

THE MOBILITY SPHERE PROSPECTIVE MAGAZINE

THE MOBILITY TIMES

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Decarbonized mobility, mobility for all



THE MOBILITY SPHERE
Transformative insights for urban life
by transdev

 **transdev**
the mobility company

YOU KNOW THAT
IN EUROPE SAFER
DECARBONIZED MODES
OF TRANSPORT
DO EXIST?



About the mobility times



We are proud to present the first issue of The Mobility Times, a magazine that documents the journey of The Mobility Sphere, a think tank created by Transdev dedicated to tomorrow's mobility. Each issue will focus on the themes of The Mobility Sphere's forums.

The current issue covers the first forum held in Amsterdam on October 4 2023, where experts from varied backgrounds explored the theme "Decarbonized mobility, mobility for all: Transforming the way we move". The issue contains highlights of their talks, interviews with participants, key quotes and insights, profiles and analysis of the challenges ahead, associated with Transdev Group's expertise and experience.

Videos and more in-depth content at transdev.com



FIGURES



Passenger travel demand in Europe increased by **20%** between 2000 and 2019



In 2021, transport emissions represent around **25%** of the EU's total GHG emissions



The share of energy from renewable sources used for transport in the EU increased from under **2% in 2005** to **8.7% in 2022** according to preliminary estimates

Source: European Environment agency, Transport and environment report, 2022

INTERVIEW

François Gemenne

Member of the Intergovernmental Panel on Climate Change (IPCC), Professor at HEC Paris and Sciences Po, and the Mobility Sphere's Scientific Advisor.



“Achieve so much more”

The intricate connection between decarbonized mobility and liveable cities

Why do we need the Mobility Sphere think tank?

People are afraid that climate action will translate into increasing costs and less personal mobility. It is exactly the right time to launch the Mobility Sphere, because we will need to solve that dilemma, we will need to show that reducing greenhouse gas emissions in the mobility sector is not a constraint, but can also be a project and an opportunity for better transport.

The Mobility Sphere is about gathering a wide range of actors involved in mobility from both the private and public sectors, from providers of transportation, to users of transportation. And to make them think together about the best way to achieve a just transition in the mobility sector.

Why does humanity find it difficult to deal with long-term questions like climate change?

We have a strong inertia in the climate system. Climate change is a problem of stock and not of flow. The problem comes from the accumulation of greenhouse gases over the past centuries, which is the reason why many young people feel resentment towards their elders because they realize that they will suffer from the impacts of climate change although it has nothing to do with their own emissions, but everything to do with the emissions of their parents, grandparents and great grandparents. And therefore, because of that, because of this disconnection in time and space between our actions and the effects of our actions, we do not have the possibility to concretely experience the

results of our actions. And that is a key cognitive difficulty.

Did the Amsterdam forum give you hope that the cognitive difficulties can be overcome?

We have always insisted on the co-benefits of climate action, telling people, you know, if you eat less meat, you will be able to have a more healthy diet and reduce the risk of some diseases associated with a meat-heavy diet. We have told them you should cycle instead of taking your car for short journeys because if you cycle, you'll be able to exercise and enjoy fresh air.

But something that struck me during the first conference was that the co-benefits of decarbonizing mobility in cities are so huge when it comes to building more liveable cities, that maybe we should think about things the other way around. Maybe we should no longer think about the co-benefits of decarbonization, but of decarbonization as the effect of building more liveable cities. It could be a fundamental shift if decarbonization is no longer the goal, but rather the benefit of our actions in redesigning transportation, and therefore in redesigning cities and the way we relate to each other.

How can we make sure that the decarbonization of transportation benefits everybody?

A key goal in setting up the think tank was obviously to work on the decarbonization of transportation and of mobility. But by doing so, we can redesign cities and therefore the way we relate to each other and the way we live. We must think about

the connections between people who live in cities, and people who use cities, or people who travel to cities.

