2035 » Today

Retro.spective to the Future

Major steps towards decarbonising mobility in Europe.

MOVIN'ON

Sustainable mobility for societal good

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Editorial

A year ago, we announced an ambitious objective: **to help make the decarbonisation of transport in Europe a reality.**

Achieving this objective is essential if we are to meet the environmental, social and economic challenges of our time, in line with the objectives of the 'Fit for 55' package.

With the 27 members of Movin'On, we have defined five strategic areas to guide our actions: **guaranteeing inclusive mobility, promoting the circular economy, facilitating intermodality for goods and multimodality for people, and inventing solutions for financing the energy transition.**

In 2024, 20 Movin'On Communities of Interest were created, bringing together leading public and private players to promote sustainable, inclusive mobility that creates value for all.

On 7 November 2024, at the Movin'On Summit in Brussels, we reached a new milestone.
This International Summit on Sustainable Mobility brought together more than 350 experts.
Together they jointly founded a collective roadmap, highlighting the steps to be taken between now and 2035, the obstacles to be overcome, and the levers to be mobilised – technological, regulatory, sociological – to make our ambition a reality.

These retrospective accounts, which we are proud to present to you today, are the result of a work of co-construction within our Communities of Interest, drawing on the diverse perspectives of our members and partners.

These Movin'On Retrospectives are more than just an exercise in projection: they represent a concrete first step towards the future we want to build.
They show that carbon neutrality by 2050 is not a distant dream, but an achievable goal, thanks to the collaborative and bold decisions we are taking today.

This is just the beginning...
Our success depends on our ability to more effectively unite the entire mobility value chain.
With this in mind, we are calling on all the driving forces – businesses, public institutions, local authorities and civic societies – to join Movin'On and our Communities of Interest and play an active part in this transformation.

Our joint commitment has the power to redefine European mobility and demonstrate that solutions exist that are both effective and appealing to all.

Enjoy your reading.

Sébastien SPANGENBERGER
Managing Director - Movin'On

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Fair Mobility For All

In 2035

new imaginaries find their way onto our roads

Presented by:

THE ADECCO GROUP · Allianz · Allianz Partners · beti MOBILITÉ AUTOMATISÉE · Capgemini engineering

MACIF · MICHELIN · Microsoft · orange · SAINT-GOBAIN · SNCF

Access *to mobility has been democratised:* low-carbon mobility *is now accessible* to all, *regardless of* income *or* location.

In 2035, public transport and active mobility have grown, supported by digital solutions.
But above all, they have been complemented by the emergence of three champions of mobility now adopted in rural, suburban and urban areas: automated shuttles, the mobility pass and smaller "Pop" vehicles.

This challenge was by no means straightforward, as we had to justify their usefulness and make them attractive.

Fuelled by a new vision, they have found their rightful place in the public space to reduce regional and social divides.

Scan and watch Movin'On 2035 TODAY, the programme inspired by Movin'On Summit

Animated by Asha Sumputh, featuring Emmanuelle Bischoffe Cluzel from Capgemini and Yann Arnaud from Macif. They share their vision for 2035, when low-carbon mobility is finally accessible to all.

What steps were taken to meet this challenge?

2028

A new tax classification leads to the emergence of Pop-Cars all over Europe

2024 — 2028 — 2029

2029

The Mobility Pass frees up city centres

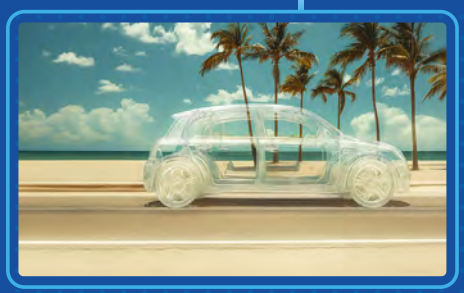
2030

The shared automated shuttle opens up rural and suburban areas

2033

An ultra-light Pop-Car is available

2030 2031 2033 2035



2031

New visions lead to sustainable mobility

2035

In 2024

Similar to the digital divide, the mobility divide is a factor in the marginalisation of people who lack access to transport, or live far from urban centres.
Increasing concern surrounds the isolation affecting populations lacking easy access to any form of transport.
This situation necessitates a comprehensive examination of universal access to mobility.

2024

The development of new mobility solutions has brought with it the risk of creating a two-tier dynamic. On the one hand, dense, well-connected urban areas are gradually abandoning individual vehicles in favour of shared, low-carbon and more economical modes of transport.
On the other hand, rural areas and small towns depend almost exclusively cars for their journeys, impacting purchasing power and increasing the risk of exclusion for people who cannot drive.

Even those who can afford a petrol or diesel car can no longer afford an electric car, as it is too expensive. They too are excluded from the quest for decarbonisation.

Mobility is no longer seen as an end in itself, but rather as a means to social cohesion and harmonious regional development.

So where to start?

In figures

1.882 KG

Average weight of electric vehicles sold in Europe.
(source: European Environment Agency, 2023)

5 %

Share of the A segment (small cars) in the European car market in 2023.
(ICCT European Vehicle Market Statistics, Pocketbook 2024/25)

79 %

of people living in rural areas said they had no choice in how they travel.
(MACIF-VEDECOM 2024 survey "The French and the automated vehicle")

14 %

Share of new electric vehicle sales in Europe in 2024, with a target of 100% by 2035.
(source: ACEA).

3 *out of* 4 French people

thought that an automated shuttle would be suitable in various contexts (such as creating new transport links, providing services within large sites, or enhancing existing services, such as at night).
(source: MACIF-VEDECOM 2024 survey "The French and the automated vehicle")

2035

2028

2028

A new tax classification leads to the emergence of Pop-Cars all over Europe

While the car remains the principal means of getting around, a new category of eco-designed electric vehicles is radically changing the automotive landscape. Smaller, more agile and bridging the gap between the bicycle and traditional cars, these vehicles are quickly dubbed "Pop-Cars", as much for the speed with which they appeared on the market as for their design.

This latest category of car emerges following the adoption of a new tax classification favouring lightweight, durable cars made in Europe.

Innovative and effective solutions in terms of ecodesign, safety and environmental issues now make it possible to create vehicles adapted to the constraints of the city. The industry has thus succeeded in demonstrating that it is technically possible to produce a lightweight, modular vehicle at an affordable price without sacrificing safety and comfort. The arrival of the Pop-Car is helping to transform the perception of the car, driven not only by the environmentally aware new generation but also by individuals from all age groups who are concerned about sustainability.

It offers three key features: low-carbon, connected and compact, accommodating at least 4 passengers. It is also more sustainable, more recyclable and more flexible.

Desirable and accessible

In a short space of time, the car has gone from being a heavy, polluting object to an expression of individual responsibility. Cars have always been the stuff of dreams, but those dreams have changed.

It remains an object of passion, but a new sense of humanity aware of environmental and urban issues has radically changed its perception.

2035

2029

The Mobility Pass frees up city centres

The densification of urban areas is leading to a stark observation that many have anticipated. Too heavy and oversized for most uses, the car is an increasingly unsuitable means of urban transport.

In response to pressure from residents, some towns are closing their roads to cars, or at least restricting access to only the lightest vehicles.

This approach is particularly common in tourist areas, which are becoming increasingly crowded during the holiday season, without being able to provide the infrastructure to cope with the high numbers of visitors.

By introducing congestion charges, imposing higher charges on parking spaces or banning access altogether, towns and cities are trying to keep vehicles outside their walls and compensate for this by setting up peripheral parking areas and low-carbon shuttle systems.

The principle of the "carless vacation" is emerging, with some tourist destinations even making their traffic-free town centres a selling point and boosting sales. Others choose to reward visitors who use soft modes of transport to access the city. This approach is spreading rapidly, leading to the emergence of the "mobility pass" principle in towns and cities that are opting for sustainable mobility.

The future *as seen by the* Community *of Interest*

Based on the principle of the Interrail card, the mobility pass allows the use of all means of transport over a given period. This principle is gradually replacing vehicle ownership with a subscribed mobility chain. We now own a mobility service rather than a car, which becomes a commodity in its own right.

The phenomenon some describe as the "netflixisation" of mobility is driving a new relationship with our cars, accompanied by a significant transformation in usage. The important thing is not so much the vehicle, which is interchangeable, but the services it provides according to need.

2035

2030

2030

The shared automated shuttle opens up rural and suburban areas

Numerous experiments are underway nationwide to eliminate the remaining technological and regulatory barriers to deploying automated public transport systems in rural and peri-urban areas. The emergence of innovative low-carbon means of transport is a response to both the challenge of an ageing population and that of the isolation of certain regions. From now on, mobility will be based on solidarity.

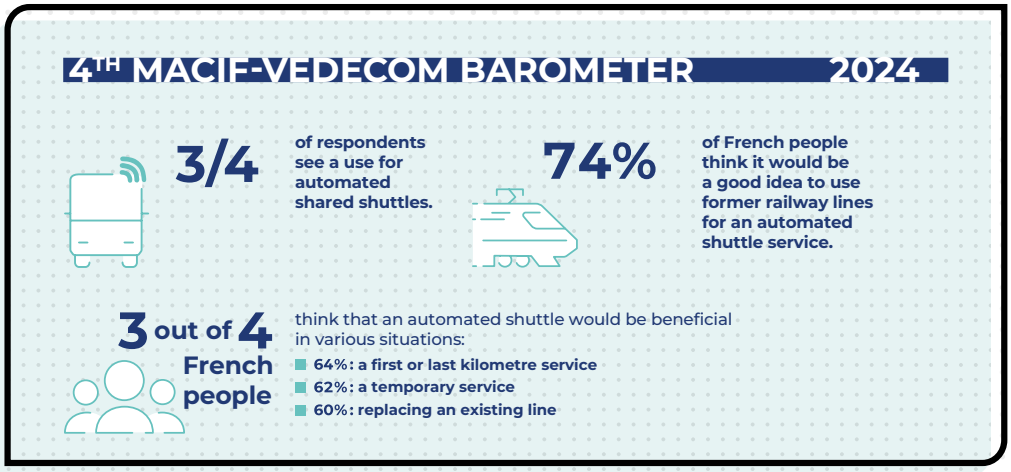
The aim is to serve the entire territory without leaving anyone by the wayside, and to ensure that individual needs align with collective resources. Alongside carpooling, carsharing and traditional public transport solutions, automated and shared shuttles are taking over in some areas.

Operating day and night over a dense network, they serve regular routes and can use geolocation to pick up passengers at their request, even in remote areas. These collective shuttles are helping to transform transport into a social activity again.

Operational over many areas, the experiment is becoming widespread, symbolising the revival of the countryside by providing access to employment, education, health and leisure for previously deprived segments of the population. It is a key element in the economic fabric and the renewed dynamism of our regions.

70%
of French people
express a positive attitude towards this mode of transport.

st MACIF-VE DECOM BAROMETER 2021



The future *as seen by the* Community *of Interest*

"Mobility for all, autonomy for all, via the shared automated vehicle" has been the leitmotiv of our Community of Interest since the creation of the automated vehicle. We sense that the increasing automation and connectivity of vehicles can promote sustainable and inclusive mobility, particularly in rural and suburban areas.

Surpassing the problems associated with new risks and the need to adapt liability regulations and preventive measures posed by the arrival of these vehicles in public spaces, we focused on the potential of this groundbreaking technology to provide a practical response to the challenges of mobility for people and goods in rural areas.

In 2024, 85% of people living in rural areas had no direct access to public transport. In view of this, we felt it was important to look beyond a strictly technological and urban approach to autonomous vehicles.

A great deal of work has been conducted on the social acceptability of this new type of transport, with a large number of residents and local councillors being surveyed in areas where shared automated shuttles are being trialled.

We have also been involved in developing the business model for shared automated mobility, with the aim of making these innovative modes of transport profitable and replicable in as many areas as possible.

2035

2031

New visions lead to sustainable mobility

2031

Through incentives and impulsory measures, restrictions and the development of shared mobility options, transport habits have undergone profound changes. However, the car still enjoys a clear advantage over other modes of mobility and remains the default means of transport. It is still associated with an ideal of freedom, though the reality is that it has become more of a constraint.

The problem is not the car itself, but rather the widespread, habitual use of it. Even when low-carbon and made lighter, it remains a source of urban congestion and social inequality. It associations with freedom, speed and emancipation are beginning to crack, however, in a world where urban and global boundaries are now blatantly obvious.

The transformation of habits is being driven by a battle of perceptions. Ensuring that our modes of transport are once again seen as a means rather than a status symbol or a reflection of an ideal way of life. A transformation that compels the automotive industry to adopt a more realistic approach in its communications. For every euro invested in image advertising, another must now be invested in promoting multimodal industries.

A framework that enables them to finance their transition without jeopardising their established business model. It helps reshape the perception of cars as well as their own industrial vision.
A transformation of perception, leading to a rebalancing of the car's place in the mobility chain, by recognising its legitimacy for certain journeys where it is most appropriate. It's still necessary for getting around, but it's no longer essential to our lives.

2033

An ulta-light Pop-Car is avialable

The Pop-Car: a question of standards.
Small but comfortable, agile but economical and versatile, the development of the Pop-Car is contingent on a change in standards.
These "toned-down" vehicles, smaller and with speeds adapted to urban infrastructures, no longer need to burden their bodywork and cabins with bulky equipment to ensure movement and passenger safety.

This imprecedented category of vehicle makes it possible to envisage an adjustment of safety standards to the characteristics of these lighter, slower vehicles. To guarantee, at the very least, the same level of safety as current cars.

The initial aim of this development is to create an "M1 light" category, planned for 2028, enabling the emergence of ultra-light vehicles weighing less than 850 kg, including the battery.

The introduction of a second "M0" category, from 2033, occupies an intermediate segment, between the L7e and the M1, with a maximum mass of between 700 and 750kg, including the battery weight.

What actions did we take in 2024 to achieve these results 10 years later?

01 Community of Interest

EV-Weight: Towards a New European Pop-Car Category

02 Community of Interest

Autonomous vehicles, from expectations to actual deployment

03 Community of Interest

Carless Vacations

Community of Interest

EV-Weight: Towards *a New European* Pop-Car Category

Powered by:

Capgemini

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Burning question

Can we create a new category of light electric vehicles for 4 people?

What impact are we aiming for?

- Less energy consumption (<6t CO_2 eq for production / -50% electricity consumption compared to an average EV).
- Less materials and critical materials consumption (lighter and ecoconception).
- Reinforce European competitivity (produced in Europe).
- Affordable electric mobility:
  - Starting at 10k€ without incentives.
  - Or supported with an innovative leasing concept allowing under 100€/month all included.

What are we creating?

- A new category recommendation for a light and safe car:
  - As soon as 2028, a 850 kg car.
  - As soon as 2033, a 750 kg car.

Who's on board?

Allianz | Allianz Partners · Capgemini engineering · Crédit Agricole Consumer Finance · Dassault Systèmes · Michelin · Saint-Gobain · Valeo

What's our roadmap?

- *2022* **Initial work on L6e/L7e market understanding.**
- *2023* **Framing the question.**
- *2024* **Recruitment of partners, analysis of situation and proposal, coalition building with external partners like GERPISA (academic research) and VDI (German association of engineers).**

Download the press release.

Download the Pop-Car's roadmap.

Community of Interest

Autonomous *Vehicles, From* Expectations to Actual *Deployment*

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MACIF

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MACIF

Community of Interest

Burning question

How can we promote mobility for all, autonomy for all, via shared automated vehicles in rural and suburban areas?

What impact are we aiming for?

- Open up new regions with shared automated shuttles.
- Contribute to decarbonisation.
- Facilitate public mobility to foster improved access to employment, education, health and more.

What are we creating?

- A framework and a turn-key solution that will enable local authorities to implement shared automated shuttles in their territories.

Who's on board?

beti · BNP PARIBAS CARDIF · FORVIA · KANTAR · MACIF · MAIF · MICHELIN · Microsoft · navya · orange · SNCF · VINCI

What's our roadmap?

- *2020* **Deconstructing the autonomous vehicle solution.**
- *2021* **Exploring autonomous mobility in rural and peri-urban areas.**
- *2022* **Enhancing understanding of the passenger experience.**
- *2023* **Preparing a comprehensive deployment and operating model.**
- *2024* **Building the Territorial Readiness Index.**
- *2025* **Scaling and replication.**

Community of Interest

Carless *Vacations*

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Community of Interest

Burning question

How can we offer a viable alternative to car use in touristic zones during holiday seasons?

What impact are we aiming for?

- Less traffic during the holiday season.
- Better quality of life for tourists and the local population.
- A decrease in "peak" car use should result in smaller cars.

What are we creating?

- A set of recommendations for good practices based on real-life experience.

Who's on board?

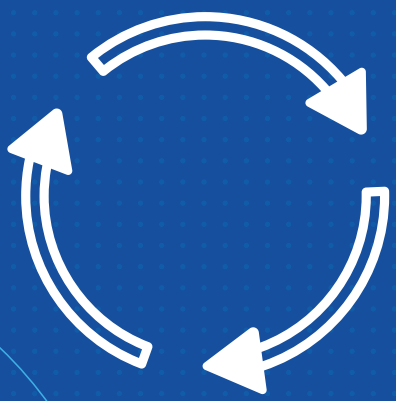
BIARRITZ

PAYS BASQUE EUSKAL HERRIA

What's our roadmap?

- *April 2024* **Framing of the question and local interviews.**
- *June 2024* **Serious game workshop.**
- *November 2024* **Relaunch and enlarge topic.**

Circular Economy & Competitivity



In 2035

Smart Parts & Talents enable the Circular Vehicle

Presented by:

THE ADECCO GROUP · ALSTOM · ENGIE · GEODIS · MICHELIN · Mobivia · SAINT-GOBAIN · SOLVAY · THALES · TotalEnergies

Reusable, *interoperable and upgradable,* Smart Parts enable *cars* to become *recyclable* by design.

By 2035, the automotive industry will have reviewed its manufacturing methods in order to move towards a circular economy model that responds to the urgent need to decarbonise the sector. A car is no longer seen as an object to be discarded at the end of its life, but as a collection of spare parts, a genuine source of "raw" materials.

The emergence of the "smart part" enables the creation of a "circular vehicle" with a very high level of repairability.

This deconstruction of the way cars are made combines competitiveness, autonomy and the circular economy, and addresses the crucial issues of vehicle life-cycle analysis, ecodesign, traceability of spare parts, reuse of components and decarbonisation of manufacturing methods. Even hinting at the concept of an eternal vehicle.

The decarbonisation of the automotive industry, planned for 2050, is on track and is driving reshoring, the emergence of centres of excellence, industrial expertise, and economic competitiveness in Europe.

Scan and watch Movin'On 2035 TODAY, the programme inspired by Movin'On Summit

Animated by Emilie Kovacs, featuring Valérie Bertheau from Thales, Malika Clouin from Solvay and David Puech from The Adecco Group. They share their vision for 2035, where the automotive industry fully embraces a circular model.

What steps were taken to meet this challenge?

