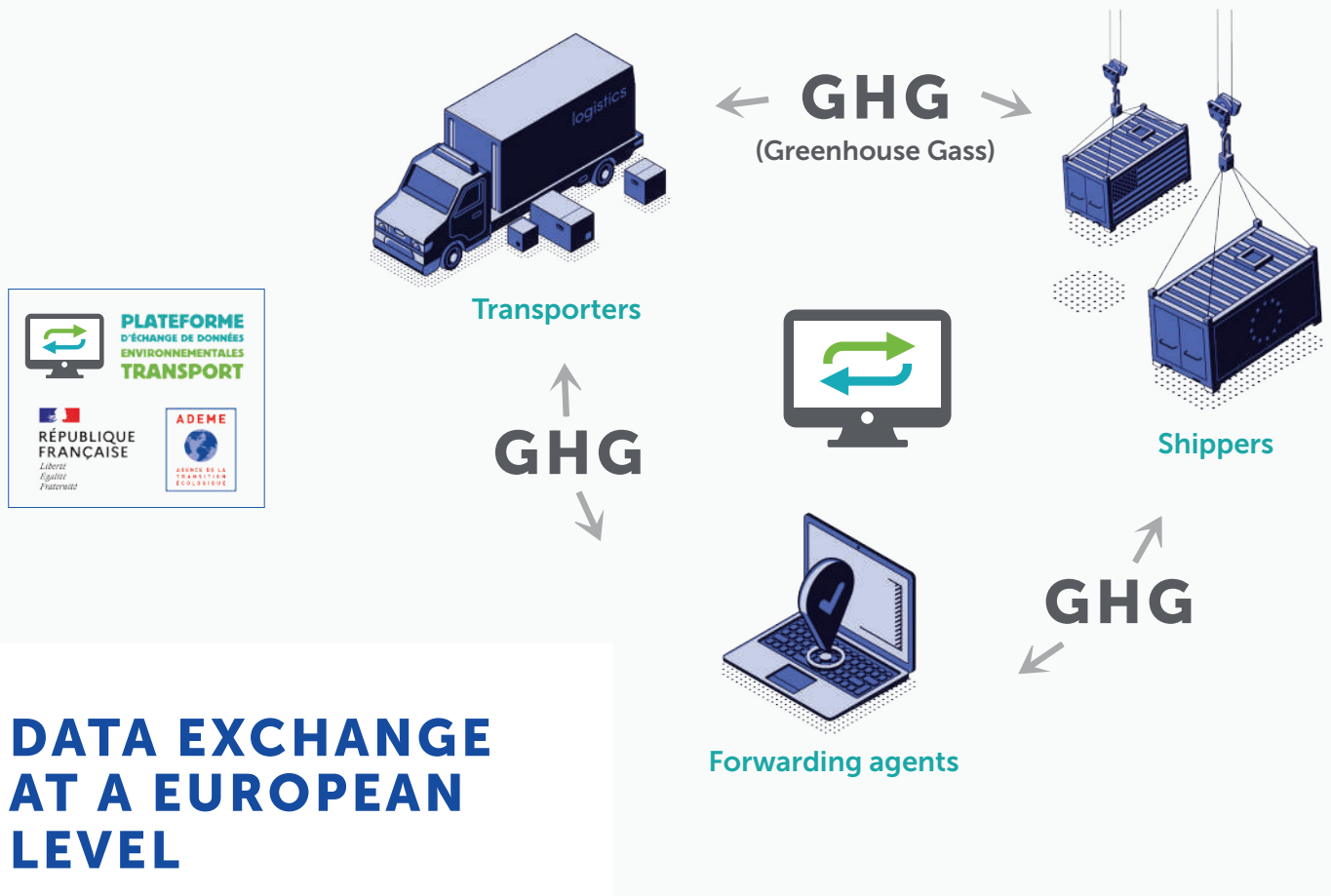
AWARENESS AND ECONOMIC INCENTIVES

Needs:

- Inform economic stakeholders about the advantages of the modal shift, but also about the efforts that need to be made.
- Diversify or even strengthen financial incentives to overcome stakeholders' reluctance to change.
- «Making people love the transition»: Coordinating and standardising offers at both national and international levels, ensuring they are accessible and clear to accelerate change.
- The exchange of environmental transport data at the European level.