We have a tendency to oppose people to each other, people living in urban centres and people living in suburban areas, a tendency to oppose motorists and users of public transportation, a tendency to oppose users of some public transportation and users of other public transportation as if they were competing with each other. I think that we need to recognise that all of us use different means of transportation.

What creates some resentment among people living in peri urban or rural regions is that they have the impression that all efforts and investments are concentrated in cities and that they are being left out and excluded from decarbonization as a political project. Decarbonizing mobility won't be successful if people have the impression that they are being excluded. The challenge of this think tank, the Mobility Sphere, is to try and avoid that by seeing equity not just as a kind of grand general moral principle, but also as a condition for efficiency. This is exactly the reason why the Mobility Sphere can achieve so much more than what it was designed for.

6%
Increase in the world's energy-related CO₂ emissions in 2021, the biggest annual rise ever.

Source: International Energy Agency



Our cities were shaped by the car and for the car. But now, we have to create the basic conditions for **easy and intuitive access to public transport.**



Madeleine Masse

Architect and Urban Planner, Founding President of Atelier SOIL (France)

AMSTERDAM INSPIRATIONS

Overheard at the Mobility Sphere Forum

“Why not make virtual reality part of studying spaces that were designed? You could take a representative group of people and get them to experience the space before building it.”

Artoghrl Alishbayli

Behavioral neuroscientist PHD student, Radboud University (Netherlands)



*We have to understand and tell everybody, and tell decision makers, that **the zero carbon transition is not a punishment, it's the solution. It's a win-win for everybody.***



Karima Delli

Member of the European Parliament, Chair of the Committee on Transport and Tourism (EU)

“We have cities, from Bogota, to Amsterdam, to Prague, that are doing very interesting things. How can we capitalize on progress made at the local level to overcome obstruction at the national level?”

Sylvain Haon

Director of Strategy, International Association of Public Transport (Belgium)



Decarbonization is an absolute must. We shouldn't sound alarmist but tell people in a very calm and rational way that this really is a priority and needs to be taken up.



Katarína Cséfalvayová

Director of the Institute for Central Europe & Executive Lead of the Danube Tech Valley Initiative, Former Member of Parliament (Slovakia)

“We don't like to be isolated, can we use that thought to get people out of their own car?”

Jean-Philippe Peuziat

Director of the Public and EU Affairs department, French Association of Public and Rail Transport (UTP) (France)



We have a finite amount of road space in our cities, and **that space needs to be there for the people that are moving together** as opposed to apart.



Brian Caulfield

Professor in transportation and Head of Department at Trinity College Dublin, Expert to the National Transport Authority (Ireland)



What about our children? We often ask ‘what will be the impact on cars?’ but rarely ‘what will be the impact on the youngest and most vulnerable people?’ **We must create a city that is on scale for all the little ones.**



Elke Van den Brandt

Minister of the Government of the Brussels-Capital Region, responsible for Mobility, Public Works and Road Safety (Belgium)

“The challenge of mobility is not just about technology. It's about politics and it's about governance, and bringing different interests and world views together.”

Charlotte Halpern

Researcher at Sciences Po's Centre for European Studies and Comparative Politics (France)



Inclusivity in mobility means equal rights for everyone to get from home to school, to work and to run errands. Anything people need to do.



Zeina Nazer

Co-Founder of Cities Forum (United Kingdom)

“I care about environmental justice. People living in rural conditions are perhaps less conscious of the issues, but they pay the highest price for our lifestyles.”

Samah Karaki

Neuroscientist, Founder of The Social Brain Institute (France)



FORESIGHT

Living in the City of 2050

How urban mobility and urban development will go hand in hand?

Cities are often the starting point when we think about the future of mobility. Cities are where population density is high, where congestion and pollution are greatest, and where solutions like high-quality public transportation will have the biggest impact because so many people need to move around daily.

“Over 70 percent of the world’s population lives in cities”, Zeina Nazer, co-founder of Cities Forum, told The Mobility Times in Amsterdam during the Mobility Sphere’s first forum. “By helping cities, we are helping the majority of the world”.