2027

The design of vehicles and parts is guided by ecodesign principles

2024 — 2026 — 2027

2026

The emergence of a "Europe of skills"

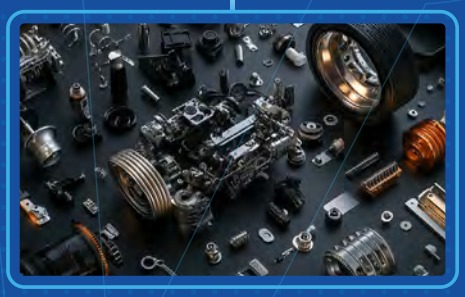
2030

The single market for non-hazardous waste is launched

2034

The first "eternal vehicle" leaves the factory

2030 2031 2034 2035



2031

Waste becomes strategic

2035

In 2024

The manufacture of batteries for electric vehicles is seen as a crucial issue for European sovereignty and competitiveness. But it is not the only one: we must also consider how to optimise vehicle use (eco-driving, shared mobility, multi/intermodality) and make the vehicle fleet an asset for economic development and skill enhancement, without compromising environmental objectives.

2024

To achieve this, innovative industries must be created, ecodesign implemented, and the traceability, reparability, and recyclability of every spare part considered. Faced with the risk of job losses and difficulties in filling new jobs linked to electrification and software, a radical transformation of skills is becoming essential.

Time is running out.
There is an incompatibility between the urgency of the situation and the lengthy timeframe required by the industry to implement investments, establish sectors, provide training, develop regulations, and achieve time to market.

In figures

50%

Share of vehicles dismantled in approved centres in Europe
(source: eu.boell.org)

85%

Minimum weight of a car that must be recycled in accordance with European Directive 2000/53/EC.

27

Number of European countries, each with different legislation, making the cross-border transport of waste complex.

12.5%

Share of direct and indirect jobs in Europe dependent on the automotive sector
(source: European Automobile Manufacturers Association).

2035

2026

2026 The emergence of a Europe of skills

Europe has succeeded in advancing a shared vision for the manufacture of batteries, fuel cells and electronic components.
A cross-sector roadmap designed by a unique collaborative ecosystem, involving not only the entire automotive sector – industry and services – but also mobility stakeholders such as banks, insurers, and energy providers.

In terms of employment and the transformation of skills, we must encourage the development of existing professions rather than seeking to create new ones. The challenge also lies in identifying what new skills to develop and establishing training programmes and career transition paths to support this transition.
Extensive campaigns to raise awareness of the skills of the future and specific upskilling and reskilling programmes are being rolled out. The connection between academia and businesses is growing, offering joint training to other industry stakeholders and building bridges between sectors.

Some employers guarantee lifelong employability for their employees. All are developing ambitious CSR programmes, promoting diversity and inclusion, and paying close attention to supporting their employees in their latest roles.

Support from the public authorities assists the development of new activities on a regional scale, after identifying the skills present in existing industrial areas.

The vision of a "100% recycled" car is driving the creation of recycling sectors that address the challenges of reindustrialisation, sovereignty, reshoring, and local revitalisation.

2035

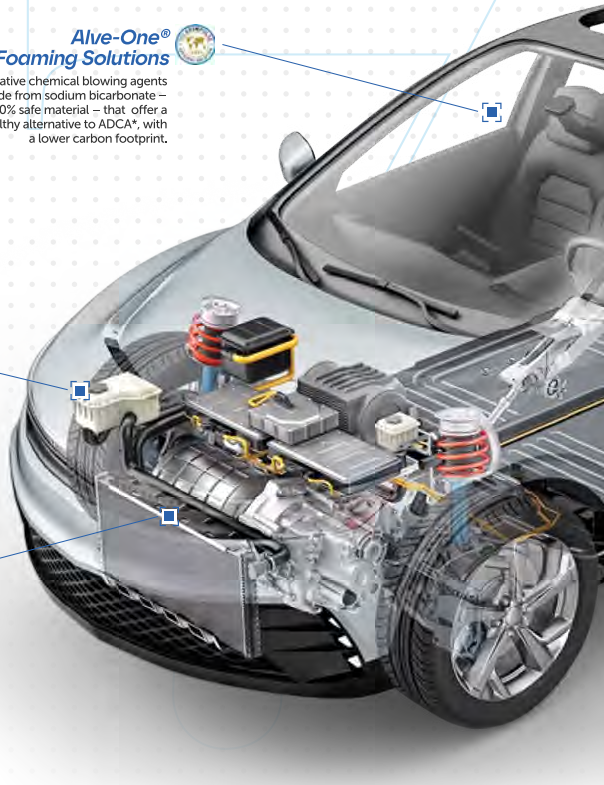
2027

The design of vehicles and parts is guided by the principles of ecodesign for the planet and competitiveness

The integration of environmental impact with vehicle design and manufacturing processes has given rise to the principle of design with high environmental value. It is no longer a question of knowing how to produce a car, but about conceiving the car as an integral part of a European circular economy, which does not depend on new resources or external skills.

The principle of ecodesign is no longer simply a matter of manufacturing vehicles or spare parts with less impact on the environment, but also considering all stakeholders fairly during the design and industrialisation phases.

Examples of SOLVAY solutions



Alve-One® Foaming Solutions

Innovative chemical blowing agents made from sodium bicarbonate – a 100% safe material – that offer a healthy alternative to ADCA*, with a lower carbon footprint.

Augeo® SL191

Bio-based solvents made from glycerin – a renewable source – for use as a safer alternative to petroleum-based solvents in paints and coatings.

Magnet grade Rare Earth Oxide*

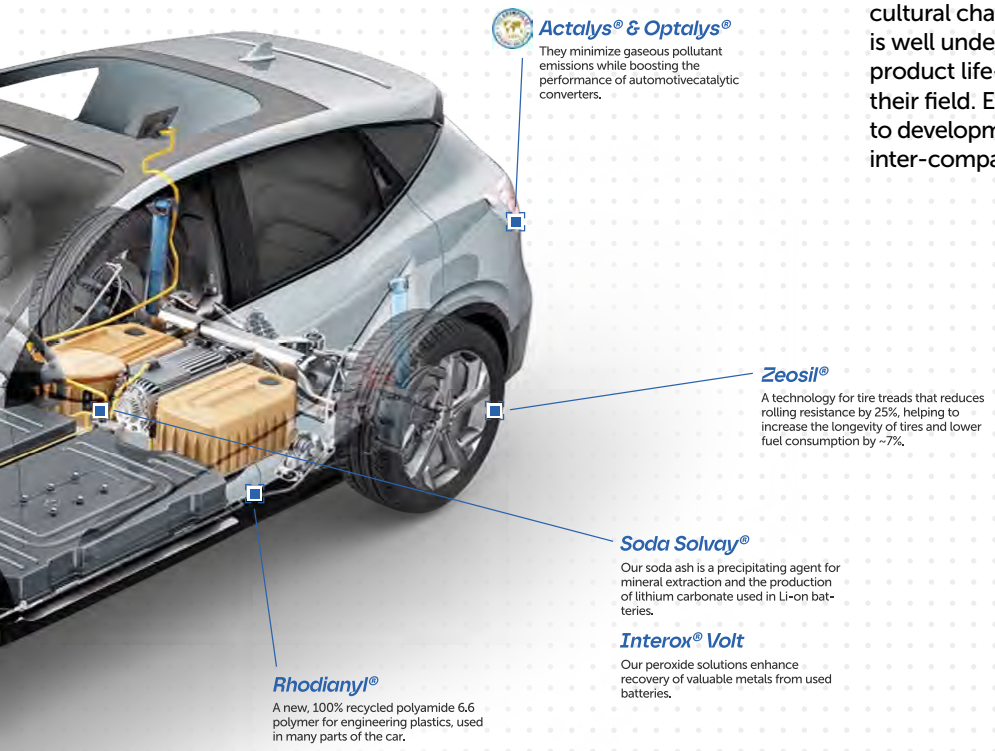
Rare earth magnets, also known as permanent magnet, enable the conversion of Electrical Energy into Mechanical Energy and Vice Versa.They are key components enabling the EV revolution with powerful and highly efficient e-drive traction motors.

Each part and material is designed with a repairability index, an essential factor for optimising environmental impact.

Driven by this need, numerous collaborations are being set up throughout the automotive value chain, from materials suppliers, parts suppliers, manufacturers and organisations to the companies responsible for dismantling and recycling. The data essential to making the right decisions at the right level is defined and then exchanged on secure platforms.

By anticipating environmental impacts and the effects of climate change, we avoid choosing materials or manufacturing processes that would render the product obsolete over the short term. Ecodesign is therefore no longer seen as a constraint in the design of a product or vehicle, but rather as a lever for competitiveness and differentiation. Once seen as an optional expense, the associated costs reduce the financial risks associated with the environment and are now integrated into the development process.

Ecodesign principles are contributing to a radical cultural change within companies. This transformation is well understood by leaders, who have turned product life-cycle analysis specialists into experts in their field. Entire organisations, from top management to development stakeholders, are trained through inter-company exchanges that are becoming the norm.



2035

2030

2030

The single market for non-hazardous waste is launched

The prospect of a "100% recycled" car has never been closer. However, achieving it still requires scaling recycling innovations to an industrial level and simplifying procedures that currently face too many disparities.

Each country, and even each region or state, has its own criteria, processes and timelines. The launch of common waste market would finally allow waste to move from one country to another, or from one region to another, without interruptions or obstacles, unleashing the potential of mobility industry players. In 2024, the European Commission recognised the urgent need to establish harmonised criteria in order to create a single market for waste. A number of initiatives were implemented, enabling customers and manufacturers to operate within a legally secure framework, while encouraging investment and innovation in the sector.

This radical simplification frees up precious time for manufacturers, who until now have had to cope with excessive procedures and disparities in treatment across countries.

This transformation will enable Europe to reduce its reliance on imports of critical materials or rare products. The result will be the creation of skilled jobs, the development of centres of excellence and the conversion of industrial areas.

2031 Waste becomes strategic

Until now, the full recycling of car parts has met regulatory obstacles. Certain spare parts that are reused, remanufactured or recycled are considered to be waste under the regulations, as soon as they are removed from the original vehicle from which they were extracted.

It is therefore necessary to recondition certain parts before reusing them. This process necessarily has an impact on lead times and costs. As a result, it is often more cost-effective to replace a faulty part with a new one rather than one that has been recycled.

The prospect of a 100% recyclable vehicle, envisioned by manufacturers, and the traceability of each spare part are helping to advance legislation and change perceptions of "waste".

Its status is therefore evolving to allow for straightforward reuse, without compromising on vehicle safety or comfort, which remain non-negotiable.

Regulation adaptation is thus enabling the development of a common market in secondary materials, which still needs to be strengthened and structured. Including a supply of recycled materials that reduces dependence on imports. The recovery of waste and its integration into the circular economy are therefore tied to major issues of sovereignty.

In short, waste is becoming "trendy" and the reuse of spare parts is gradually transforming the way people think about cars. Driving a "reconditioned" vehicle is now socially meaningful. It is a powerful way of demonstrating a commitment to the environment. And to bring about change.

2035

2034

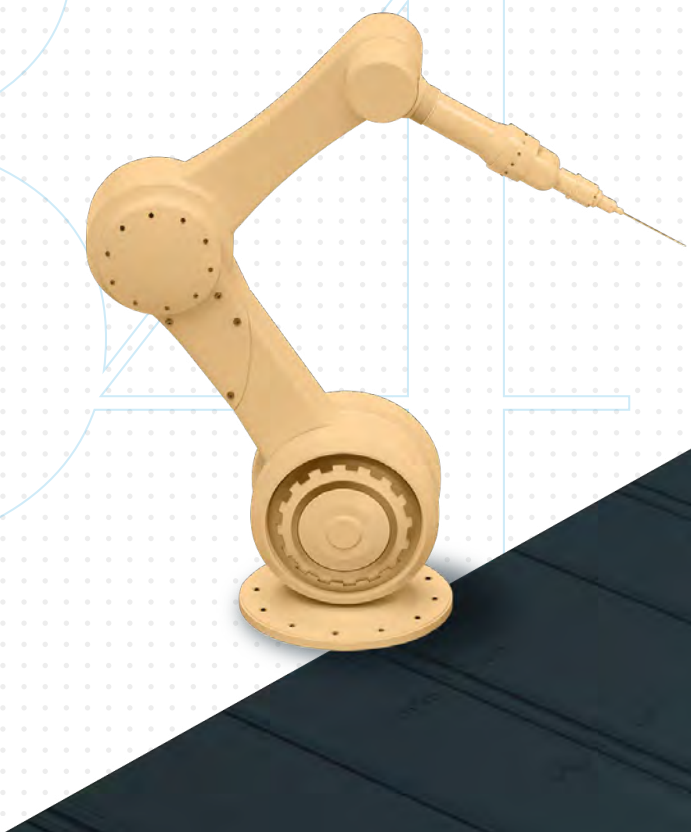
2034

The first "eternal vehicle" leaves the factory

The "circular vehicle" is no longer a pipe dream. The maturity of recycling channels and tracking technologies make it possible to envisage a vehicle that can be upgraded, repaired and recycled ad infinitum.

A revolution that gives rise to a new vehicle concept, built around an indestructible and universal chassis and an adaptable digital system, to which interoperable parts and services could be added based on needs, usage, and technological advances.

It introduces a sustainability index measuring adaptability, serving as a selling point for the vehicles in question. The term "eternal vehicle" is soon coined to describe these forward-thinking automotive principles.

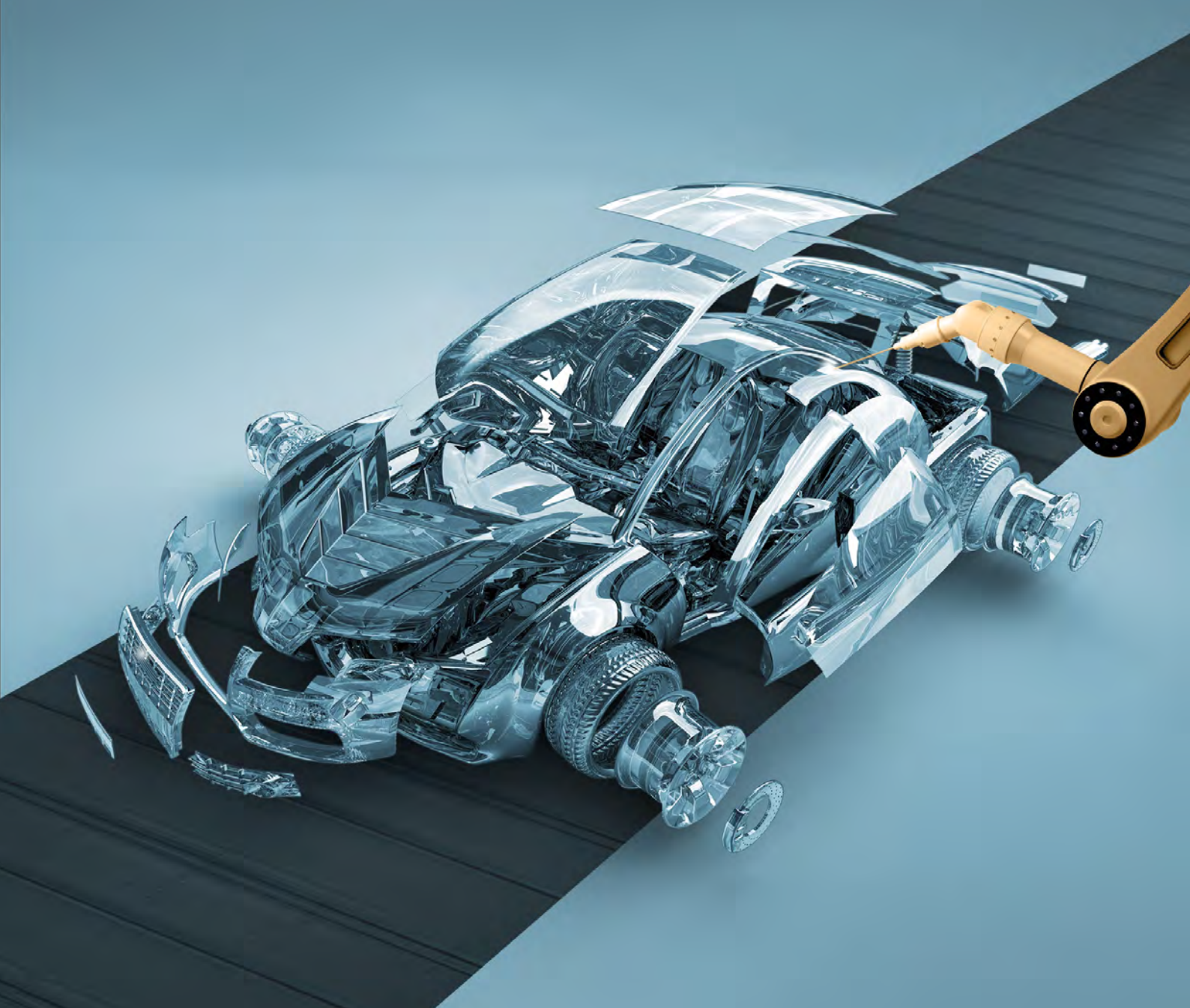


The automobile is now conceived as an "evolving product" that can be transformed throughout its life, much like a Lego® piece to which functionalities can be added and defective parts replaced.

It is a misnomer, but it resonates with the press and serves as a strong enough promise to rally the entire transport industry behind the concept with the goal of decarbonising the entire process.

Although the car is still made of steel, glass, fabrics, rubber and polymers, these components are now fully recyclable and interoperable by design.

A transformation that affects the very nature of the materials used, of course, but also the supply chains, industrial processes, manufacturers' business models, expertise, design, recycling channels and also driver perceptions.



What actions did we take in 2024 to achieve these results 10 years later?

01 Community of Interest

Up-skilling & Re-skilling Europe

02 Community of Interest

Ecodesign and Life-Cycle Assessment in the Manufacturing Sector

03 Community of Interest

Creating a Common Framework to Unlock Market Potential for Mobility Waste

Community of Interest

Up-skilling & Re-*skilling Europe*

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THE ADECCO GROUP

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The Adecco Group

Ulrike Ristau-Hutter
Movin'On

Community of Interest

Burning question

How can we collectively ensure a future-proof talent pool to empower the energy transition & build a competitive and sustainable mobility for Europe?

What impact are we aiming for?

» Showcase, co-create & scale HR solutions for mobility workforce transition & up-skilling.

What are we creating?

» Talent Playbook:

› Design, co-develop, and deploy HR solutions to support workforce transition and skills development across all mobility sectors.

» Proof of Concept:

› A cross-sectoral state-of-the-art analysis of operational and strategic solutions adopted to facilitate their alignment with forecasted needs (the talents required to successfully transition to sustainable mobility). The goal is to bridge the gap between advanced skills forecasting and proven solutions ready for HR teams to implement.

› Bringing together innovation and human resources leaders from the mobility sector to co-design and test operational solutions that support workforce transition.

› Key solutions to enhance a shared vision of the future of mobility and the impact of major transformations; job and profession descriptions; a European Mobility Academy; pan-European skills certifications, joint training programs, and skills exchange initiatives.