Actions:

- **Support experiments:** Have the public authorities finance pilot projects to demonstrate the effectiveness of multimodality. Related to ports undergoing strategic change and the creation of energy infrastructure. In general, to ensure the sharing of experiences and to promote collective intelligence across Europe.
- **Launch awareness campaigns:** Inform businesses about the economic and environmental benefits of rail and inland waterways, exemplified by initiatives like «MedLinkDay» modal shift days, where the COI was involved in 2024.
- **Introduce environmental taxation of carbon-based resources:** Increase the costs associated with road transport (e.g., carbon taxes, tolls) to internalise its external costs, or even finance the transition.
- **Creating labels recognized by companies' CSR policies:** For example the MEDLINK label for freight transport and the ANEMOS label for sailing-based transportation.
- **Organising new sector stakeholders for more impact:** For instance, including the freight to sail transport sector (WINDSHIP and IWSA), and the MEET 2050 institute dedicated to ecological and maritime environmental transition.
- **Standardise performance indicators:** Define common KPIs and their calculation methods, ensuring their replicability.



DATA EXCHANGE AT A EUROPEAN LEVEL

Needs:

- Steering the trajectory of decarbonisation, not just the final target.
- Informing and encouraging the end consumer.
- Expand targets to encompass inflows into Europe, ensuring equitable treatment for all players. This may involve implementing a «European protectionism» approach, if practical and timely, to achieve a balanced distribution of decarbonisation efforts between European and non-European stakeholders.

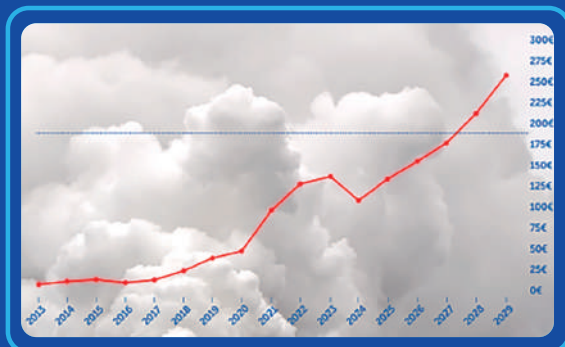
Actions:

- Encourage the stakeholders in the transport chain** (transport providers, shippers, contractors) to collect and report their greenhouse gas (GHG) emissions, categorised by journey and transport mode.
- Closely monitor developments, to reward or sanction them**, by providing annual «green KPIs».
- Link GHG data platforms** to standards and regulations, and ultimately to European policy, to measure, inform, regulate, compensate (e.g., tax).
- Oblige non-European stakeholders to share their GHG data** («end-to-end» spirit) and strengthen an anti-fraud policy (e.g., improve the traceability of transshipment in Cape Town to reduce the sailing distance between China and Europe).

6.