The desire to re-invent the modern city for the benefit of all is shared by several experts at the Amsterdam meeting, with Elke Van den Brandt, Brussels government minister in charge of mobility, saying: “For me, mobility is never a goal. It’s just the instrument I’m using to offer more quality of life to the people in Brussels.”

Madeleine Masse, an architect with much experience in redesigning public spaces in Paris, said that “we must integrate all these notions of inter-modality, of connections, and move towards a different model.

The urban space needs to be given back to its inhabitants. We are building cycling paths and bus lanes and we mustn’t forget pedestrians, because our cities are not often very walkable.”

Mass transit, she said, has to be a priority, especially for those who travel longer distances. **“We have to make room for surrounding infrastructure, for train stations, tram stations and bus stations so we can move the largest possible number of people from one place to another.”**

Experts agree that car use will have to diminish and public transport rise if cities are to become more liveable.

“Most cities have been trying to reallocate space in order to shift away from the dominant role of cars towards other types of mobility”, Charlotte Halpern, researcher at Sciences Po’s Centre for European Studies and Comparative Politics, told the Mobility Times. This, in turn, will also create opportunities to use space differently, said Van den Brandt. “Cars take up about 70 percent of public space in Brussels, either through car lanes or parking. If we can get a little bit of that space back, we can build terraces for the cafes, we can build playgrounds, cycle lanes and bus lanes. We can do so much.” ●●●

CITY FACTS

● **By 2050 the number of megacities** (with a population of over 10 million) **projected to increase to 50, from 33 in 2023.**¹

● The world’s urban population increased from 751 million in 1950 to **4.2 bn in 2018.**²

● **75%** of Europeans live in urban areas.³

● In 2020, the largest agglomeration in the EU was **Paris (France; 11.0 million)**, at 29th place in the world rankings.³



Sources

- ¹ Institute for Economics and Peace, 2023 Ecological Threat Report
- ² United Nations, World Urbanization Prospects 2018 report
- ³ Eurostat



●●● Nazer added: **“It is very important to have an attachment to where you live. If you love your city, you will take care of it. It becomes your home.”**

To incite car owners to switch to more sustainable forms of transport, cities must offer them clean, reliable and safe public transport that runs frequent-

ly, experts said. The expectation is that once a credible alternative is offered, they will be more likely to make the change. Nazer said public policies should incite them to do so. **“I would want to make it more difficult for people to choose their personal vehicle if public transport is available. So training and educating the public are very important.”**

The future of mobility requires a global approach, with policies addressing the specific needs of both urban and peri-urban areas. **Find out more on page 12.**

The commuting question

Commuting in and out of cities is central to the mobility revolution

The rise of the city as a hub of human activity goes back thousands of years. Be it for trade, industrialization or, more recently, the knowledge economy, urban development has been at the center of the human experience. Their role as vast pools of employment, education, culture and entertainment puts cities at the forefront of challenges for infrastructure, especially mobility.

“The modern city was first characterized by vast networks for water, gas and electricity created during the industrial revolution”, said Arnaud Passalacqua, professor at the Paris School of Urban Planning.

Then came mobility solutions, starting with horse-drawn carts, and the car which “created its own networks”. Cars helped create and distribute the benefits of economic growth, but today “our urban model is out of date”, says Passalacqua, as congestion, pollution and climate change call for a major rethink of urban mobility.

So what’s next? Most experts agree that the urban and peri-urban mobility of tomorrow will rely on several modes of transport working

seamlessly together, each presenting the best solution for every part of a journey.

This “multi-modal” approach can be seen in action at the Moncloa station in Madrid, a prime example of new mobility. Around a shopping center at the station, linked to two metro lines, there are hiring stations for electric scooters and for bicycles, and stops for several bus services. An escalator takes passengers to a vast hall with numbered entrances: this is the starting point for express coaches, where 5,000 buses transport 180,000 passengers daily to and from peri-urban and even rural areas around the metropolis, serving only a few stops along the way which allows them to cover large distances fast.