Who's on board?

accenture · THE ADECCO GROUP · ALSTOM · EIT InnoEnergy Co-funded by the European Union · ENGIE · GEODIS · MOBILIANS · mobility · PFA Filière Automobile & Mobilités · ReKnow University · RENAULT TRUCKS · TARMAQ · TotalEnergies · waves of CHANGE

What's our roadmap?

» **State-of-the-art:**

› *June - September 2024* **Interviews.**

› *October 2024* **Collective workshop for strengthening, solution design and roadmap development.**

» *November 2024* **Call-to-action and committment at Movin'On Summit 2024.**

» *Q4/2024 - Q4/2025* **Proof of concept of selected collective solutions. Talent solution playbook.**

» *Q2/2025* **Key actor & stakeholder map.**

Community of Interest

Ecodesign and Life-Cycle Assessment in the Manufacturing Sector

Powered by:

THALES

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Movin'On

Community of Interest

Burning question

How can we accelerate the adoption of best ecodesign practices and Life-Cycle Assessment in the manufacturing sector?

What impact are we aiming for?

- Support the gradual adoption of ecodesign practices by companies in the manufacturing industry, so as to create a more even playing field.
- Foster cooperation between actors (both public and private) and the creations of shared best practices of ecodesign.

What are we creating?

- A white paper leveraging best practices:
  - Approaching the topic from a business and pragmatic standpoint.
  - Promoting cooperation and data sharing across value chains.
  - Implementing ecodesign with tailored tools.
  - Culture change, training and financing.

Who's on board?

ALSTOM, FORVIA, MICHELIN, Schneider Electric, SYMBIO, THALES, RÉPUBLIQUE FRANÇAISE, ADEME, SAINT-GOBAIN, SOLVAY

What's our roadmap?

- *2023* **Sharing best practices.**
- *2024* **Creation of a whitepaper.**

Scan this QR code
to download our white paper.

Community of Interest

Creating *a Common Framework* to *Unlock Market* Potential Mobility *Waste*

Powered by:

SOLVAY

Connect with the content leaders:

Malika Clouin
Solvay

Pierre-Edouard Sorel
Movin'On

Community of Interest

Burning question

How can we align national regulations in Europe to really create a European common market for end-of-life waste products?

What impact are we aiming for?

- Integrate more waste into new products, in order to develop circular value chains and advanced activities linked to recycling.
- Develop resiliency of critical resources, reinforce competitivity and sovereignty and simplify business between Member States.

What are we creating?

- A position paper that proposes the creation of a standardized and digitalized pan-European procedure to simplify and homogeneize end-of-waste process across all European countries.

Who's on board?

MICHELIN, SAINT-GOBAIN, SOLVAY, THALES, Valeo, VEOLIA

What's our roadmap?

- *2023* Framing the question and understanding the stakes.
- *2024* Members recruitment and creation of the ecosystem. Alignment on positions and final recommendation.
- *November 2024* This Community of Interest is finishing. Its position paper, based on real examples, is out.

Please contact us if you want to know more and participate in the advocacy phase.

Insights & strategic *perspectives*

At the heart of discussions at the Movin'On Summit

In 2035, *repair, reuse, recycle is* **the new normal.**

The ambition to decarbonise the world of mobility does not only concern motorisation. The car industry is also a major consumer of components such as rubber, aluminium and glass, which require a great deal of effort to extract and produce large volumes of greenhouse gases. Long regarded as disposable goods, automobiles – and more broadly, modes of transport – must now be reimagined through the lens of production methods aligned with circular economy principles.

An approach that seeks to meet three requirements: reduce, reuse and recycle, to break with the idea of a disposable car. This calls for an in-depth restructuring of the spare parts recycling sector, which has been poorly regulated up to now. This major project will bring together all the key players in the industry and in regulation, to work together to create a sector of excellence on a European scale. For Michelin, "this circularisation of the economy changes everything. It changes our value chains, design, production and interaction with customers," says Lorraine Frega, Executive Vice President of Distribution, Service & Solutions for the brand.

> ***Circularity and repair are solutions to ensure mobility for people who might otherwise lose access to it***
>
> Jean-Philippe Dogneton,
> Chief Executive Officer,
> MACIF

Repair *rather than* replace: an *obvious* strategy

"For us, the circular economy is a strategic rationale. It's self-evident. We incorporated it into our plan very early on as a major objective," says Jean-Philippe Dogneton, CEO of MACIF, who points out that today, 70% of damaged vehicle parts are systematically replaced with new ones.
The cost of car maintenance and repair is a key factor in household finances, with the share of the household budget devoted to mobility reaching 10 or 15%, according to Eurostat figures cited by Laurianne Krid, Director General of the International Automobile Federation (FIA). Mobility is a right, but it can also be expensive. While it is undeniably a factor of social integration, enabling access to jobs or shops, it can also quickly become a source of vulnerability, or even division.

Nor does the issue depend on whether you live in an urban, peri-urban or rural area. By aiming to reduce maintenance costs to increase purchasing power for vehicle owners, repair is therefore an obvious economic issue, but one with clear social implications as well. ***"Circularity and repair are solutions to ensure mobility for people who might otherwise lose access to it,"*** he says. At the same time, it will help to keep regional car repairers in business.

Making *recycling* acceptable: *a question* of money

Recyclability, however, is currently facing a contradiction that hinders its large-scale development. For the moment, reusing existing components or remanufacturing certain spare parts is often more expensive than replacing them with new ones. This ecological inconsistency must be corrected if recycling, an essential issue, is not to become a burden on households and a further cause of social division. There is therefore a question of social acceptability to address in order to help people understand the benefits behind the circular economy principle, which are not always immediately apparent.

Green NCAP, a consortium bringing together a large number of the world's leading players in the mobility sector, recognises the importance of visibility and has launched a tool for analysing the environmental impact of each vehicle over its entire life cycle, from manufacture to recycling. A single indicator based on criteria common to all. And enabling consumers to choose their vehicles in full knowledge of the facts. “The idea is to put a name and figures to what we call circularity,” explains Laurianne Krid.

Promoting *the circulation of* spare parts

The European Commission is therefore planning a new wave of simplification to give consumers clear and reliable information when making purchases, and to enable vehicle spare parts to circulate more smoothly within the EU. Because there's nothing homogenous about a vehicle.

And some used materials are sometimes classified as waste, which makes reuse more complex, with all sorts of administrative obligations complicating the process and adding to formalities and costs. And, as a result, it hinders most individual initiatives in favour of recycling vehicle parts. Here too, the challenge lies in revealing the progress made in terms of carbon footprints and product circularity, as well as the progress made in terms of social justice and working conditions. These are virtuous efforts that generate costs and are not always recognised at the time of purchase. “This is another example where we are going to need the regulator's help to make things run smoothly,” explains Lorraine Frega.

It is important for consumers to have an understanding of the impact of the vehicles they purchase today over their entire life cycle

Laurianne Krid,
Managing Director, Region I,
FIA

The challenge *of a rising* awareness about *recycling*

The desire to support such practices now exists within the population. According to a survey carried out by the OECD and cited by European Commissioner Isabelle Perignon, 74% of the population would be prepared to make sacrifices to adopt more responsible consumption. The entire issue behind these indicator principles is awareness. Raising awareness of the impact of each action taken in favour of a circular economy in order to promote it. And so connect desire to action.

"It is important for consumers to have an understanding of the impact of the vehicles they purchase today over their entire life cycle," says Laurianne Krid. The same is true for Michelin, for whom the circular vision is not only a strategic necessity, but also a technical challenge when it comes to designing a tyre made from 100% renewable or recycled materials.

An ambition for which there is currently no ready-to-use technology. "An absolutely fascinating challenge, but one that is very long, very complex, and very costly," says Lorraine Frega.

"This means revisiting virtually every stage of the manufacturing process, from tyre design to production." The case of tyres is particularly revealing in terms of circularity. A recycled tyre placed on the market must perform at least as well as its equivalent made from petro-sourced materials, without the end consumer noticing any difference in its appearance.

The only noticeable difference is the price, which obviously raises the essential question of how to promote valuing the circularity approach in the face of global economic players who have not necessarily made this responsible choice. "That's the difficulty," warns Lorraine Frega. "For European companies like us, who decide to make these commitments part of their DNA, the question of circularity inevitably comes alongside that of competitiveness."

> *As a regulator, our aim is to strike the right balance between what we can impose on businesses [...] and at the same time provide a regulatory framework that can motivate consumers to buy and buy better.*

Isabelle Perignon,
Director of Consumer Policy, DG JUST,
Commission Européenne

Revealing the invisible

The issue of raising awareness about the circularity approach is therefore central to engaging all stakeholders behind this initiative. Showing what we don't always see and explaining what's at stake in order to transform these commitments into positive actions, bearing in mind that the price factor is still central to the purchasing decision. The regulator has a major role to play in this process.

"As a regulator, our aim is to strike the right balance between what we can impose on businesses in the form of standards, laws or regulations, and at the same time provide a regulatory framework that can motivate consumers to buy and buy better," says Isabelle Pérignon, European Commissioner for Justice and Consumers.

Achieving this balance is complicated, but necessary to support the efforts of companies involved in virtuous initiatives and to make consumers understand the importance of their actions. "61% of consumers find it difficult to understand which products are really environmentally friendly," says Isabelle Pérignon, who also points out that 82% of them have difficulty making their buying decision. The reason for this is that the market is now saturated with multiple indicators that confuse rather than enlighten.

Regulation fostering competitiveness

An initial European directive aimed at clarifying this simplification process is due to come into force in 2026 and is based on the ambition to install a unified label on a European scale to identify the durability and recyclability of a product placed on the market. On the one hand, this will mean better information for consumers and, on the other, it will promote the virtuous initiatives put in place by companies committed to this principle of circularity. A second directive, also scheduled for 2026, is intended to promote the right to repair by extending the legal warranty on consumer goods.

This will cover the risks and make repairability the default choice. Whether at the level of the regulator, manufacturers or repairers, winning support for a recyclable vehicle therefore requires transparency in the steps taken and simplicity when it comes to information on the spare parts that make up a vehicle. ***"Simple but not reductive. That's where it gets difficult,"*** Lorraine Frega rightly recalls.

> ***Simple but not reductive. That's where it gets difficult***
>
> Lorraine Frega,
> Executive Vice-President of
> Distribution, Services & Solutions,
> Michelin

Insights & strategic *perspectives*

At the heart of discussions at the Movin'On Summit

In 2035, *large-scale investment in green transition infrastructure is* **the new mobility key.**

Decarbonising transport is a major undertaking that raises a number of issues, including within the regulatory framework in which it operates and industrial models. This requires a radical change in the way we look at mobility. These efforts must be made without sacrificing the competitiveness of the industries involved. Because the mobility game is now played on a global scale.

And not all competitors play by the same social, economic and ethical rules. "We are in an unfair system where it becomes very difficult to be competitive if you try to comply with the rules, while others do not," warns Laurence Noël, EVP Global Industry Leader Automotive at Capgemini.

The automotive industry employs 40 million people. This represents 6% of jobs in Europe.

Laurence Noël
Executive Vice-President Global Industry Leader Automotive, Capgemini

Safeguarding European *competitiveness*

At a European level, however, social, economic and ethical rules are inescapable, and this balance must be struck if we are to reconcile economic sovereignty with the future of the planet. This is particularly true in the key sector of European industry: the car. ***"The automotive industry employs 40 million people. This represents 6% of jobs in Europe,"*** says Laurence Noël. "We know that the automotive industry is facing major challenges at the moment. These challenges are all happening at the same time: the transition to electrification, the move to software-defined vehicles, new customer expectations in terms of user experience, supply chain challenges and regulatory requirements, as well as new competition with new players entering the market."

The temptation to withdraw

Faced with such transformations, competitiveness is inevitably called into question when we know that European industrial production costs are 20 to 30% higher than in other regions, notably because of labour and energy costs. These conditions should not call into question the commitments made by Europe, but they do need to be taken into account when comparing ourselves to the global market. The first instinct is to use protectionist measures by taxing imports of vehicles that do not necessarily meet the same CSR requirements as those set by Europe.

That's what the Americans did when faced with electric vehicles from China. "I don't believe in a Europe that is content to turn in on itself," notes Laurence Noël. In her view, Europe can only function properly within an open trade framework. This means developing the capacity to collaborate at all stages of the value chain as part of a global approach shared by all partner countries. And that's perhaps where the problem lies. In her view, "isolating European production from the competition will not help the global players on the market. It does not support competitiveness. It is counter-productive".

The *carrot* and the *stick*

For chemical manufacturer Solvay, regulation is a key issue for the future of European industry. While it is essential, it is important to ensure that it does not become a handicap by imposing too many constraints. Investing in low-carbon production methods should be an attractive proposition for manufacturers. But this is often seen as a constraint that has to be complied with. According to Philippe Kehren, Solvay's CEO, this contradiction stems from an improper mix of carrot and stick. “In Europe we only use the stick. We don't have the carrot,” he warns. “I can tell you that it's much easier to produce renewable materials in China than in Europe, where the waste directive is really, really difficult to apply.

It's hard to be competitive when you're not playing by the same rules. This deadlock led to the Antwerp Declaration, signed by more than a thousand European companies, with Solvay participating. The declaration was presented to the President of the European Commission, Ursula von der Leyen, at the beginning of 2024. A declaration in which the signatories make a firm commitment to a sustainable industrial transition in exchange for an industrial policy that will enable them to become competitive and attractive to investors once again. “What we need is a favourable environment, incentives and encouragement to stimulate innovation and transitions,” explains Mark Major, climate advisor at the Kühne Foundation, which seeks to promote research in the fields of logistics and transport management. “We need to implement the Green Deal, but we also need to have an industrial deal, because when you close factories in Europe, you're just importing pollution along with the products.”

Finding and retaining talent is in fact one of the top priorities for companies.

Cinzia Alcidi
Director of the Economic Policy,
Employment and Skills Unit,
CEPS European Commission

Regulation *in question*

This regulatory environment also runs the risk of slowing down the capacity for innovation of European companies, which is perhaps even more serious. Because AI and high-tech skills are also tending to follow the market and move elsewhere. “We've reached a critical point where we see that, when it comes to the most complex technologies, for example, the United States and China are now far more advanced than Europe,” worries Philippe Kehren.

The challenges of competitiveness and re-industrialisation are therefore accompanied by the joint risk of “disinnovation”, which must be addressed as a matter of urgency. ***“Seeking out and retaining talent is in fact one of the top priorities for companies,”*** confirms Cinzia Alcidi, of the Centre for European Policy Studies (CEPS) research think tank. Retaining brains means continuing to invest in skills, supporting and encouraging innovation in industry, and funding training, education and centres of excellence.

This means promoting start-ups and improving cooperation between the public and private sectors, which is often lacking at present. “We are aware of the shortcomings. Now really is the time to act,” says Philippe Kehren.

> ***We are now facing the challenges of the 21st century, an incredible level of competition from around the world, with an outdated machine from the past.***
>
> Mark Major
> Climate Advisor
> Kühne Foundation

Is Europe still relevant?

These bottlenecks and obstacles appear to be both the cause and the consequence of this decline in European competitiveness, and are fuelling a general loss of confidence in Europe's ability to turn things around. In the face of such criticism, a number of legitimate questions arise: is the "Europe machine" best suited to supporting industry, or has it been transformed into a constraining mechanism that is potentially dangerous for the future? Is a mechanism that was designed in the 1950s for six countries, to ensure reconciliation and reconstruction still relevant in a globalised world?

This machine is always ready to make decisions that affect its future. ***"We are now facing the challenges of the 21st century, an incredible level of competition from around the world, with an outdated machine from the past,"*** worries Mark Major.

"Now, with 27 countries, do you think we will ever achieve unanimity on a new vision, new tools, a new structure, new priorities? I fear not, and I'm worried that this will be a fatal mistake for the EU".

Restoring *confidence*

Europe must now prove its ability to maintain control in this context. And to restore confidence so that we can move forward in a concerted manner at a time when the mood is one of widespread mistrust. ***"The regulator believes that the industry is being intentionally deceptive and taking advantage of the situation. The industry, for its part, thinks that the regulator gets up in the morning just to make its life difficult, which is not the case,"*** says Philippe Kehren. "We're all working towards the same goal, we all want the same thing. Trust is really essential." In this regard, Europe struggles with being too abstract, a frequent criticism that hinders it from embodying these shared objectives.

"One of the first things lacking is leadership. I don't see any European leader with enough energy and vision to get things done," says Mark Major, whose general criticism of European politicians is that they come from local elections and therefore lack a global vision. "I think you have a very different mindset when you're running a global business competing on a global scale," he says. "We need leadership. And we also need an industrial decarbonisation pact that encompasses everything," adds Philippe Kehren.

Rediscovering a Europe *of ideas*

This notion of trust is also essential if we ever want to regain our boldness. Take a courageous approach to decarbonisation and ensure that Europe finds innovative avenues that other countries are not exploring because it is not in their economic interest to do so. A need to be daring. We need to be bold," says Laurence Noël. "We pay a lot for oil because we are not oil producers. But that's just as well, because oil is not the future," adds Philippe Kehren.

A commitment to the principle of a circular economy, the development of recycling channels and the search for bio-based raw materials should be seen as opportunities to relocate part of Europe's production and trade and to develop a virtuous low-carbon economy, without having to adopt protectionist measures.

The main results will be to reduce Europe's dependence on foreign countries and cut some of its greenhouse gas emissions, particularly from freight transport. For Mark Major, "30% of the reductions we need can come from these potential green supplies with products we already know".

Rediscovering *common* sense

The participants at this round table expressed the wish for a Europe capable of thinking as an ecosystem and linking all these issues together. A shared ambition and long-term convictions that are currently lacking. "We need to rediscover or redefine the meaning of our mission in Europe. I think we've lost it," says Laurence Noël.

"We're on the verge of switching to electric cars, but we have nothing in place to make it happen. We don't have the technology or the batteries. We don't have the materials, we don't have the supply chain. How do we go about it? We don't even have the people to do it. We don't have the skills," she warns. "That's what regulations should be for. Thinking in terms of an ecosystem. Focusing on how we can make it happen rather than what we cannot do."

> ***Polluters must pay. This principle can generate revenue on an incredible scale, which can then be used for innovation, skills, training and transition***
>
> Mark Major, Kühne Foundation

Moving from *intention* to action

While the diagnosis is clear and the challenges identified, the question remains: how to implement reforms and adapt regulations to move towards a shared vision, and steer investment towards decarbonisation in a way that does not conflict with the challenges of competitiveness.

For Laurence Noël of Capgemini, three priority actions exist. Firstly, investing in education and training to anticipate future needs in terms of expertise in low-carbon energies. And to do it collectively, so that we don't waste time fighting over standards and futile rivalries. Secondly, to finance the digitisation of industry and transport, which is likely to optimise flows, energy consumption and the carbon footprint. Finally, investing in a resilient supply chain, capable of constantly adapting to accidental flow disruptions or occasional load surges.

The challenge undoubtedly also lies in the ability to develop creativity. It's not a value that springs to mind naturally, but it's one that's at work when it comes to finding alternative solutions, such as the Pop-Car, and winning markets left vacant by the competition.