TRANSITION MILESTONES

**BASED ON AN IMAGINED LIKELY
SCENARIO, HERE ARE 4 POTENTIAL
TIPPING POINTS ON THE PATH TO 2035:**



2029
*The price of CO₂
makes petrol
obsolete*

2024

2029

2030

2030
*Inauguration of
the Rhine-Alpes corridor
paves the way for
intermodality*





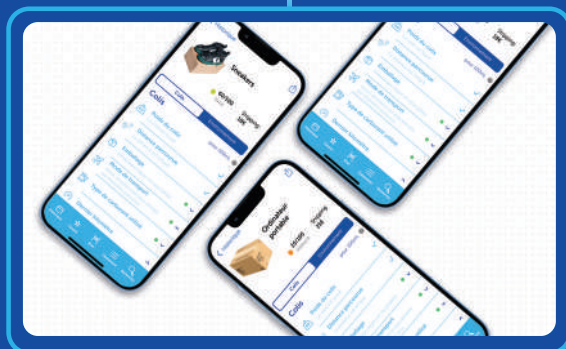
2032
**Ports turn
landward**

2032

2033

2035

2033
**The Yuka of transport
launches the race for
responsibility**

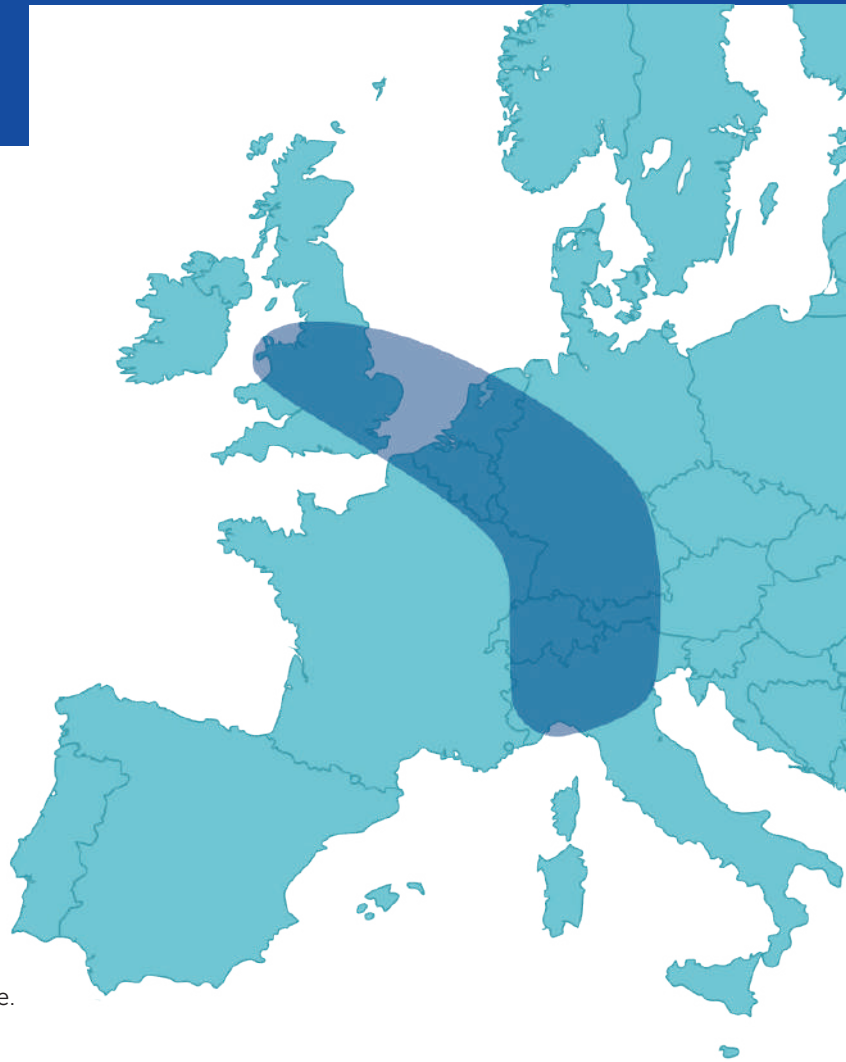


2035: «RESPONSIBLE GOODS» TAKE UP THE INTERMODALITY CHALLENGE.

**BY 2029,
THE DRASTIC RISE
IN CO₂ PRICES WILL
FAVOR THE ENERGY
TRANSITION AND
ALTERNATIVE
TECHNOLOGIES.**

This significant increase in CO₂ costs transforms investment priorities in the transport and logistics sector. In addition, the ETS2 which is added to the ETS, affects the entire chain, both B2B and B2C, (i.e., transport costs to the end consumer).

In 2029, the true cost of the transition impacts everyone. Awareness has given way to tangible financial experiences, forcing shifts in spending and alternative decision-making.



IN BRIEF:

This is a real tipping point that enables acceleration and change by harnessing the sustainable profitability of business models.