Strengthening its multi-modal policy, the Spanish capital has introduced a single pass valid for all forms of transport, including hired bicycles.

Recently, the Paris region announced an initiative going in the same direction, with a plan to create 45 express bus lines, and accompanying infrastructure projects, by 2030.



Most cities have been trying to reallocate space in order to shift away from the dominant role of cars towards other types of mobility.



Charlotte Halpern

Researcher at Sciences Po’s Centre for European Studies and Comparative Politics (France)



We have to make room for surrounding infrastructure, for train stations, tram stations and bus stations so we can move the largest possible number of people from one place to another.



Madeleine Masse

Architect and Urban Planner, Founding President of Atelier SOIL (France)



“You create awareness in the present, with a very nice side effect of having a better climate for us all later. Amsterdam is doing a great job with that.”

Manu Lageirse
CEO of Transdev Netherlands

AMSTERDAM: A LABORATORY FOR THE FUTURE OF MOBILITY

The Mobility Times talked to Manu Lageirse, CEO of Transdev Netherlands, about Amsterdam, the city chosen for the Mobility Sphere’s first forum in October 2023.

Is Amsterdam a good place to talk about the future of mobility?

We have a lot of ongoing discussions here about how to move people around. The Dutch government made a choice to move towards public transport ahead of everybody else. It’s a political choice. The Dutch government chose the path of big-volume public transport and made commitments early on.

Do you have any concrete examples?

They said that by 2025 we don’t want any new buses which are not zero-emission. They also have a policy of making parking a car expensive. A lot of people go into Amsterdam. And you can see that of the people going to an area where the parking spots are expensive, like 8 or 10 euros per hour, 70 percent now take public transport there.

What is it like to be in the transportation business in this environment?

It’s one of the most competitive markets that we have, and because we are at the forefront of zero emissions it is very capital-intensive. Because of the government’s commitment, our clients are among the most mature

clients that you can find in Europe. So you have a combination of very professional clients and great competition, and this is why most of the innovation is happening in the Netherlands.

Do you have any tips for cities elsewhere?

If you talk about change now, but your life will be impacted in only 30 years’ time, not a lot of people are going to do anything. But if you talk about liveable cities, you can make them liveable now. You create awareness in the present, with a very nice side effect of having a better climate for us all later. Amsterdam is doing a great job with that.



Why Amsterdam?

The Dutch capital was an obvious choice for the Mobility Sphere’s first Forum

Amsterdam is the nominal capital of a country that is close to the frontline of climate change impact in Europe and implementing some of the most innovative transport solutions, making the city an obvious choice for the first edition of the Mobility Sphere forum.

The Netherlands has one of the densest road networks in the world, but also a well-developed rail network and world-class cycling infrastructure. It has developed several initiatives that inspire policy makers elsewhere, including on smart mobility, zero-emission zones and sustainable public transport. Dutch authorities champion a “multi-stakeholder approach to multi-modality”, creating momentum to bring private and public road transport to zero-emission levels, notably bus services.

From 2025, all new buses in the Netherlands must use 100% renewable energy or fuel. And all buses must be fully emission-free from 2030.

More than 9 out of 10 Dutch people live in cities, making almost the entire country a laboratory for urban transport improvements, especially its metropolis, Amsterdam.

In its latest initiative, the city lowered the speed limit on most streets to 30 km/h. It also created special lanes for public transport which can travel at 50 km/h.



All together now

How cooperation will be key to the mobility revolution

No matter how much effort each individual, company, authority or government puts into contributing to the mobility of the future, they will be more successful if all stakeholders work together, the Mobility Sphere forum in Amsterdam heard.

“Everybody knows what needs to be done, the solutions are available,” Karima Delli, Member of the European Parliament and Chair of the Committee on Transport and Tourism, told the Amsterdam audience. “I would encourage member governments to stop prevaricating, to stop being divided,” she said. “Transport must become the greatest priority for member states.”