Decarbonisation driving *the business* model

There remains the question of financing, the linchpin without which nothing can be done. It is now just as pointless to seek profitability without a sustainable development policy as it is to think about decarbonisation without thinking about the economic model that goes with it. “Making this transition has a cost, and no single player in the value chain can bear the entire cost,” says Philippe Kehren. If funding is to be collective, its resources must not be based solely on voluntary action by businesses, nor on taxation that would run the risk of further curbing economic competitiveness and household consumption. Instead, we need to focus on empowering the players. ***“Polluters must pay. This principle can generate revenue on an incredible scale, which can then be used for innovation, skills, training and transition”***, says Mark Major. “Make polluters pay, then use this revenue to support the transition,” he concludes. Let's hear it...

Inter modality of Goods

In 2035

Responsible goods meet the intermodality challenge

Presented by:

DunKerque Port – Grand Port Maritime de Dunkerque · GEODIS · MICHELIN · SOLVAY

The players in the logistics and freight transport sector have now overcome their differences.

A radical increase in the cost of carbon emissions makes low-carbon energy sources more competitive. Additionally, the emergence of new business models is driving investment in logistics infrastructures and technologies that facilitate the transfer of goods between different modes of transport.

Intermodal hubs are now operational and profitable, and of infrastructure availability is helping to decarbonise transport. All these stakeholders are now focusing on transported goods, the "elementary particle" that unites them and pinpoints each of their responsibilities.

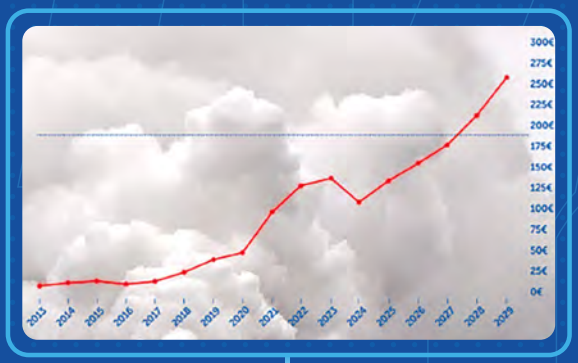
All those involved in the transport chain, right through to the end consumer, are now equipped with indicators that enable them to assess the carbon impact of the goods they transport on an ongoing basis.

Despite the continuing growth of global trade, individual responsibility will enable the world of logistics and freight transport to align with the decarbonisation trajectory set for 2050.

Scan and watch Movin'On 2035 TODAY, the programme inspired by Movin'On Summit

Animated by Ulrike Ristau-Hutter, featuring Philippe de Carné from GEODIS and Deepak Mehta from Movin'On. They share their vision for 2035, when responsible freight will have met the challenge of intermodality.

What steps were taken to meet this challenge?



2029

The cost of CO_2 makes oil obsolete

2024 — **2029** — **2030**

2030

Inauguration of the Rhine-Alps corridor paves the way for intermodality

Ports expand inland

2032

2033

2035

The Yuka of transport sparks a drive for responsibility

2035

In 2024

Almost 80% of goods transport by road is still by lorry. This figure is incompatible with the objectives of decarbonising transport, despite new, "greener" modes of energy propulsion.

Multimodal centres suffer from inadequate infrastructure, as well as a lack of alignment of standards and processes, which leads to load disruptions and slows down the modal shift towards mass modes of transport, such as rail, river and port.

2024

The performance of logistics hubs and modal transfers is hampered by a lack of fluidity, resulting in lower profitability, longer transport times and, in most cases, service level deterioration.

Existing infrastructure, the key to intermodality, is proving insufficient to support growth in the volume of goods shipped.

Measuring the impact of modal shifts in freight transport remains difficult to assess and therefore to strengthen.

In figures

5%
Contribution of the transport sector to the European Union's GDP, representing more than 10 million jobs.
(source: European Commission).

25%
of greenhouse gas (GHG) emissions from road transport in the EU attributed to heavy commercial vehicles, representing 6% of total EU GHG.
(source: European Commission).

20%
of road freight transport journeys were made empty in 2022.
(source: Eurostat).

25%
of greenhouse gas (GHG) emissions from transport in total EU emissions, has been rising in recent years.
(source: European Commission).

67.9%
EU's share of maritime transport in freight transport (in tonne-kilometres) in 2021, followed by road (24.6%), rail (5.4%), inland waterways (1.8%) and air (0.2%).
(source: Eurostat, Key figures on European transport – 2023 edition).

100%
Coverage of the TEN-T network with the European rail signalling system ERTMS, designed to improve rail safety and efficiency.
(source: European Commission, TEN-T).

2035

2029

2029

the cost of CO_2 makes oil obsolete

The strengthened ambitions of the Green Deal in Brussels have increased pressure on CO_2 quotas. The European carbon market now extends to the building and transport sectors, making carbon-intensive technologies increasingly less profitable.

A odds with the continuous growth in consumption and the volume of freight transport that goes with it, the cost of carbon weighs on production.

Europe is now directing industrial investment towards low-carbon technologies, which have become highly competitive, particularly in the field of mobility. It acts as a real catalyst, starting a movement towards green energies and decarbonisation-related innovations. Biofuels initially serve as a transitional technology to replace diesel, which has become too expensive. Innovations are stimulated based on the electrification of transport and industrial production, which are now developing at high speed, and on a large scale.

The technology is beginning to make inroads in the sea freight and air transport sectors, where it was once said to be unsuitable.

The cost of carbon is leading to increased competition between industries and modes of transport. It is directing investment towards new low-carbon technologies, which have become more competitive, particularly in the field of mobility.

2030

Inauguration of the *Rhine-Alps corridor* paves the way *for intermodality*

The long-awaited opening of the first freight corridor between the ports of Rotterdam and Genoa is now a reality. This 1,400 km corridor links two crucial points in the region, between Northern Europe and the Mediterranean, and combines rail, river and road transport.

Above all, it reveals one thing: large-scale intermodality works. This Rhine-Alps corridor, which runs along one of the most important routes for freight transport, now represents the multimodal backbone for freight in Europe.

The idea is to standardise end-to-end processes right at the heart of Europe. By standardising equipment (containers, pallets), we will be able to ensure "fluidity" between carriers, shippers and operators, as well as reducing load disruptions and improving the quality of service offered to operators. This ambition requires harmonisation across Europe and its member countries, in terms of tunnel and train dimensions. Work is underway to modernise the network in order to create missing cross-border links, eliminate bottlenecks at borders, and increase the fluidity of network traffic along its entire length. A secure, interoperable information system covering the entire line and all territories is also being developed on a continental scale.

This corridor, inaugurated at the start of the year, is now fully operational and has met with success since it opened: rail freight on the Rhine increased by 75% (in tonne-kilometres) during the first 6 months of operation.

The increase in capacity and traffic shows that demand exists as soon as technical barriers and national disparities are removed. Traffic on this corridor now runs 24 hours a day and makes full use of the infrastructure, thus contributing to its profitability. The infrastructure has also proven its resilience, as an exceptional drought on the Rhine at the end of summer demonstrated. Despite a disruption in part of the multimodal chain, it was able to absorb the traffic and bypass the point of disruption without halting transport.

This ensures continuity of service from point to point. The challenge now lies in defining a supranational mode of governance for this route, which crosses several countries including Switzerland, which is not a member of the EU. A single point of contact has been set up to centralise responses for transport stakeholders – road, rail, and inland waterway – and improve efficiency. While a number of issues remain outstanding, the essential thing is that goods can now be transported from north to south and south to north without any technical, regulatory or logistical disruption.

2035

2032

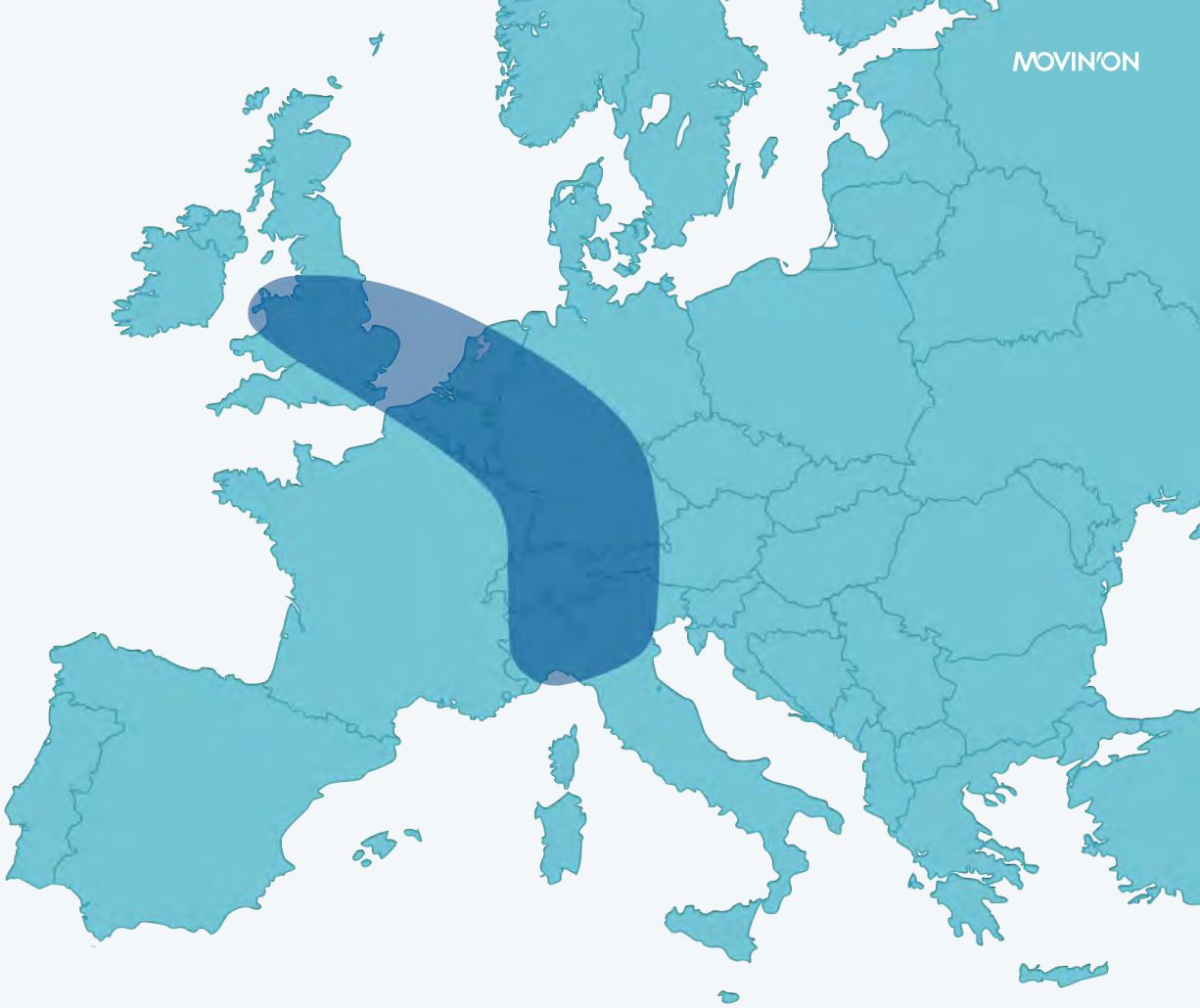
2032 Ports expand inland

The successful deployment of the corridors drives the ports in their wake, which are now establishing themselves as a hub for decarbonisation. It is through them that 80% of the world's goods are in transit. It is also on these multimodal platforms that crucial decisions are made regarding cargo transfers and access to the hinterland: rail, inland waterways, or road.

The inauguration of Dunkirk port's road-rail terminal marks, in this regard, a starting point for a new mode of collaboration among port stakeholders. Public stakeholders, on the one hand, include elected officials from local and regional authorities. A large number of private stakeholders, on the other hand, are involved: including rail operators and maritime carriers offering multimodal solutions; logistics providers enabling the multiplication of platforms in the port area; energy companies offering access to various low-carbon energy sources such as electric or green hydrogen terminals; and shippers, for whom the port is a hub for streamlining flows.

Not forgetting civil society and citizens, who have the power to influence political decisions. These collaborations unlock investments in infrastructure, methods, and digital technology that govern these "new ports". They make the Dunkirk terminal a unique and operational experiment in intermodality.

This updated port district is designed from the outset to optimise flows, simplify goods handling and connect modes of transport, such as ships and freight trains, and ultimately simplify the modal shift from road to rail. It now concentrates on the production and storage of low-carbon energy sources needed for its operation (offshore wind farms, biogas storage, hydrogen production, etc.) and on-site storage areas for goods, in purpose-built vertical warehouses that limit the amount of land required. More connected, more interoperable, more fluid, the port is also more integrated into the city and connected to all modes of transport that pass through its infrastructures.



The port is firmly orientated towards the land and integrated with its surroundings, emerging as a new player in local urban planning. Located at the crossroads of maritime, inland waterway and rail transport, connected to the Rhine-Alps corridor and the economic basin of Battery Valley, the Port of Dunkirk is becoming a key player in transport interoperability.

This "new port" is pioneering fresh modes of governance. First, at the site level, through the involvement of an independent port operator, with the authority to arbitrate decisions made between shippers, dock workers, and carriers. Second, on a regional level, by encouraging collaboration between transport and regional players. Finally, digital, with the sharing of digital data being a key condition for optimising communication between the various actors operating on the site. The ability to map flows digitally and in real time allows for the integration of technologies based on artificial intelligence and robotic solutions, automating the transfer of goods, reducing handling, and optimising transfer points.

In the middle of the year, the Dunkirk rail-road terminal won the "Port Community Award", becoming a showcase inspiring many other multimodal platforms. A local success story with international reach, it results from the successful integration of mobility stakeholders, the port industry present, logistics and multimodal and urban standards that help remove numerous interdependent technical, legal, financial, political, and societal barriers. A logistical feat in terms of interoperability that unearths an unexplored world of possibilities in terms of real-time monitoring concerning the impact of goods transport.

2035

2033

2033 The Yuka of transport sparks a drive towards sustainable practices

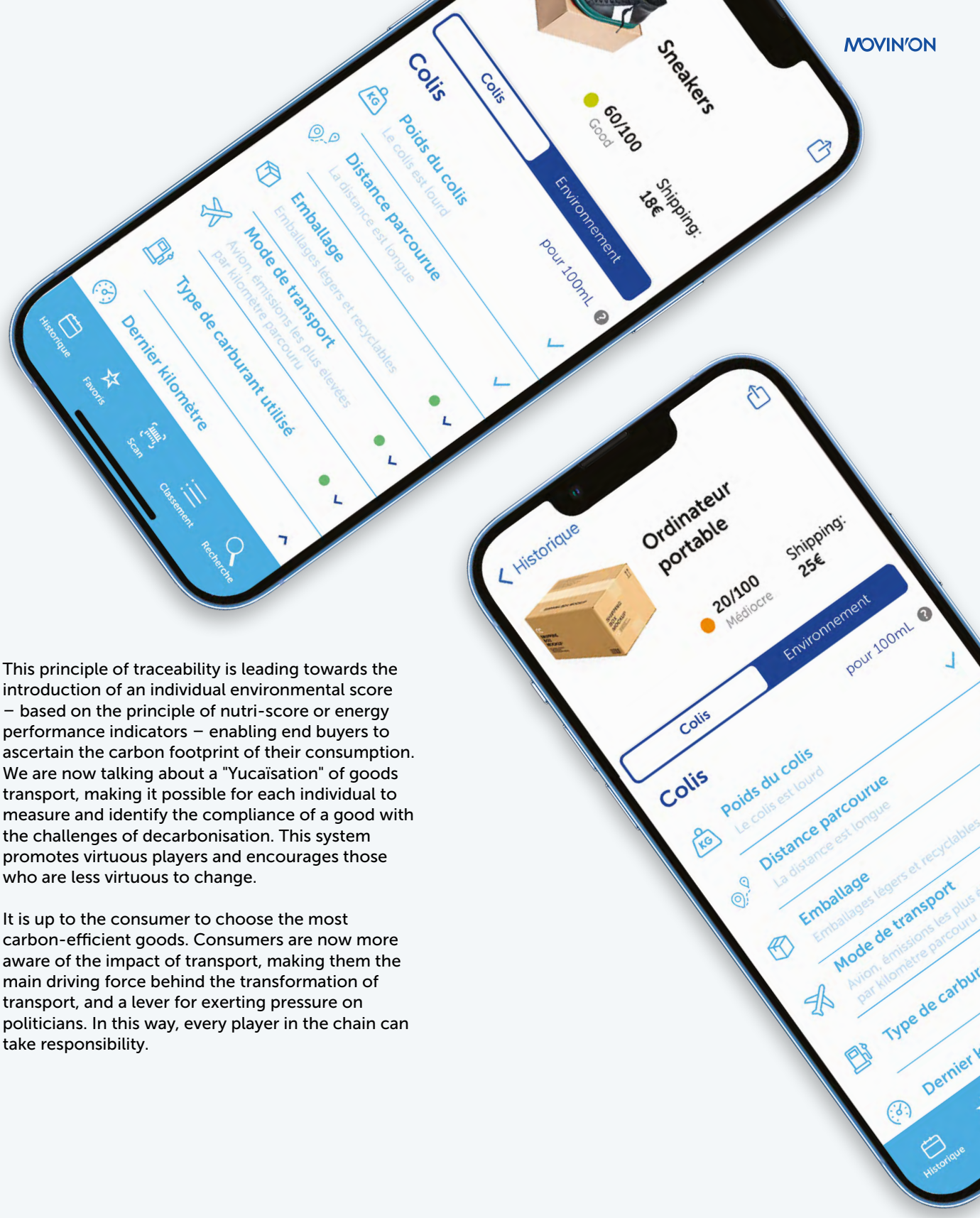
The development of multimodal platforms helps to standardise intermodality rules between operating and data analysis systems. From now on, all calculations will be based on the same standards, a "common language", modelled on the European taxonomy.

Led by the World Trade Organization, the opening up and interoperability of transport data is now compulsory, and is accelerating the development of a large number of innovations for carriers and multimodal operators.

A "Waze" for lorries is fast becoming a digital solution for optimising routes, waiting times and loads for carriers. The development of a "capacity exchange" sanctions empty journeys and enables transport operators to reach agreements and increase the load factor of their means of transport.

These solutions have led to the creation of the "single unit carbon rate", a universal indicator. Its aim is to increase transparency and, ultimately, create a climate of trust between goods and consumers.

This indicator makes it possible to track, measure and use the carbon impact of a transported good at any time, and to calculate its environmental cost in euros. Accessible via any connected digital device, it assesses the impact of transport at every stage of the supply chain. A player who "makes the effort" to use low-carbon transport is therefore identified by the system, which is then able to calculate the environmental cost of goods throughout their journey to the consumer's shopping basket. Today, this environmental cost is assessed at the level of a container, or even a pallet. The possibility of going all the way down to the individual package is now being considered. Some goods can even "communicate" this individual score directly to the consumer via a simple smartphone. This functionality now feeds into product marketing.