IN 2030, THE « RHINE-ALPS CORRIDOR » IS FINALLY OPENING !

And it will demonstrate in concrete terms that intermodality between rail, river and road transport is possible.

It creates confidence in Europe's ability to organise, cooperate and act effectively, as it crosses 6 countries, including Switzerland, which is not part of the EU.

But, all this is not new in fact ... this «blue banana» has always been at the heart of Europe's economic development, encompassing the most populated and interwoven areas of our continent in terms of trade and industrial exchanges. This milestone brings together all the efficiency, modernity, technology, automation and digitalisation of our time, by incorporating the planet and its ecology into the economic and political equation.

This type of corridor brings the fluidity necessary for the transport of goods in Europe, in terms of resilience to climate change.

IN BRIEF:

This marks a crucial tipping point, the large-scale consolidation of flows.



IN 2032, PORTS WILL INCREASINGLY SHIFT LANDWARD, EVOLVING INTO INTEGRATED MARITIME LOGISTIC HUBS AND TERRESTRIALLY-ORIENTATED CITIES.

Ports are transformed into multimodal hubs that become active and decisive «agitators» for decarbonisation — both for the transport of goods and people — on site or in the surrounding areas. Cooperation is private and public in nature, thanks to appropriate legal structures.

As for freight, these multimodal hubs become **ultra-automated logistics platforms** linked to data intelligence, as well as energy storage and distribution platforms (e.g., LNG, H2, Biofuels, Ammonia, to name a few). **Post-treatment flows of residues and waste** from logistics chains are also seamlessly integrated into these multimodal hubs.

Through operational excellence, the integration of standardised data, and territorial connectivity, this turning point fosters accelerated change, aligning the interests of both private and public stakeholders.

IN 2033, THE INTRODUCTION OF A NEW APPLICATION TO THE GENERAL PUBLIC, CALLED « YUKA TRANSPORT » MAKES THE CARBON FOOTPRINT OF GOODS MORE TANGIBLE AND TRANSPARENT FOR THE END USER.

This application provides more power to the end consumer. It allows them to obtain information about the carbon impact of their chosen delivery method: «YUKA Transport» responds to the problem of converting the CO₂ impact of the different modes of transport into monetised forms, and highlights the additional cost of express delivery. Free express delivery too often encourages the end consumer to choose this option, yet it can be considered more polluting.

Thus, the consumer has the choice to favour a decarbonised but slower means of transport, compared to a polluting express mode, and thus penalises environmentally harmful logistics practices.



IN BRIEF:

It is a real tipping point which, through the end consumer, allows decarbonised adoption and large-scale change.

IN 2035, «RESPONSIBLE GOODS» WILL TAKE UP THE INTERMODALITY CHALLENGE.

That is to say, products are transported using the option that emits as little CO₂ as possible.

Due to their potential for CO₂ savings, the deployment of modal shifts is crucial for transport decarbonisation strategies in line with the EU's ambitions for 2035.

Promoting physical and digital intermodal solutions, creating appropriate multimodal freight and energy infrastructures, encouraging cooperation between private and public entities and giving the consumer the power to approve good practices will enable Europe to significantly reduce its greenhouse gas emissions.

Although complex, this modal shift serves as a vital foundation for resilience against climate and societal challenges, including driver shortages, road blockages, and fluctuations in energy prices.

For companies, this translates to efficient and eco-friendly logistics, with emerging business models at the forefront.

For citizens, this represents a broader and greener range of mobility options.

In short, a better quality of life!

Join our Movin'On members and be committed to sustainable mobility.
To find out more movinonconnect.com

accenture Capgemini CGI ENGIE MACIF MICHELIN SOLVAY

THE ADECCO GROUP Allianz ALSTOM BrestPort A le point de l'Europe Brittany Ferries CMA CGM Dunkerque PORT BRUE PONT MARITIME DE DUNKERQUE EY FORUM OCEANO GEODIS

KANTAR Microsoft Mobivia orange SNCF STELLANTIS THALES TotalEnergies