Charlotte Halpern, Researcher at Sciences Po’s Centre for European Studies and Comparative Politics, agreed that governments have a major role in uniting all actors in mobility. “Public authorities can play a central role in this process and define the main targets and the objectives to be reached as a society,” she said.

One example is the EU’s aim to reach carbon neutrality in mobility by 2050. “That’s a big one. They’ve been very successful in setting the targets and they have beautiful plans. They’ve been less successful in implementing them,” Halpern said.

“Most of the focus in the next few years has to be on implementation, and how to bring the public back into the conversation, as well as firms and social movements.”

There’s already progress, she said: “In some EU cities they have decided to strengthen leadership about mobility to ensure that the portfolio is not divided between different mayors. One in charge of cycling, one in charge of cars, the other one of parking. But to have a more holistic approach to what mobility could be.”

Samah Karaki, a neuroscientist, warned against the hope that the complex questions of mobility could be solved at a single level, be it political, technological, corporate or individual. “It’s much better to approach these questions in a systemic, multi-disciplinary way,” she told the Amsterdam forum. “We need to include all actors who have a contribution to make.”



INTERVIEW

Change! Yes, but how?

Neuroscientist Samah Karaki tells The Mobility Times why we find it hard to do things differently, and how governments can help.

Why do people find it difficult to change their behaviour, for example switching from cars to low-carbon transport?

We resist change for the very efficient reason which is that we are actually busy. We already have a huge cognitive load, so many things going in our brain at the same time. We have a tendency to overweight short term costs and benefits over long term ones. That’s called hyperbolic discounting.

What solution does neuroscience have to offer?

When you want to replace one behaviour with another, the most efficient way is to add difficulties to the behaviour you want to stop, and to facilitate the behaviour that you want to adopt.

How does that strategy translate into the mobility debate?

When it comes to mobility, instead of talking about individual psychological reasons, we should focus on creating public transit infrastructure, and ask ourselves: is it accessible, convenient, high quality, reliable? How far do people live from employment or schools, and what types of areas do they live in? Once this is achieved, you increase the hassle for those still using their private cars.

So you make it easier for people to make the right choice?

The idea is to make change really implicit, so people don’t have to add a choice and engage any more cognitive load.





STOCKHOLM

Going with the flow

Stockholm's Public Transportation Authority proposes to integrate travel by boat fully into urban public transport in Stockholm, the Swedish capital surrounded by water. Maritime commuting generates 75 percent less CO2 emissions than car journeys per passenger and deserves the same attention as metro, commuter trains, buses and local railways in projects to decarbonize transport. Safe and convenient stops, more routes, common tariffs and climate-smart vessels are key to unlocking the potential of water transport.

IRELAND



Brian Caulfield

Professor in transportation and Head of Department at Trinity College Dublin, Expert to the National Transport Authority (Ireland)

Electric from the start

What is Ireland's transportation situation like?

About 70% of all trips are by private car. The efficient and effective public transportation is in the capital, and our rail network has undergone decades of underinvestment. So people have become dependent upon the car.

What would you need for a transition towards cleaner mobility?

The first thing I'd ask for is a time machine, because we would need to have done this about 20 years ago. But we still can. There is a good rail network there that could be redeveloped and should be redeveloped quickly. We've invested a huge amount of money in the road network, and we can put more efficient and effective bus services on those. And that's starting to happen. It is getting better, but it is slow.

What are Ireland's specific challenges?

In Ireland, we're about half of the EU average in terms of population density. In rural Ireland people travel the longest distances with the oldest vehicles creating the most emissions. How do we decarbonize those parts quickly? It's by providing public transportation or electrifying the private car fleet, or introducing shared private cars.

Can you boost public transportation and decarbonize it at the same time?

If we're investing in a bus fleet that is likely to be there for 10, 15 years, why not have it electric from the start, or as low carbon as possible? It has happened in one of our bigger towns, Athlone. The bus network there has been completely electrified and completely overhauled, and that's showing great signs of success.