This principle of traceability is leading towards the introduction of an individual environmental score – based on the principle of nutri-score or energy performance indicators – enabling end buyers to ascertain the carbon footprint of their consumption. We are now talking about a "Yucaïsation" of goods transport, making it possible for each individual to measure and identify the compliance of a good with the challenges of decarbonisation. This system promotes virtuous players and encourages those who are less virtuous to change.

It is up to the consumer to choose the most carbon-efficient goods. Consumers are now more aware of the impact of transport, making them the main driving force behind the transformation of transport, and a lever for exerting pressure on politicians. In this way, every player in the chain can take responsibility.

What actions did we take in 2024 to achieve these results 10 years later?

01 Community of Interest

Intermodal Goods Transport to, from, and within the Port of Dunkirk

02 Community of Interest

Green Corridors for Goods Transportation in Europe

Community of Interest

Intermodal *Goods Transport* to, from & within *the Port* of Dunkirk

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Burning question

What infrastructure will the Dunkirk industrial port area need to increase multimodal transfer, and thus achieve its dual objective of growth and successful ecological transition?

What impact are we aiming for?

» Help decarbonise the transport of goods in the Dunkirk port through the optimal transport modes mix.

» Involve the players in the industrial port zone in the port's decarbonisation objectives with regard to modal shift, as well as identifying the most important and economically viable projects, and launching the most urgent actions.

What are we creating?

» Land transport
- Define the specifications for dedicated truck lanes linking the southern industrial zone, the container terminal and logistics platforms.

» Rail transport
- Identify business opportunities for a combined transport terminal connected to rail highways.

» River transport
- Identify development prospects thanks to the forthcoming commissioning of the Seine Nord Europe canal.

Who's on board?

Dagur, Aluminium Dunkerque, ArcelorMittal, BASF We create chemistry, Bogaert, Clarebout, CMA CGM, DFDS, Dillinger, Dunkerque Port, Fret SNCF, PSA, BDP, Rhenus Logistics, SDMT, Terminal Flandres, TotalEnergies, UMC, Verkor

What's our roadmap?

» *March 2024* **Roadmap & decarbonisation levers.**

» *April 2024* **Current actions and projects of Community of Interest members, and identification of the main ones.**

» *May 2024* **Launch of workshops: dedicated lanes & container terminal.**

» *September 2024* **Land transport workshop : digital twin, road planning, dedicated lanes, employee mobility.**

» *November 2024* **Specifications for the dedicated lanes project & call for expressions of interest for the container terminal.**

Community of Interest

Green Corridors for *Goods Transportation in* Europe

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Community of Interest

Burning question

How can we accelerate the decarbonisation of European goods transportation thanks to modal shift and intermodal corridors?

What impact are we aiming for?

- Demonstrate the feasibility and identify the key levers of modal shift ambitions for decarbonising goods transport.
- Accelerate and improve transport efficiency and impact (time, service, cost, CO_2).
- Make transportation more resilient (increase options, anticipate social changes, foster digitalization and automation).

What are we creating?

- Design and implementation of European intermodal corridors to demonstrate feasibility.
  - Three learning paths differentiated by distance, type of goods, recurrency, key actors.
- Whitepaper for shared learnings and identification of 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?

AI CARGO FOUNDATION, ESG Clermont Business School, GEODIS, HISSEO, Mamma Grana, Maritime Energy and Environmental Transition, medLinkPorts, MICHELIN, Mines ParisTech, NORLINK PORTS, PARIS TERMINAL, SOLVAY, VELA, Wind Ship association

What's our roadmap?

- **Three proofs of concept for concrete collective learning:**
  - *May 2024* Study on the shift to short-sea shipping (short distance, corporates, chemical products).
  - *July 2024* Corridor 1 set-up (long distance, non-recurrent flow, manual set-up, SME).
  - *September 2024* Corridor 2 set-up (long distance, recurrent flow, corporates, bulk).
- *Q4 2024* **Key success factor identification and whitepaper publishing.**
- *Q4 2024* **Key actor & stakeholder map.**

Insights & strategic *perspectives*

At the heart of discussions at Movin'On Summit

In 2035, *an efficient usage of infrastructure and vehicles is* **the new pillar** *of pan-European intermodality.*

The ambition to build a sustainable and resilient pan-European multimodal transport network is still hampered by the predominance of road transport. Despite efforts to develop a system that gives priority to bulk modes of transport, such as river and rail, over 80% of goods are still transported by lorry. This volume is incompatible with the decarbonisation targets set in Europe. Whatever we try to do, it's always simpler, cheaper and quicker to transport goods by lorry than to try to alternate between different modes of transport. The arguments are hard to refute, and Michelin Chairman Florent Menegaux reminded us of this reality at the start of the panel discussion: to travel the 728 km from Michelin's head office in Clermont-Ferrand to Brussels, he had to use no fewer than four means of transport and as many different stops, methods of payment, tickets and locations.

In the end, this experience is quite similar to that of the goods, and provides a better understanding of the issues involved. "When we talk about multimodal solutions, we need to think in terms of what we want to achieve. Is it a question of time, cost, reliability or quality? There are many different aspects to consider," he says. "It's a complex mechanism to put in place, involving both the aim, the means available, and a large number of parameters that have to work together."

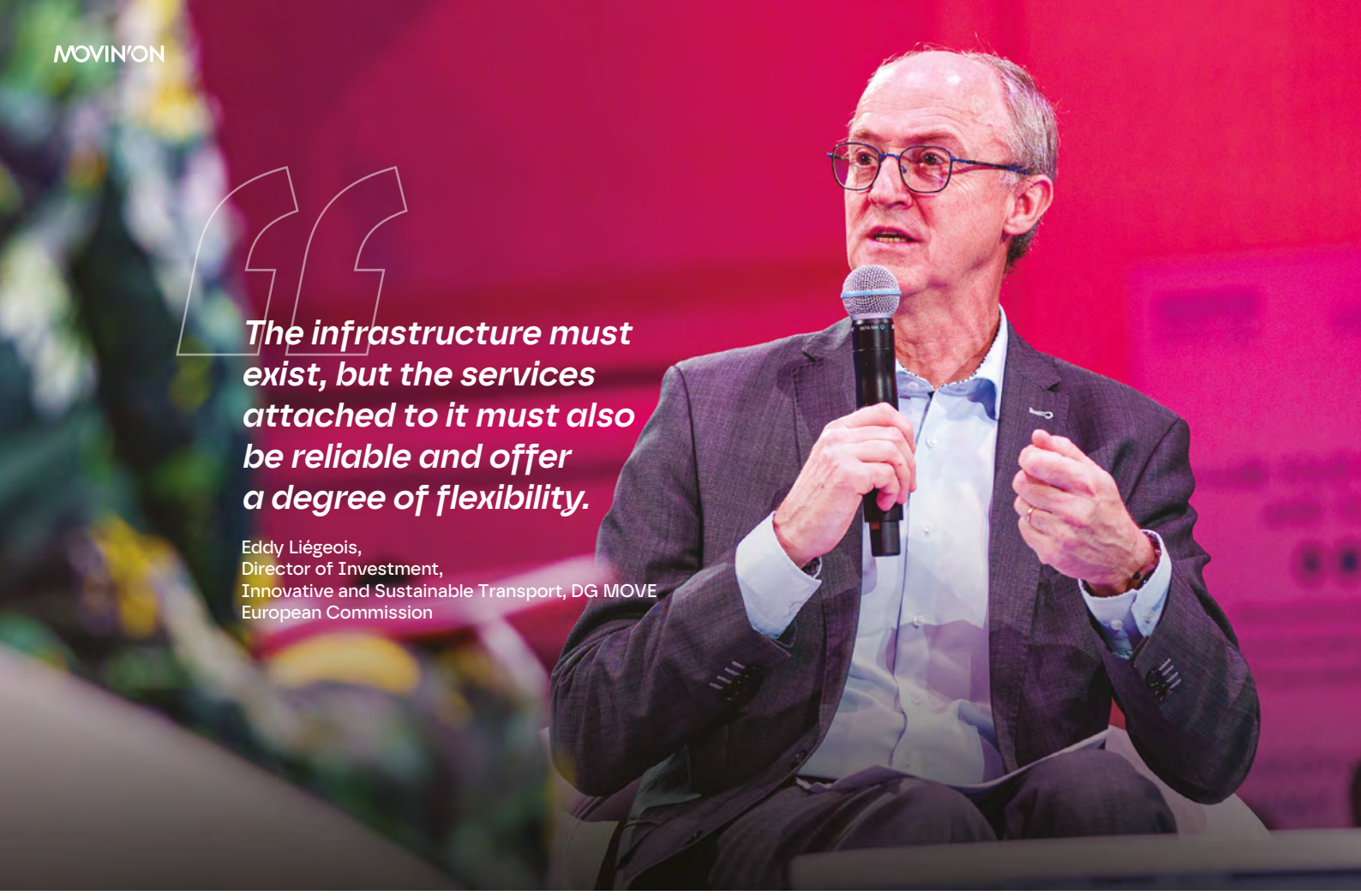
Simplifying *access to bulk* transport

This ability to move goods smoothly throughout the transport chain has a name that embodies its ambition: intermodality. This is an issue for logistics professionals, requiring us to think holistically rather than in isolated compartments, and the main obstacle lies in our ability to overcome territorial disparities and remove the obstacles that exist when freight containers change modes of transport. “As a shipping line, we have the capacity to consolidate the movement of these containers on massive means, such as a river barge or a train,” notes Christine Cabau, Executive Vice President in charge of Assets and Operations at CMA CGM, which transports up to 22 million of these containers around the globe every year.

For her, transport practices are, above all linked to cultural and territorial factors. If China moves goods by barge, it's because that's what it has always done. If the United States moves its containers by rail, it's because its infrastructure was built on this model. In Europe, it's the lorry. And such habits are hard to break for a transport coordinator.

When we talk about multimodal solutions, we need to think in terms of what we want to achieve. Is it a question of time, cost, reliability or quality? There are many different aspects to consider.

Florent Menegaux,
President,
Michelin Group



The infrastructure must exist, but the services attached to it must also be reliable and offer a degree of flexibility.

Eddy Liégeois,
Director of Investment,
Innovative and Sustainable Transport, DG MOVE
European Commission

Infrastructure *and services*

We must therefore focus on the appeal of alternative solutions in order to transform these uses. To simplify the task of transport coordinators and make mass transit modes as easy to use as lorries. "When you're not a specialist, it's a lot easier for you to pick up the phone and call a road haulier to organise a lorry than it is to ask yourself: who do I call to organise it by rail? How do I contact the barge operator? It's really, really difficult," she insists. While there is still a need to standardise infrastructure at a European level, the key to the success of intermodality lies in the support provided to transport operators.

"We must continue to promote the construction of infrastructure. ***The infrastructure must exist, but the services attached to it must also be reliable and offer a degree of flexibility.*** This is not the case at present. Until this happens, we won't see intermodal terminals achieve real success," adds Eddy Liégeois, head of trans-European transport policy for the European Commission.

Making *intermodality* desirable

To compete with road transport, intermodal services must overcome a number of technical obstacles. First of all, availability. Ensure that trains and river barges run as frequently as lorries. For Christine Cabau, “the customer is always in a hurry. He can't wait for tomorrow. If you have an offer available immediately, they may be able to buy it. But if he has to wait, he'll choose the lorry.” Secondly, there is the issue of cost, as intermodality is not necessarily cheaper than a lorry capable of transporting goods along the entire length of the network.

Even if everyone is aware of the need for a green transition, carriers remain economic players who will only change their habits if it is in their interest to do so in terms of profitability. “Transport is a supply industry,” says Christine Cabau. However, a cutting-edge offer always presents an economic risk for these players. It is therefore important to encourage them to turn to mass transport methods that are less carbon-intensive than road transport. This approach involves taxes, but also subsidies to encourage creative solutions and improve the distribution of traffic flows.

Data to the rescue!

Another challenge is optimising loading. After all, to be profitable, a mass transit system has to operate at full capacity. Half-full transport is not profitable. Here, too, the challenge is to improve cooperation between the players involved, to enable cargoes to be pooled more effectively.

This is an area where information is king, and which requires the development of a digital environment in which data can circulate securely on a European scale. The creation, in 2023, of the European mobility data space (EMDS), which is still in the launch phase, is aimed precisely at facilitating access to and the sharing of data between the many players involved in transport. This initiative requires these players to participate and release their precious data.

On the whole, and by common consent, Europe currently suffers from an overly segmented approach to the problems to be solved, which runs counter to an intermodality policy that, by its very nature, requires a cross-sectoral vision. “We're trying to solve a problem that only concerns rail freight, without trying to develop a global perspective,” warns Eddy Liégeois. In his view, it is therefore important to extend this vision to all solutions and services in order to effectively develop the intermodal offer: “Public money is not unlimited. We have to make the best use of it.”

There is one player who already has all the data collected and who can regulate it. The ports.

Christine Cabau,
Executive Vice-President, Assets and Operations,
CMA CGM

The *challenges of* simplification

The situation is clear. It requires the simplification called for by the players involved, with a view to fostering relationships and processes. Freeing up information, pooling data and encouraging dialogue. There is no single solution, but there is a general need to encourage unhindered collaboration between public and private sector players to enable the emergence of an ecosystem from the mountain of standards, formalities and constraints that currently stand in the way.

"There can be no sustainability without an economic model to support it. The most important thing is to develop a regulatory system that encourages the emergence of this ecosystem rather than trying to regulate the ecosystems themselves," says Florent Menegaux. "If we really want to develop intermodality, we must pool resources, encourage collaborative innovation, exchange data and put in place new financing mechanisms," he insists.

"There is one player who already has all the data collected and who can regulate it," says Christine Cabau. "The ports." Port areas are crucial transit spaces where the majority of goods arrive and depart from the continent, where the data for all these flows circulates and where many players work together. Convincing arguments for simplifying exchanges. "Port community systems are designed to provide a global view of what is happening with freight," she says. A centralised vision is needed to make all these exchanges more fluid, which could make ports the key players in the development of intermodality in the coming years.

And what about the *city*?

The city has a major role to play in developing this global and collaborative vision. Firstly, because it is a place of consumption, making it the main destination for goods transport. Secondly, because it also brings together the key issues of decarbonisation and reducing transport congestion. The city is in fact a hub where all the flows converge, and therefore constitutes a kind of small-scale testing ground for intermodality issues. "By 2040, 430 urban nodes will need an intermodal freight hub," says Ivo Cré, Project Director of the Polis Network, which brings together a large number of European cities to discuss transport issues. This challenge requires the same considerations as those applied to the transport network as a whole: focusing on data flow, service development, and increased collaboration between various stakeholders.

In his view, multimodal interchanges in towns and cities are the next stage in the development of intermodality. This means that, from now on, the major structuring programmes must take account of this local scale and be supplemented by numerous local and specific actions. ***"We need to understand that the next big thing in transport will be made up of many small things,"*** he says. "We operate in complex environments, where it sometimes takes 120 actions along a freight corridor to make something work. You need a financing model that allows you to take all these small steps," he notes.

> ***We need to understand that the next big thing in transport will be made up of many small things.***
>
> Ivo Cré,
> Policy Director,
> Polis

Multi modality of People

In 2035

Driven by usage, technology makes multimodality desirable

Presented by

An *end-to-end* service and a *willingness* to share makes *the development* of *multimodal* transport *possible and* desirable for all

Thanks to a policy of opening up and sharing data, urban and suburban transport has become connected and easier to access. In general terms, it is now possible to build a seamless and easy mobility path between modernised and autonomous shared transport, soft and shared mobility modes, connected and on-demand carpooling, and carsharing solutions for journeys of less than 500 kilometres, around urban centres or between cities.

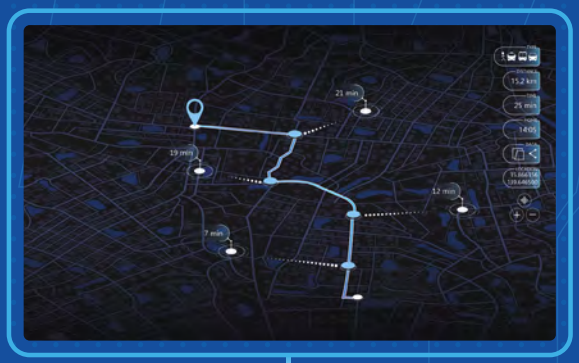
In this diverse landscape, there is now a mode of transport to suit every use.

The private car is still on the road, but it has found an appropriate place at the heart of a shared mobility system. It has been radically transformed to adapt to the constraints of the city and to mobility patterns. Thanks to a range of solutions that are always adaptable, low-carbon and interconnected, the transport sector is well on the way to achieving the goal of zero net carbon emissions by 2050, despite the significant increase in demand for transport and mobility needs around the world.

Scan and watch Movin'On 2035 TODAY, the programme inspired by Movin'On Summit

Animated by Rahul Gupta and featuring Juliana Buelvas from Alstom, Valérie Wattelle from Capgemini and Tanguy Deren from Akkodis. They share their vision for 2035, where technology, driven by usage, makes multimodality desirable.

What steps were taken to meet this challenge?



2026

Open data frees up intermodal transport

2024 — 2026 — 2030

2030

Community transport made fun

2032

Mobility "loyalty" scheme wins public support

2034

With Software-Driven Mobility, mobility paths become connected and instantaneous

2035

2035

In 2024

In 2024, mobility in urban and peri-urban areas began to change. The number of electric vehicles proliferated, as did alternative modes of individual mobility, such as bicycles and scooters. This transformation resulted in improving air quality, but traffic and congestion limited its benefits.

2024

Connecting different modes of transport seamlessly and under tight schedules was a daily challenge. For many people, multimodal transport continues to be an obstacle course in which the use of the car remains central. Mass transit and low-carbon transport must become desirable. Instead of doing away with the car, the aim is to integrate it into a multimodal journey, wherever it makes the most sense. The main stumbling block remains a reluctance to share: the use of one's vehicle and public space, using public transport more often or sharing mobility data. Sharing is the key to multimodality.

Carpooling, shared mobility, the massification of means of transport, the interoperability of services and, to some extent, even public spaces are all principles based fundamentally on sharing. The aim is to "inspire" all those involved in mobility to share their experiences, with a view to promoting an end-to-end mobility experience or offering: sustainable and beneficial to all.

In figures

83.8%

Rate of car use during rush hour in France *(source: Vinci Barometer).*

2.6 T

Current average CO_2 emissions per French person for annual travel, with a reduction target of 0.6 t by 2050 to comply with the Paris Agreement. *(sources: ADEME Carbon Base 2021, 2 Tonnes Workshop).*

34%

European employees spending 1 hour or more each day commuting to and from work *(source: Eurostat, 2019 data).*

1.22 MILLION

Kilometres travelled in short-distance carpooling in October 2024 in France, an increase of 45% on the previous year *(source: French National Carpooling Observatory).*

29%

Share of French people using at least two modes of transport for their journeys to and from work *(source: Alphabet x IFOP 2023).*

2035

2026

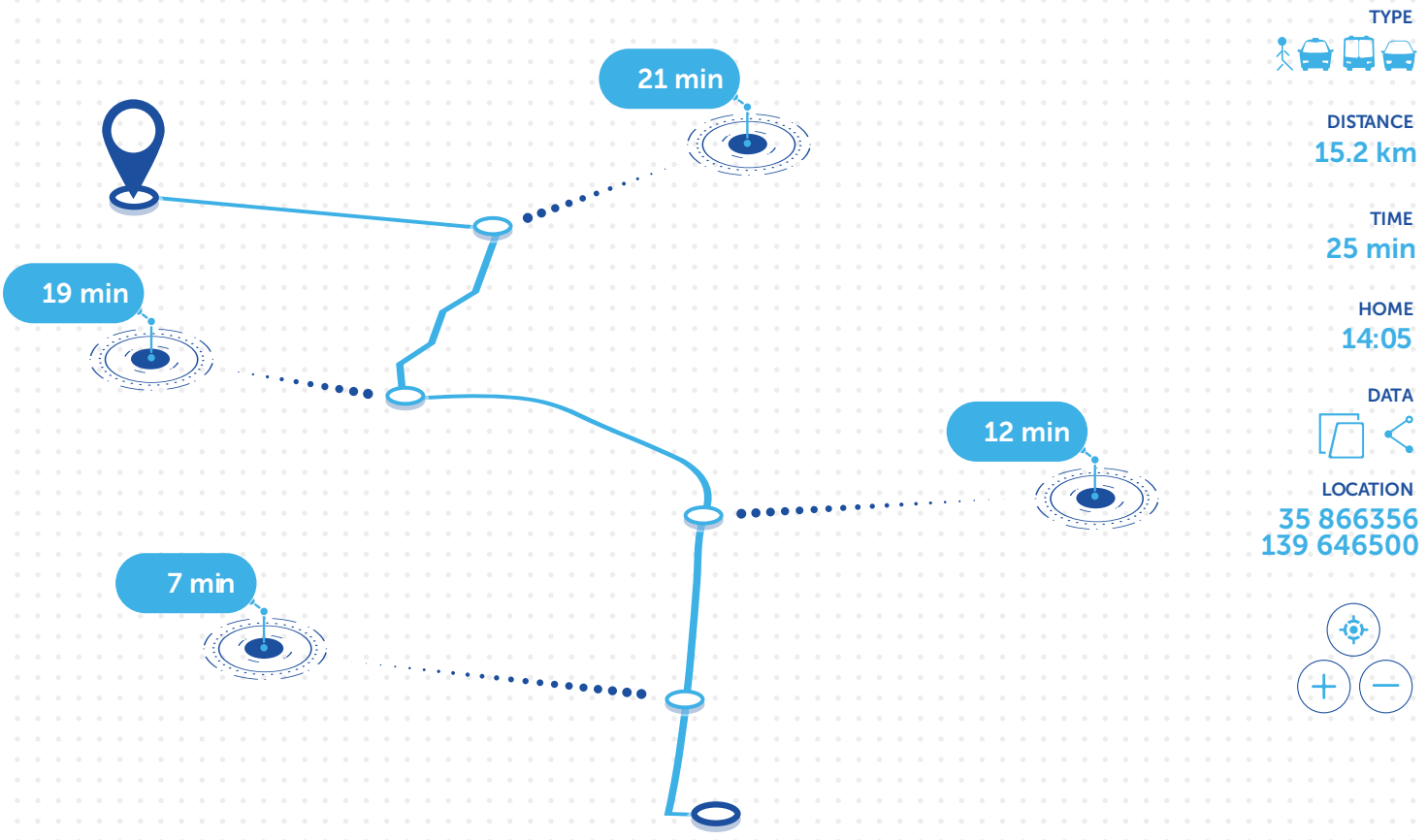
2026

Open data frees up intermodal transport

The vast amount of data produced by the transport sector has long made it a major player in the data economy. Usage, flows and traffic are analysed closely to gain a better understanding of travel patterns and improve our service offering.

Transport operators are well aware of the value of data collected at each stage of a journey. But they have also understood that this value is derived more from sharing it than from owning it.

Based on the results of European projects such as MOBIDATALAB, transport authorities, manufacturers, start-ups and operators have set about establishing rules for the governance, sharing and interoperability of this data between all stakeholders. Under European regulations, all transport sector stakeholders are required to make this data available to ensure that it is transparent, accessible, interoperable and reusable.



Sharing data means enabling all modes of transport to communicate with each other, thereby simplifying their interactions.

This presents an opportunity for technology players, who are harnessing this precious raw material and rapidly developing innovative solutions. Better aware of all transport conditions, passengers can now make an "informed decision" about their itinerary, combining the most efficient modes of transport and minimising waiting times at multimodal hubs.

The crucial question of payment has even been resolved by an intermodal application that allows payment to be made for all modes of transport. By sharing data, carriers can also gain greater visibility of the state of their networks, load transfers and the profitability levers available to them. Openly conceived, data facilitates transport interoperability and the development of a resolutely multimodal form of mobility, for which the private car is no longer necessarily the default choice.

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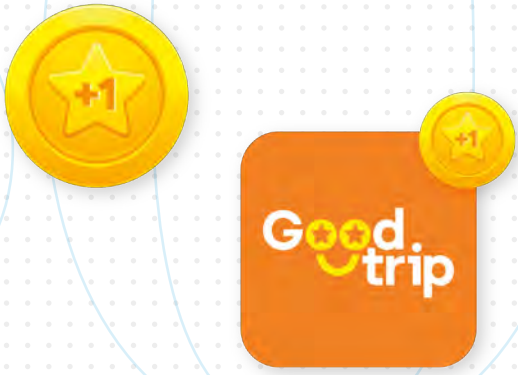
2030

Community *transport* made fun

While major public policies and urban transport programmes know how to talk about core routes, feeder infrastructure, journey times and monetary costs, they all too often overlook the desires and needs of transport users. These psychological factors are key to the mass adoption of shared, low-carbon forms of mobility.

The transformation of community transport is voluntary, even enthusiastic. It is this observation that has prompted a number of innovative players to take a closer look at these adoption levers.

Following data accessibility, social applications are emerging with the goal to create social connections and initiate civic movements that promote sustainable mobility practices. One of them is set to conquer all smartphones.



By drawing on the principles of gamification, the Good Trip app rewards the most responsible actions and removes barriers to adopting certain modes of transport.

Game-based incentives now make choosing sustainable transport more appealing.

Choosing public transport over a private vehicle, offering to share a ride through carpooling and cycling at rush hour, trigger a system of social rewards and engage citizens with these crucial issues. The application unleashes a desire to share that was previously lacking, and creates a community spirit around issues of sustainable mobility.

It is revolutionising the travel experience by offering gaming between travellers. Where it becomes possible to rank yourself to others on a global scale, to check the relevance of your energy choices, to showcase your efforts, and to challenge yourself against targets in the same way as sports applications.

We naturally try to "do better", to minimise our impact. Most importantly, you are no longer alone in making your choices. The Good Trip application allows you to instantly visualise the consequences of seemingly innocuous changes to certain transport habits. And it is beginning to generate a global dynamic that is profoundly transforming the way transport is used.

2035

2032

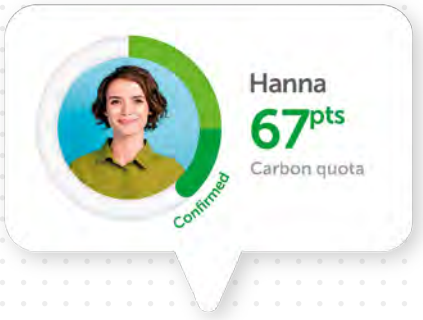
2032 Mobility "loyalty" scheme wins public support

Incentivising measures, such as support for carpooling, subsidies for the purchase of low-carbon vehicles, or the use of soft mobility, have promoted the transformation of transport. Other restrictive measures, such as taxing large vehicles or increasing parking charges in towns and cities, have also contributed to its development. Despite all this, and notwithstanding the development of citizen-led actions, usage patterns have yet to transform sufficiently to achieve the desired decarbonisation of mobility. The implementation of a Green Mobility Programme is beginning to make a difference.

It was already known that the limit of 2 tonnes of CO_2 equivalent emissions (per person per year) was necessary to stay within the 1.5 °C global warming target set by the Paris Agreement. We have now reached 4 tonnes, with significant disparities between regions and cities.

These measures concern all modes of individual consumption, but transport choices play a key role alongside residential heating. The transformation of mobility habits depends on public acceptance, driven by the adoption of the Green Mobility Program, which further encourages citizens to embrace low-carbon mobility practices. The success of the scheme lies in a simple truth: it focuses on usage.

The concept is simple: at the beginning of the year, each individual receives a specific carbon quota allocated to transport, which they must comply with. Throughout the year, motivational campaigns and eco-compensation mechanisms reward the efforts made. Anyone can check the status of their quota at any time and receive personalised advice about how to manage it more effectively.



Seen as a positive incentive, the Green Mobility Programme is triggering a wave of awareness of the individual impact of transport and a sense of responsibility for individual actions. It helps everyone better understand their role in the collective goal of decarbonising transport.

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2034

With Software-Driven Mobility, mobility paths become connected and instantaneous

While the accessibility of data and connecting modes of transport to their environments are radically transforming usage, the private vehicle has not been ignored. It is no longer at the heart of urban mobility, but it has undergone a radical transformation. Software-defined vehicles, or mobile objects powered by mobility data, are now fully operational, to the benefit of Software-Driven Mobility.

A principle that has nevertheless necessitated a radical transformation of the very idea of the car, which is now based on the services it provides.

The car is first and foremost designed as a communication software system capable of governing its behaviour, interacting with its environment, communicating with other modes of transport, interoperating with personal assistance AIs, and improving itself according to needs and technological developments.

Considered an integral part of shared transport, the car is permanently connected to the mobility system in and around the city. It is now capable of adapting to traffic conditions, integrating seamlessly into multimodal journeys, spontaneously offering a carpooling solution at the start of a journey, being shared, and adapting to the habits and needs of users.

The car is now a multifunctional object, capable of communicating with the driver's ecosystem and raising awareness about their usage habits. Designed in this way, the vehicle knows nearly as much about its driver as our handheld communication devices, with which it continuously exchanges information. Software-defined vehicles have given rise to Software-Driven Mobility.

Like any operating system, the vehicle can be upgraded throughout its life cycle, in real time, by constantly adapting to its environment and constraints. It therefore paves the way for predictive maintenance, autonomous driving, and naturally contributes to the calculation of the score included in each driver's carbon passport.

What actions did we take in 2024 to achieve these results 10 years later?

01 Community of Interest
4 People Mobility Scenarios in 2040 (100-500 km range)

02 Community of Interest
Software-Driven Sustainable Mobility

03 Community of Interest
Intermodality for People

Community of Interest

4 People Mobility Scenarios in 2040 (100-500 km range)

Powered by:

ALSTOM

Connect with the content leaders:

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Alstom

Bruno Bourdon
Movin'On

Community of Interest

Burning question

What future can we imagine for the mobility of people and goods over 100-500 km by 2040?

What impact are we aiming for?

- Develop a cross-sectorial and agnostic vision of the disruptions that can affect 100-500 km mobility in Western Europe, by 2040.
- Explore future mobilities, their potential impact on different modes, and opportunities to recover and cope.
- Provide an analysis framework to members of the Community of Interest to allow them to prooftest their products/services roadmaps.

What are we creating?

- 4 contrasted, illustrated and quantified scenarios (narrative, global volume of mobility and evolution of modal shares).

Who's on board?

ALSTOM MICHELIN STELLANTIS TotalEnergies

What's our roadmap?

- *November 2023* **Creation of a work package for each members.**
- *February 2024* **A one-day workshop to share major trends and identify an initial batch of scenarios.**
- *May 2024* **Review of scenarios with external stakeholders like Safran, Thales Avionics, ADEME, IVECO and ITF.**
- *July 2024* **Convergence of four contrasted scenarios.**

Discover our scenarios by scanning the QR Code. For more information please contact us.

Community of Interest

Software -Driven Sustainable Mobility

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Capgemini

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Valérie Wattelle
Capgemini

Pierre-Édouard Sorel
Movin'On

Community of Interest

Burning question

How can software both drive and strengthen sustainable mobility, making it desirable, affordable, safe and accessible?

What impact are we aiming for?

» The decarbonation of mobility thanks to software and data enabling a virtuous change of mobility usage: more shared trips, more intermodal trips, less solo driving.

What are we creating?

» A white paper demonstrating the impact and listing the regulatory, technological and transformation levers of software-driven sustainable mobility:

- The need for a European Green Mobility Passport, as a loyalty program for citizens and a major enabler to software-driven sustainable mobility solutions.
- Making a case for integrating software-based solutions for decarbonised trips directly into new cars.
- Use cases to showcase the power of Software-Driven Mobility in 2035.

Who's on board?

Capgemini · MICHELIN · Microsoft · SNCF · Allianz · Allianz Partners · ecov

What's our roadmap?

» *2024* **Based on the "100-500 km prospective scenarios" Community of Interest, identification of major levers created by software. Business ideation.**

» *2025* **Join us for the next steps: Preparation and launch of Proof of concept. Go Live.**

Community of Interest

Intermodality *for* People

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AKKODIS

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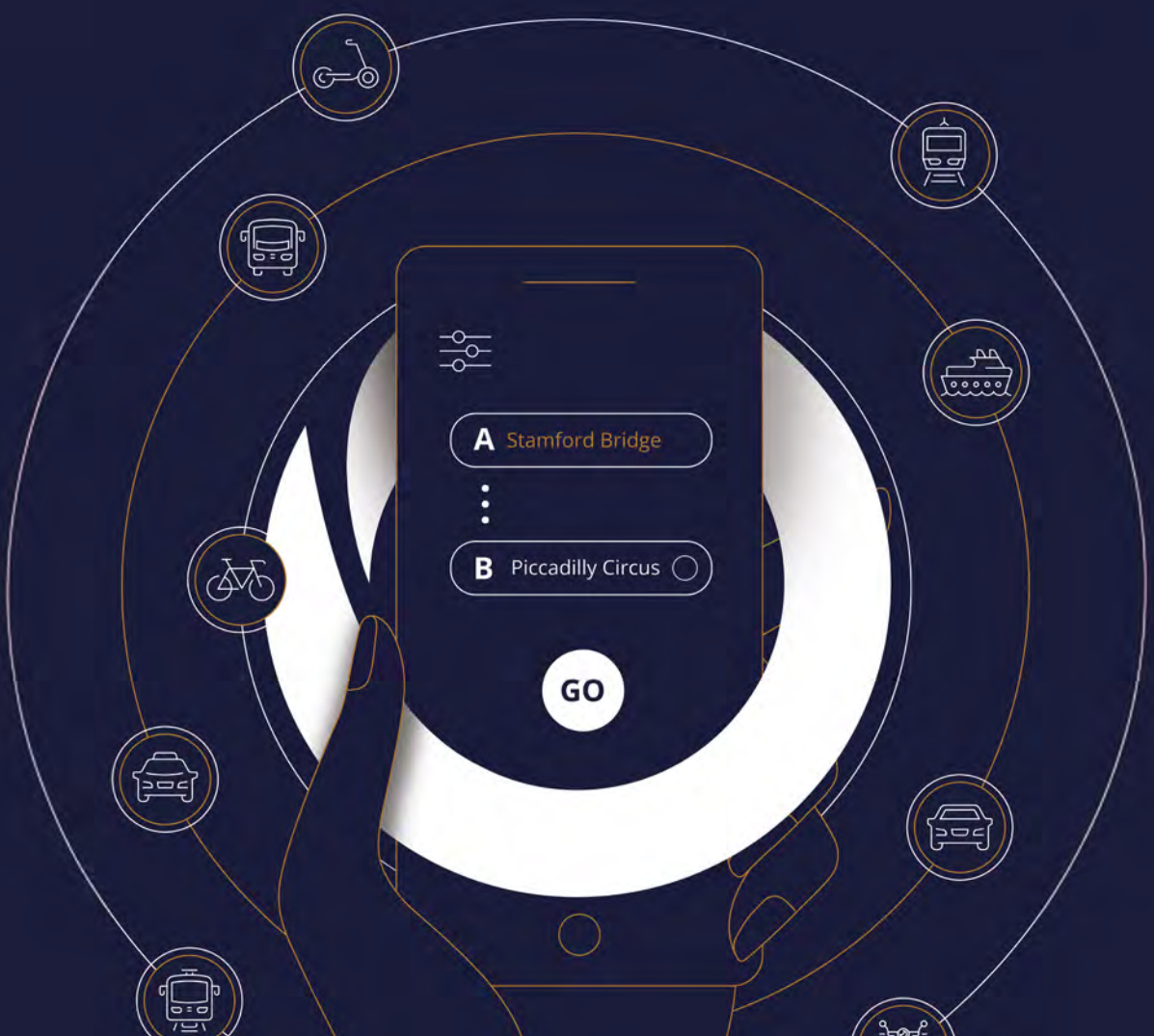


Community of Interest

Burning question

How can we improve the intermodality experience to make it more attractive?

What impact are we aiming for?

» Decrease solo car driving on commuter trips, because intermodality has been made simpler and joyful.

What are we creating?

» A white paper advocating a mindset change through concrete actions:

- Include a sensorial/comfort approach in transport equipment and infrastructure design, especially in waiting areas.
- Facilitate usage of personal active mobility devices (foldable bikes, scooters...) in trains and buses through standard dimensions (e.g. luggage cabin) and dedicated storage solutions.
- Improve traveller experience through social interactions or games during trips, making trips a joyful experience.

Who's on board?

THE ADECCO GROUP · AKKODIS · KANTAR

What's our roadmap?

» **White paper is available. Please contact us if you want more information.**

Scan this QR code
to download our white paper

Financing the Energy Transition

In 2035

Impact *indicators* lead to *enlightened energy choices, with* financing secured

Presented by:

ALSTOM · BrestPort À la pointe de l'Europe · Brittany Ferries · Capgemini · CMA CGM · ENGIE · GEODIS · MCA · TotalEnergies · VINCI

Choosing *a low-carbon mode of* transport *has* never been *so* simple... *or so* complex.

*I*nvestments have increased the number of energy solutions available and encouraged a massive shift towards alternative modes. Transport stakeholders must now constantly balance compliance with service offerings and actual expectations, delivery costs, delivery times, and varying environmental impacts.

Choosing modes of transport and energy, which are often contradictory and sometimes difficult to prioritise, is made easier by the development of indicators that assess the carbon impact of a product in real time.

This gradual awareness of the impact of transport means that the entire world trade value chain is becoming more responsible, leading to a transformation in the practices of all those involved, from producers to end consumers. The decarbonisation of freight transport, a goal set for 2050, is now well underway.

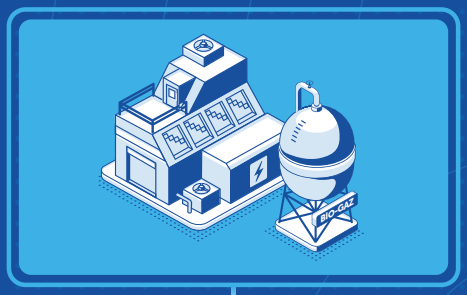
Scan and watch Movin'On 2035 TODAY, the programme inspired by Movin'On Summit

Animated by Hayley Edmonds and featuring Émilie Espanet from CMA CGM and Sylvain Chapon from Engie. They share their vision for 2035, when impact indicators will have led to informed energy choices, with financing secured.