European stories



SLOVAKIA



Katarína Cséfalvayová

Director of the Institute for Central Europe & Executive Lead of the Danube Tech Valley Initiative, Former Member of Parliament (Slovakia)

is a mistrust from the majority, from the conservative parties and their voters towards green policies and the green transition.

Is there a danger of some countries in central and Eastern Europe feeling left out of EU green policies?

There is, and countries feeling left out are more vulnerable to populist policies fed by disinformation narratives.

Yet you seem hopeful...

I think there are signs of positive change, and I'm always an optimist. The green transition and decarbonization is not just something we must do, but also something that can give us a tremendous competitive advantage. So I think we don't really have a problem. We just need to change our perspective and look at the opportunities.

A tremendous competitive advantage

Do cars have a special status in Slovakia?

People think of their cars as something of a status symbol, they want beautiful cars. They want to have equipment that is visible in their cars. This is one of the things that will make it very hard for central and eastern Europe to green their transportation, because most of the transportation is done by car.

What about politics?

Green topics are still viewed as being represented by some small part of very liberal, very progressive political parties. And there



GERMAN REGIONS

On the rails

In recent years, German authorities have been bringing back rail services in regions where lines have been under-developed or abandoned. Optimising, rejuvenating and sustaining: small stations are given the same treatment as big hubs, with the aim of making them popular as the preferred alternative to car travel. More than 900 kilometres of regional and rural train lines have been reopened since the 1990s, and over 1,300 additional kilometres have been identified for future rehabilitation. Transdev is the largest private rail operator in Germany, running 16 major rail concessions in nine states.



AMSTERDAM

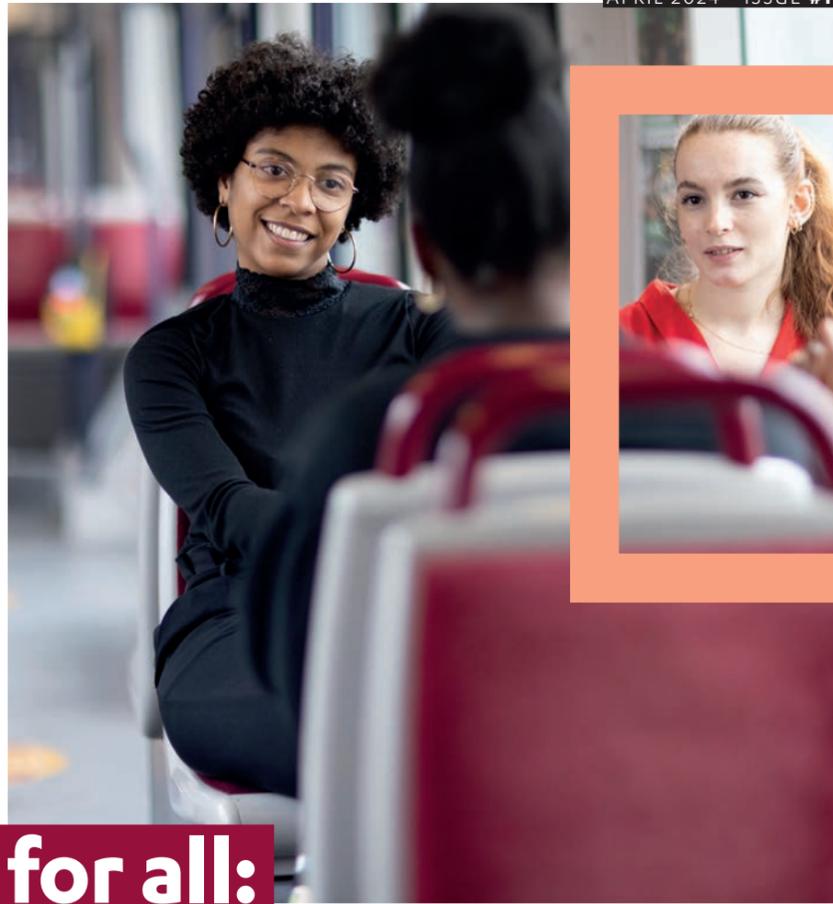
Electric power

Amsterdam has opted for the deployment of electric buses to meet the country's requirement to operate a zero-emission fleet. To ensure continuing service, the buses are recharged by a combination of rapid charging at the end of the line and full charging at night with electricity from renewable energy sources. Thanks to a 100 percent electric bus fleet in Amsterdam, Transdev is the first zero-emission mobility operator in Europe.