What steps were taken to meet this challenge?

2027

Low-carbon energy solutions are scaled up



2024 — 2025 — 2027 — 2028

2025

A platform unites all transport stakeholders

2028

The network of mobile charging stations expands

2029

The “Energy Model Canvas” shapes energy decisions and investments

2029 2034 2035

2034

The “Impact Score” raises awareness more effectively

2035

In 2024

In 2024, the decarbonisation of freight transport will come up against the need for financing to enable the development of a large-scale, low-carbon energy network that is efficient and offers an available source of energy adapted to each regional use and scale .

2024

CO_2 emissions have already fallen in the largest European countries. But faster progress is essential. This acceleration is possible thanks to the electrification of uses, energy savings, the development of renewable energies and low-carbon gases (biomethane, hydrogen, synthetic molecules). The switch to electric power for heavy vehicles, which account for almost 40% of transport-related CO_2 emissions, remains difficult to achieve. However, this is an essential prerequisite for decarbonising transport. This major challenge requires significant investment in capital expenditure (CAPEX), not only in Europe to develop the necessary infrastructure and technologies, but also on a global scale across the entire transport chain.

Furthermore, these investments will entail high operational costs (OPEX) to ensure their operation and maintenance. This financial commitment must be made quickly, and over the long term, to accelerate the transition to low-carbon transport. These considerable resources are profoundly changing the business models of multimodal hubs and distribution networks in particular, which must be reassessed in the light of large-scale, coordinated investment. Investors, transport asset holders, and clients must address these challenges, which affect the ability of consumers and professionals to adopt them. They could pose a risk to inflation. Time is running out. Europe must act, but it must not do so alone, or risk losing competitiveness.

In figures

10%

Combined greenhouse gas (GHG) emissions from heavy goods vehicles (6%) and maritime traffic to and from ports in the European Economic Area (4%) as a proportion of total GHG emissions in the European Union.
(sources: European Parliament, European Environment Agency).

1.1%

Share of heavy goods vehicles using alternative energies (electric, hydrogen, natural gas) in Europe.
(source: ACEA).

2X

Investment cost (CAPEX) of an electric HGV compared with a combustion HGV.
(source: TRATON)

0.75%

Share of the global shipping fleet using alternative energies (LNG, LPG, methanol, hydrogen, ammonia).
(source: Veracity by DNV).

15 to 30%

Share of refuelling costs in total operational expenditure (OPEX), accounting for 10 to 20% of the main shipping companies' revenues. The current cost of refuelling is estimated at between $600 and $630/tonnes.
(source: Maersk financial results).

2035

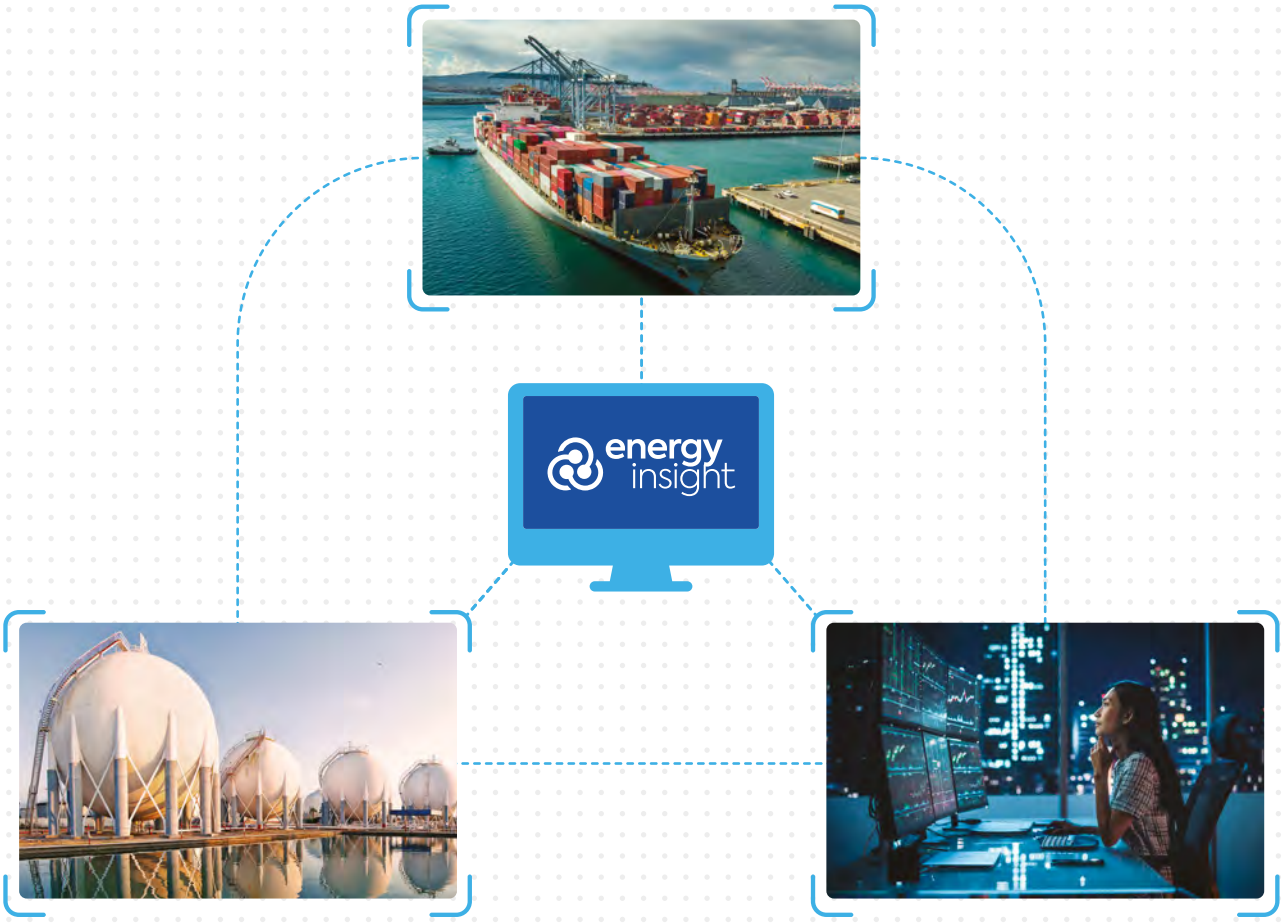
2025

A platform unites all transport stakeholders

Despite the built up momentum, the process of decarbonising modes of transport continues to face an obstacle that is ultimately more social than technical: the lack of communication between many players across different sectors. These stumbling blocks, which are hampering the implementation of sustainable mobility solutions and the scaling up of investments, are largely due to the heterogeneity of the public and private players involved, the disparity of risk measurement criteria and the lack of consultation forums.

However, the challenge of sustainable, cost-effective mobility requires long-term commitment visibility from all players. A necessary condition for bold and lasting coalitions. The launch of Energy Insight, the social platform resulting from the Digital Transport & Logistic Forum, is intended to provide a common platform for meeting this need for dialogue and a common language. Covering all sectors and modes of transport, Energy Insight provides political and economic decision-makers with an environment of transparency and trust, in which to work with private-sector players.

energy insight



The future *as seen by the* Community *of Interest*

The platform fills a gap: the need for communication and simplicity, enabling rapid, collective and sustainable decision-making.

Above all, it helps to de-risk investments by offering a common perspective to all players in the transport and energy sectors. Energy Insight is helping to build trust in a shared commitment that has been lacking until now. As a result, it is rapidly adopted by all stakeholders, who use it as a forum for formal dialogue and a common frame of reference. Energy Insight is an essential first step in establishing collective action in support of a common roadmap and innovative solutions for the benefit of all.

2035

2027 Low-carbon energy solutions are scaled up

The emergence of renewable energies is leading to a considerable widening of energy options, with a large number of alternatives to fossil fuels now mature (hydrogen, eFuel, bio-LNG, biogas, biofuel, electricity). This development will require major investment to transform infrastructures and scale up new technologies, in particular OCCS.

2027

Somewhat paradoxically, the diverse offering creates complexity in the choices for logistics hubs and carriers. And it continues to act as a brake on decarbonisation. No renewable energy is perfect, but each has its own advantages in terms of decarbonisation, transportability, local availability, distribution and ease of use.

The number of players in the energy sector is multiplying, but distributors play a strategic role in the visibility and, ultimately, the success of any given form of energy. They are the ones who ensure its availability across the country, wherever it is needed.

This development is the subject of national plans and is mobilising considerable financial resources on a European scale, bringing together the players in the distribution sector around common protocols. This overall trend is reassuring the markets and unleashing considerable innovation in the field of public-private financing.

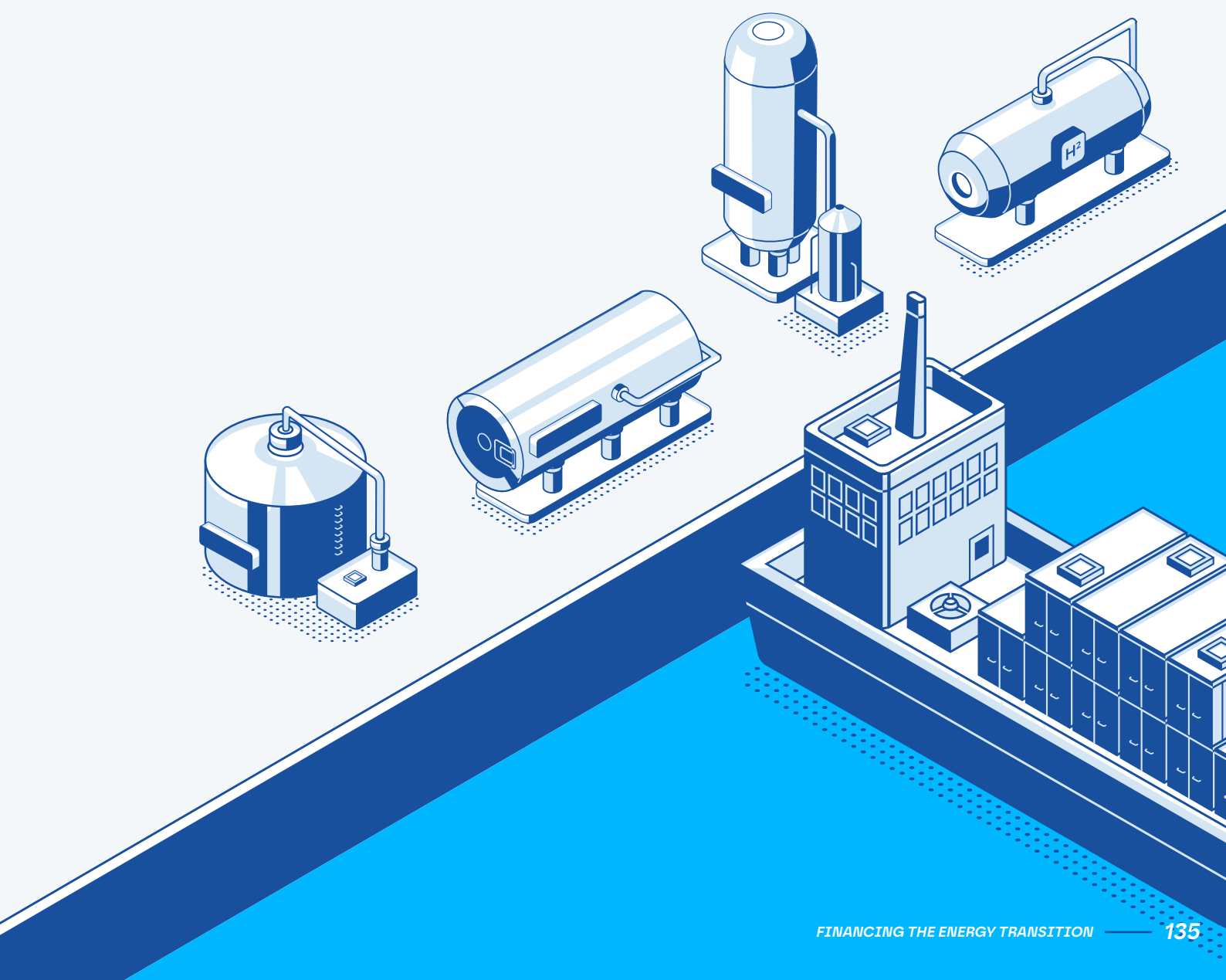
This agreement will enable heavy infrastructures and multimodal hubs to scale up and offer low-carbon energy tailored to the specific characteristics of the network, its uses and modes of transport. The availability of different energy sources wherever they are needed is on the way to being guaranteed.

The essential question of adapting energy infrastructures as an essential lever for the transformation of mobility is one that all players must address. Until 2040, investment in electricity infrastructure will be at its highest in order to enable the deployment of renewable energies (€39 billion per year for energy transmission and distribution networks), cross-border interconnections and the recharging infrastructure needed for transport.

The electrification of mobility is appropriate for the lightest vehicles. But in the case of heavy mobility (lorries, buses, boats, planes), the size of the batteries required for autonomy can be an obstacle.

Alternative solutions do exist. Internal combustion engines can already be easily adapted to run on other molecules, such as: bio-CNG for trucks, buses, and waste collection vehicles; biodiesel, ammonia, bio-LNG, bioethanol, and synthetic biomethanol for maritime transport; and bio-kerosene, low-carbon hydrogen, or synthetic kerosene for air transport.

The maritime freight sector must reduce its greenhouse gas emissions by 70% by 2040. It is important to remember that almost 75% of hydrogen demand in Europe comes from heavy road, sea and air transport.



2035

2028

The network of mobile charging stations expands

Although the decarbonisation of transport is underway, its large-scale development is hampered by too many disparities in the field; particularly on the roads, where there are a multitude of players.

Developed on a small scale, these solutions work best for local transport, but have not managed to establish themselves for long-distance freight transport.

This wait-and-see attitude does little to encourage hauliers to switch their truck fleets en masse to low-carbon energies.

The success of the transformation to a "low-carbon road" depends on the industry's ability to increase the density of the energy supply to guarantee roaming charging along the entire length of the transport infrastructure.

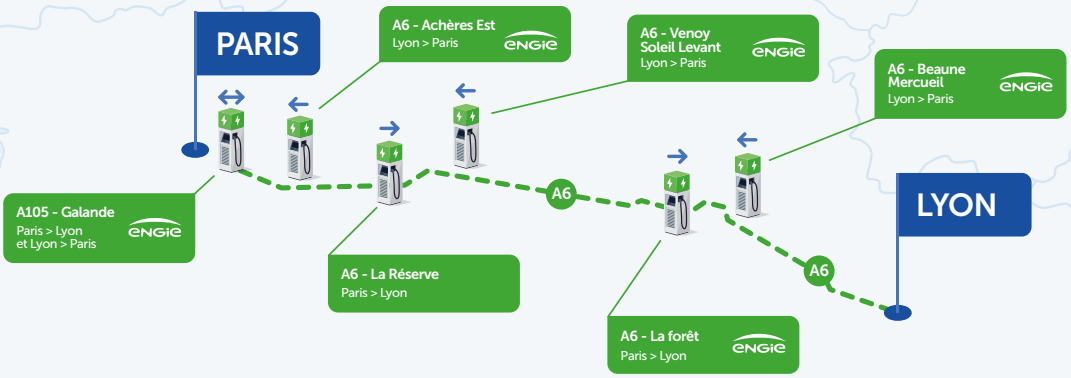
However, the necessary decarbonisation of transport makes this transformation urgent for the profitability of the distribution network. Deadlines are driving collaborative discussions between technology, energy, and transport stakeholders, leading to the deployment of a distribution network supported by public-private financing.

This deployment takes advantage of the service areas already available on transport networks and is gradually being connected to low-carbon energy networks. This large-scale movement has reached a critical volume and is creating momentum, encouraging carriers to switch their fleets to renewable energies, such as hydrogen, rechargeable electric or biogas.

Given the availability of supply and the promise of low-carbon energy, the transformation of transport is proceeding rapidly, without the end consumer having to foot the bill.

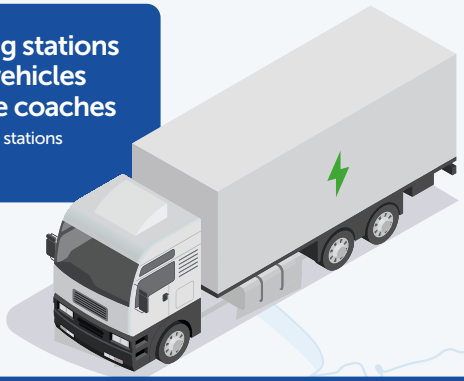
European first for APRR and ENGIE for an electric HGV corridor

On 4 October 2024, APRR and ENGIE Vianeo inaugurated their electric recharging corridor on the Paris-Lyon route, equipped with ultra-fast charging points dedicated to electric heavy goods vehicles. This represents a significant and unprecedented step forward for electromobility, supported by these two pioneering partner companies.



Electric recharging stations for heavy goods vehicles and long-distance coaches

Very high-power recharging stations (400 to 500 kW per station)



Electrifying the roads: a question of infrastructure

The energy transition in long-distance road haulage in France is gathering pace, driven by the joint initiative of the major players in the sector. Facing this challenge is crucial: to meet Europe's decarbonisation targets by electrifying a sector that accounts for 90% of goods flows and 7% of the country's greenhouse gas (GHG) emissions. The installation of a recharging infrastructure adapted to lorries is a key concern. By 2035, 10,000 charging points for long breaks and 2,200 fast charging points (Megawatt Charging System or MCS) will need to be installed at 519 service and rest areas in France.

The electricity consumption of heavy goods vehicles in transit is expected to reach 3.5 terawatt-hours, with a peak power demand estimated at 1.1 gigawatts. This large-scale deployment will require colossal investment: €630 million will be needed to adapt electricity networks to the new requirements.

Sources :
Besoins et enjeux de la recharge en itinérance – March 2024
Enedis, TotalEnergies, VINCI Autoroutes, Iveco, MAN Truck & Bus France, Mercedes-Benz Trucks, Renault Trucks, Scania and Volvo Trucks study - "Decarbonization pathways for Europe: ENGIE's scenario". 2024

Scan the QR code to download the full study

2035

2029

The "Energy Model Canvas" shapes energy decisions and investments

The large-scale decarbonisation of transport still presents a major and complex obstacle for carriers: the ability to identify the impact of their choices on the natural and social environments. It must also be achieved within the context of global competitive imbalances. Whether for carriers or end consumers, economic considerations still often outweigh ecological ones.

This lack of visibility is holding back the development of alternative energies and is blocking a large number of decarbonisation initiatives, especially within the European Union.
The complexity involved in choosing the right form of energy remains a barrier to decarbonisation.

The crucial question now is: which form of energy should be used for which purpose and in which context? The wide range of energy sources – electricity, hydrogen, biogas, eFuel – means that the choices to be made by logistics hubs and carriers are more complex than ever before.

The Energy Model Canvas has become a strategic tool, facilitating a smarter energy transition, capable of guiding the development of new forms of mobility and supporting the decarbonisation of the transport sector.