90% reduction in GHG emissions from transport with respect to 1990 will be needed by 2050 to achieve climate neutrality in the EU.

Source: European Green Deal



FOCUS

Mobility for all: The inclusion challenge

Why decarbonized mobility needs a strong social component

Decision makers need to ensure that the future of mobility, and decarbonization of the transport sector, include low income areas and people living outside of cities, experts told the Mobility Sphere's first forum in Amsterdam in October 2023. Any failure to make mobility inclusive could have dramatic consequences for our societies if large parts of the population feel they are being left behind, they said.



We have to make sure that the most vulnerable people can continue to live full lives despite all the changes



Samah Karaki

Neuro-scientist and founder of the Social Brain Institute

“Successful mobility has to be inclusive,” said Zeina Nazer, co-founder of Cities Forum. “Everybody needs equal rights to move from home to school, to work or to run errands,” she said.

Most efforts towards increasing and improving public transport are happening in cities, while many people on the outskirts or in rural areas rely on cars to get around. But the future of that model is in doubt as individual ownership of cars and their carbon footprint are increasingly under scrutiny.

“We have to make sure in rural areas that you don't need to be dependent on a car to get to a school, a shop or work,” Elke Van den Brandt, Brussels Minister responsible for Mobility, told The Mobility Times in an interview during the Amsterdam forum.

But while wealthier inhabitants may be able to make the switch to an electric car relatively easily, that option is not open to

everybody. Many risk getting cut off from transport altogether if they can no longer use their car, and lose work opportunities.

The stakes are high, said Karima Delli, Euro MP and Chair of the Transport Committee. **“If we fail to solve the climate question and the social question at the same time we will create dramatic divisions in our societies,”** she said.

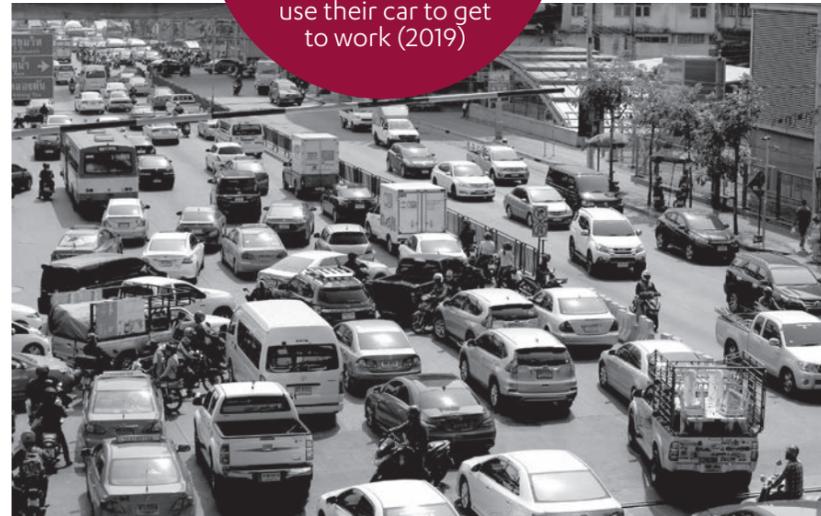
Such divisions could create more movements like the Yellow Vests (Gilets Jaunes) in France that started out as a protest against a carbon tax and grew into a wide movement of social discontent. Another risk is political, with social dissatisfaction favouring populist parties.

“What we are trying to prevent is the green transition and European Green Deal on decarbonization becoming a controversial topic like migration,” said Katarina Csefalvayova, Director of the Institute for Central Europe and Executive Lead of the Danube Tech Valley Initiative.