Designed as a decision-making tool, shared by all transport stakeholders, this model is based on a combination of a variety of factors, such as the long-term profitability, energy efficiency and environmental impact of different energy options. It enables carriers and multimodal hub managers to align their investments with decarbonisation objectives, while ensuring consistency between local needs, regulations and technological innovations. This model rapidly becomes a strategic tool driving the development of brand-new forms of mobility and supporting sector decarbonisation.

While energy infrastructure still requires investment to develop, the Energy Model Canvas encourages long-term planning, anticipating synergies between different transport infrastructures and prioritising the adaptability of technologies. This innovative methodology can also be supported by digital twin solutions and other 3D models, enabling simulations to be carried out and the most appropriate choices to be made. Visibility that enables each region to exploit the most relevant energy resources.

2035

2034

2034

The "Impact Score" raises awareness more effectively

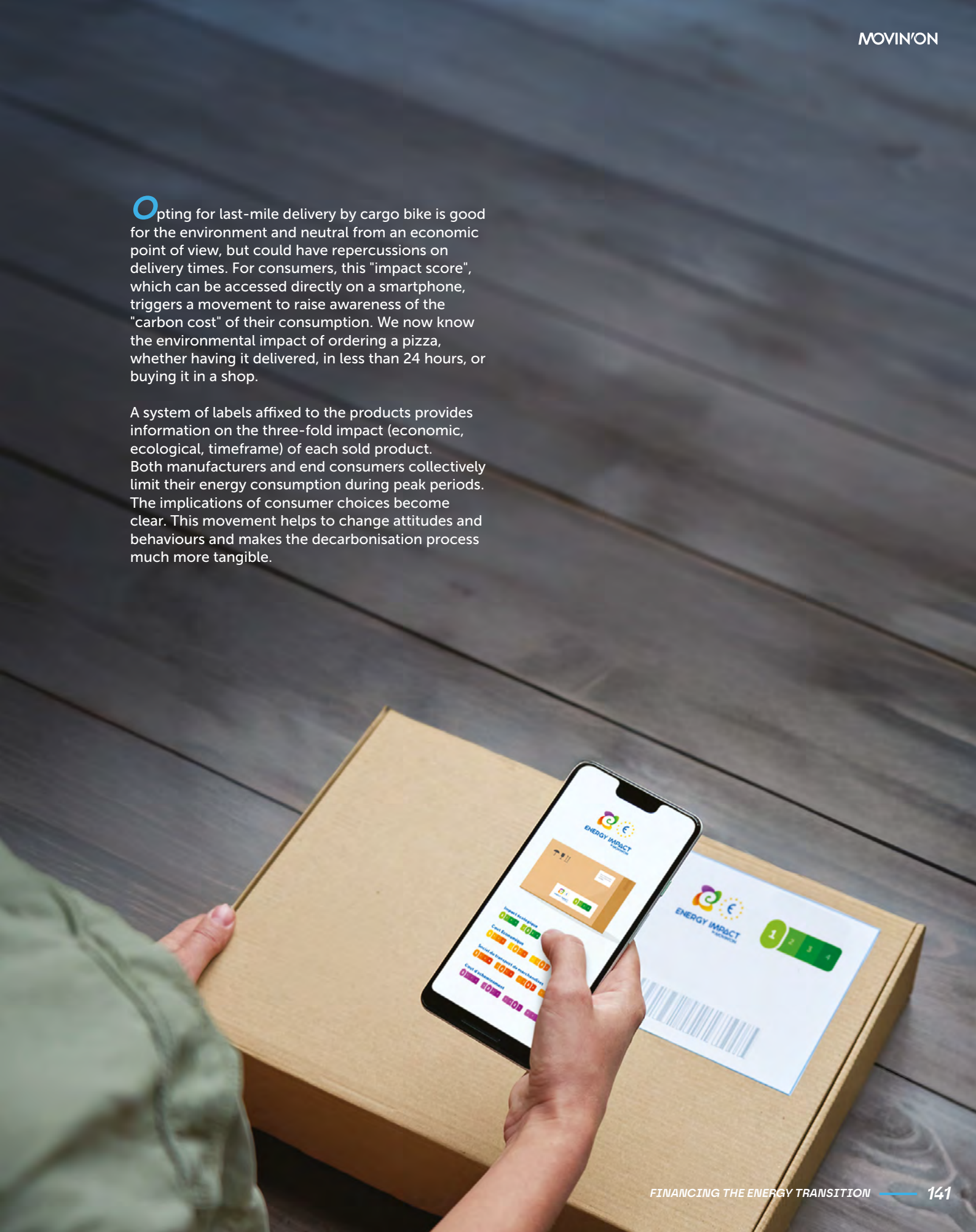
Based on the principle that "you can only manage what you can measure", the introduction of a reference system based on international standards makes it possible to measure the economic, ecological and social cost of transporting goods using common criteria. And to establish an "impact score" to assess each product.

This reference system, now in place, means that the energy source best suited to decarbonising each mode of mobility can be optimised. The development of digital technologies and the Internet of Things have made it possible to increase the traceability of goods, making it possible to visualise in real time the impact of transport "from the factory gate to the doorstep", as the advocates of this disruptive technology have claimed.

For the carrier, this means being able to constantly reconcile ecological impact, transport costs and delivery time, and to modify the mode of transport if necessary, depending on priorities. Opting for air transport has a positive impact on lead times, but a negative impact on ecological and economic aspects.

Opting for last-mile delivery by cargo bike is good for the environment and neutral from an economic point of view, but could have repercussions on delivery times. For consumers, this "impact score", which can be accessed directly on a smartphone, triggers a movement to raise awareness of the "carbon cost" of their consumption. We now know the environmental impact of ordering a pizza, whether having it delivered, in less than 24 hours, or buying it in a shop.

A system of labels affixed to the products provides information on the three-fold impact (economic, ecological, timeframe) of each sold product. Both manufacturers and end consumers collectively limit their energy consumption during peak periods. The implications of consumer choices become clear. This movement helps to change attitudes and behaviours and makes the decarbonisation process much more tangible.



What actions did we take in 2024 to achieve these results 10 years later?

01 Community of Interest
Financing the Transition

02 Community of Interest
Energy Model Canvas

03 Community of Interest
Bio-LNG Terminal at Brest Port

Community of Interest

Financing the *Transition*

Powered by:

CMA CGM

Connect with the content leaders:

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Ulrike Ristau-Hutter
Movin'On

Community of Interest

Burning question

How can we enable the transition to low-carbon vehicles, new technology and infrastructure through innovative and pragmatic financing schemes, to keep the cost at an acceptable level? What is the real cost of transition and how can we create a financial scheme to reduce the price gaps?

What impact are we aiming for?

- Re-balance the financial framework to unlock and secure investments linked to transport decarbonisation and energy choices:
  - Competitive new financing schemes (private, public) that support performant business models for heavy duty and complex energy production industries and means of transport.
  - Illustration of the real costs of transition.

What are we creating?

- "Insight sharing": build a common platform of discussion for industry and banks.
- Report on the cost of transition.
- Develop and implement innovative and pragmatic financial models for technology development and scale up, uplifting classic financing framework, guiding demand & cash flows, research financing.

Who's on board?

CMA CGM, ALSTOM, Brittany Ferries, ENGIE, GEODIS, VINCI, TotalEnergies

What's our roadmap?

- *November 2024* **Kick-off at Summit.**
- *January 2025* **Start "the cost of transition" study (RFP + roll-out).**
- *February 2025* **Industry and banks need understanding & leverage "low hanging fruit" (i.e. retrofit finance clauses).**
- *H1/2025* **Collective creation of innovative solutions.**
- *7- 8 June 2025* **Present learnings and recommendations at BEFF-Blue Economy and Finance Forum (prior to United Nations Ocean Conference).**
- *H2/ 2025* **Proof of concept.**

Community of Interest

Energy *Model Canvas*

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ENGIE MCA

Connect with the content leaders:

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Movin'On

Community of Interest

Burning question

In energy transition and fast-moving technological environments, how can we invest in the most relevant energy and associated infrastructures?

What impact are we aiming for?

» Support energy selection decision-making for new energy mobility infrastructure implementation projects. This will allow us to select the "right"/ most appropriated energy for specific energy mobility infrastructure implementation projects, and therefore to accelerate efficiently and de-risk new energy mobility infrastructure development.

What are we creating?

» An evolutive energy assessment tool, the "Energy Model Canvas", enabling the selection of the right energy source for the different applications, ensuring that key drivers and levers are considered (territories, ROI, public/private synergies, pooling mobilities & other energy applications, technological solutions adaptability to future technological solutions, coherent, cost effective and energy efficient, globally at different territorial scales).

Who's on board?

ALSTOM ENGIE MCA

What's our roadmap?

» *November 2024* **Energy Model Canvas development, 1st version.**

» *December 2024* **Energy Model Canvas validation tests.**

» *2025* **Extend applications.**

Community of Interest

Bio- LNG Terminal at *Brest* Port

Powered by:

BrestPort
À la pointe de l'Europe

Connect with the content leaders:

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BrestPort

Laurent Siffre
Movin'On

Community of Interest

Burning question

The energy transition needed to decarbonise the transportation of goods will profoundly alter the business models of today's multimodal hubs, like Brest Port. They will need to manage very diversified energy offers and define the appropriate way to transition and to invest in these new energies at various maturity stages.

What impact are we aiming for?

» Active for several years, the Community of Interest has drawn up a wide range of potential energy offers for the port and the entire region, bringing together shipping companies, energy providers, farmers, mobility players, shipyards and public authorities. As part of a massive investment plan supported by the Brittany Region, it has validated the appeal of a bio-LNG terminal that could see the light of day in 2027, as a 1st step towards the required transition. The transition is underway!

What are we creating?

» A business model based on a market survey, a Biogas suppliers study and technical-economic scenarios.

Who's on board?

DAMEN · ENGIE · GRDF · GRTgaz · RUBIS TERMINAL · TotalEnergies

What's our roadmap?

» *December 2024* **Market survey for mobility and other applications.**

» *April 2025* **Biogas suppliers study.**

» *December 2024* **Technical-economic scenarios.**

» *April 2025* **Business model.**

Insights & strategic *perspectives*

At the heart of discussions at the Movin'On Summit

In 2035, *large scale investment in green transition infrastructure* **is the new mobility key.**

The transport sector accounts for one quarter of the world's CO_2 emissions. It is therefore difficult to envisage decarbonisation without addressing the underlying energy issue. This is a process of reflection which, if it is to be followed by action, must bring together industry players and public policy makers to establish common foundations. While decarbonisation is a collective objective, the paths to achieving it are distinct and complex, depending on whether you are a transport, energy or infrastructure professional.

Ensuring *low-carbon energy* throughout the *country*

As a result, major innovations will only be possible if all the players involved pool their expertise and work together. For a company like Engie, the most important thing right now is to ensure that charging stations are deployed and available throughout the country, so as to encourage the transport industry to embrace renewable energies. ***"As an energy company and infrastructure developer, we have to make sure that we supply enough low-carbon energy for our electric charging stations,"*** explains Marion Deridder Blondel, Chief Development & Strategy Officer at Engie Energy Solutions. For her, "the energy transition has to be desirable. This is something we all need to work on together."

As an energy company and infrastructure developer, we have to make sure that we supply enough low-carbon energy for our electric charging stations.

Marion Deridder-Blondel,
Chief Development & Strategy Officer,
Engie Energy Solutions

> ***The vast majority of people just want a simple vehicle or mode of transport that works and is affordable. They don't care about anything else.***
>
> Julia Poliscanova,
> Senior Director, EVehicles & Mobility Supply Chain,
> Transport et Environment

Supporting *a supply-side* policy

This is a view shared by Jean-Marc Ollagnier, EMEA Chairman at Accenture, who believes that this desirability is also a dynamic that must extend to company employees, as they are the driving force behind accelerating the transition. “We're not moving fast enough. We all know that. So let's make the most of some of our teams to achieve this,” he insists.

For Julia Poliscanova, Senior Director, EVehicles & Mobility Supply Chain at NGO Transport & Environment, the key to this dynamic is a supply-side policy that needs to be built up.

“The vast majority of people just want a simple vehicle or mode of transport that works and is affordable. They don't care about anything else,” she recalls. In her view, it is important for European manufacturers to commit to a capacity to produce small, affordable low-carbon vehicles. A range of “Pop-Cars” that does not currently exist for regulatory and commercial reasons, but which severely hampers the competitiveness of the European market, particularly in the face of the growing Chinese market.

> *We cannot achieve an energy transition without digital technology. What's more, this digital technology requires a great deal of new energy to operate.*

Jean-Marc Ollagnier,
EMEA Chairman,
Accenture

Digital technology, a lever for *energy efficiency*

For Jean-Marc Ollagnier, the energy transition is also a question of efficiency, and digital technology is proving to be an essential lever in achieving this.

Efficiency requires the ability to measure and assess in order to make the best energy choices, and to optimise processes and systems using machine learning, including in areas such as the circular economy. "Digital technologies are part of the solution," he says. A few years ago, we coined the now quite popular concept of "twin transition", which reminds us that "***We won't achieve an energy transition without digital technology. What's more, this digital technology requires a great deal of new energy to operate.***"

We must therefore take care that the digital cure does not turn out to be worse than the disease, in this context of double transition, where the digital sector is set to become the main consumer of energy over the next decade.

Changing *perceptions about* decarbonising *transport*

"80% of CO_2 emissions could be reduced using existing technologies," notes Rana Adib, Executive Director of the REN21 network, which brings together a wide range of players involved in the transition to renewable energies. For her, the transformation is not a question of energy or means of transport, but rather of a societal model that must bring together economic, political and civil society players.

Nothing will happen if these three players do not push in the same direction. To achieve this, the public authorities have a fundamental role to play in imposing a roadmap and ensuring a balanced supply of low-carbon energy across all regions.

"We are talking about a large-scale deployment of infrastructure, carried out with a focus on integrating all sectors involved," she explains. The energy transition calls for massive investment, which is the only way to achieve a critical mass of infrastructure quickly. The movement therefore also needs a clear, shared strategy.

The citizen: *a player* yet to be *convinced*

The transition to low-carbon mobility will also require the necessary adoption by the public, which is often the main lever for major societal change. For Julia Poliscanova, there is a carrot and a stick approach to this issue, both driven by the public authorities. Carrots in the form of tax incentives to encourage choices in favour of low-carbon vehicles, bearing in mind that 60% of new vehicles in Europe are purchased by companies, which are above all sensitive to economic considerations. Carrots, too, in terms of making the benefits of switching to electromobility clear to the public, particularly in terms of the availability of supply and recharging charges.

A stick, on the other hand, limits the use of the most polluting vehicles and makes their use as laborious as possible. Higher parking charges, congestion charging and the simplification of alternative solutions are all involved here.

"We can see in every city that when you make it more difficult for people to use their own cars, they turn more to shared solutions," she says, pointing out the crucial role of soft mobility and public transport in reducing road traffic and energy consumption. Decarbonising transport also involves reducing and consolidating its use.

Building *a shared* path. *And* sticking to it.

With so many different issues at stake and so many different solutions being proposed, the urgent need to find a common, shared path is essential if initiatives are to be channelled. A shared narrative, capable of driving individual, public, private and supranational strategies and ensuring European competitiveness. And feedback from real-life experiences that can be used to "set an example". It's always about this dynamic at play.

"For us, the priority for governments, whether at European or local level, is to put in place and maintain a clear policy direction. As far as electromobility is concerned, it is essential to stick to the decisions taken for 2035 in terms of vehicle emissions. This makes it possible to set a course that guarantees investment for all players across the value chain," insists Julia Poliscanova. A vision that allows each of the players involved to define their own role in this story and to stick to it.

We must explore them to find out which model works, which technologies work in which environment. There is no single model that works everywhere.

Tom Howes,
Green transition and Market regulation,
European Commission

Europe, the *driving* force

"Over the last few years, the European Commission has set out a number of guidelines to support these different approaches," explains Tom Howes, advisor to the European Commission on renewable energy issues, who was invited to conclude the debate. "The electrification of transport is still in its adolescence. It is still growing and a lot of the suffering is due to that growth. Different models, different technologies and different approaches coexist. We are all in the process of assessing what works and what does not.

This creates a lot of confusion, but ***"we must go through it to find out which model works, which technologies work in which environment. There is no such thing as a single model that works everywhere,"*** he concludes. We should therefore hope that the energy transition passes rapidly through this crisis of adolescence and rapidly reaches a period of maturity. It will enable us to enter the phase of accelerated decarbonisation that everyone is hoping and praying for.

DECARBONISING
TRANSPORTATION IN EUROPE

MOVIN'ON
SUMMIT 2024
07 Novembre - Bruxelles

Movin'On Summit is the must-attend event of the Movin'On ecosystem.

From 2017-2019, each year, Movin'On Summit brought together an average of 5,000 participants from every continent: companies, public and private decision-makers, startups, cities, public organisations, universities etc.

As a unique event, Movin'On Summit creates the conditions necessary to foster disruption, connections and action to provide concrete solutions and innovations for the needs of each, to help society progress while acting for the planet.

During the Summit, Movin'On's Communities of Interest share their progress over the year during work sessions. In 2020, as a result of the health crisis, Movin'On Summit was cancelled and replaced by a series of digital encounters.

For its 2021 edition, Movin'On Summit was a reinvented phygital experience, broadcast worldwide from Montreal, Paris, and Singapore. Four days to inspire, connect and engage mobility stakeholders in collective action on concrete solutions for more mobility with less impact. More than 14,500 participants from 88 countries, including 4,500 active users on the Movin'On Summit's collaborative platform who took part in the event.

In 2024, on November 6 and 7, the Movin'On Summit in Brussels reached a significant milestone. Gathered at La Maison de la Poste, 350 international leaders and experts envisioned a future where, within ten years, transportation in Europe will have been decarbonised.

This International Summit of Sustainable Mobility laid the foundations for a collective roadmap to transform our shared vision into concrete action. By tracing the path from 2035 to the present day, it highlighted the achievements made, the challenges tackled and the technological, regulatory and sociological levers required for sustainable, inclusive and low-carbon mobility.

The International Sustainable Mobility Summit has been a unique opportunity to:

- Cross-review, with European political leaders, international experts and the Movin'On community, the synergies and gaps to be addressed to achieve the goals of the Green Deal.
- We aim to design and co-construct recommendations for sustainable solutions which will enable the achievement of the objectives of Europe's "Fit for 55" package.

MOVIN'ON

Sustainable mobility for societal good

Working *together* to accelerate *the* deployment *of sustainable* mobility *solutions*

We are a non-profit do-tank led by businesses committed to sustainable mobility for societal good.

We cover the entire mobility value chain and all modes of transport for goods and people.

We provide a trusted framework for public and private decision-makers to work together to develop and deploy mobility solutions that are environmentally friendly, equitable and conducive to sustainable economic growth.

Together, we are developing shared visions, proposing regulations and experimenting with solutions and business models. We are harnessing the energy needed to deploy and showcase our actions.

Join Movin'On members committed to sustainable mobility.
To find out more, visit ***movinonconnect.com***

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