“We must make sure that people are well-informed and that they do not feel that they have been left out of the process, that they have a seat at the table,” she told The Mobility Times.

Experts said decision-makers must keep in mind that many people living far from city centers use their cars because public transport alternatives are not readily available. **“They need more attention**

because they sometimes don't have other choices than using their private cars,” said Samah Karaki, a neuro-scientist and founder of the Social Brain Institute. **“We have to make sure that the most vulnerable people can continue to live full lives despite all the changes,”** she said. **“This is why all changes linked to the environment cannot be separated from the question of social justice,”** Karaki told the Amsterdam forum.



OFF-CENTRE

CONNECTING THE PERIPHERY

We mustn't neglect areas outside cities, people living outside urban centers will need to be connected to mobility networks if they are not to be left behind in the decarbonization of transport, the Mobility Sphere forum in Amsterdam heard.

Charlotte Halpern, Researcher at Sciences Po's Centre for European Studies and Comparative Politics, believes there is a “right to mobility” for people who don't have a viable public transport alternative to their private cars for getting to work and elsewhere.

“They depend on their cars,” Halpern said. “We also need to think about those who do not have the means to own a car. We need to talk about how to reach out to those social groups in particular.”

“In rural areas, for example, that means ensuring that people don't need to depend

on a car to get to school, to the shops or to work”.

“Public authorities must make sure that climate targets are reached in a just way, they need to think of ways to bring the public in, but also to ensure that social groups or spatial inequalities are taken into account,” she said.

“A lot of investment has been focused on cities, on innovation in the core of cities, but not necessarily at the margins of them, not necessarily in rural areas, and in peri-urban areas.”

INSPIRATION FROM OUTSIDE EUROPE

BOGOTA BY BUS

Bogota, the capital of Colombia, is a mega-city of 11 million inhabitants with a reputation of being welcoming, fun-loving and safe. It is also a high-profile example of what the future of clean public transport can look like.

Bogota operates the biggest fleet of electric buses in Latin America, around 1,500, and is home to the largest electric bus depot anywhere in the world outside China.

Transdev has supplied and runs a third of Bogota's electric buses with a capacity of between 50 and 80 passengers each, and equipped with onboard cameras, USB charging, information panels and permanent transmission of data to the control center. Bogota's electric bus network is on target to save 94,300 tons of CO₂ emissions per year, the equivalent of taking 42,000 private cars off the road.

“We are putting the best technology currently available in the market at the service of citizens,” said Alvaro Jose Rengifo, director of TransMilenio, Bogota's Bus Rapid Transit (BRT) system operated by Transdev serving 2.4 million passengers each day. Bogota gives the buses access to dedicated lanes, allowing them to avoid the city's rush-hour congestion.



42,000

The number of cars whose emissions are saved by Bogota's electric bus deployment

“
The wider reality of mobility encapsulates extremely diverse situations and challenges,
from the north of Sweden to the south of Portugal, from the inner city of Dublin to the countryside of Moravia in the Czech Republic.

”

INTERVIEW

Antoine Grange

CEO Europe - Transdev



Invent new paths: The challenges of mobility

What does mobility mean to you?

Mobility is an expression of freedom. But with the ongoing challenges we are facing, the energy crisis, inflation, driver shortages, and the consequences of climate change, everybody's freedom to move around has had a big cost. The challenge is: how can we make sure mobility continues to provide this freedom, while protecting the climate?

Is that what inspired you to create the Mobility Sphere?

Yes. We owe it to the younger generations everywhere in the world to invent new paths, break down walls and change our way of doing things. We need to think outside the box, and we believe our Think Tank, the Mobility Sphere, is the right tool to propose and debate ideas and solutions with the ultimate goal of providing low carbon and accessible transportation solutions for all.

Who is invited to participate?

We need all stakeholders' ideas and contributions to move forward. An integral part of our approach is our "50 Questions for 2050" that we have started publishing on our website, and where everybody is invited to formulate a question about reaching carbon neutrality in Europe by 2050. It's a very inspiring space.

This is also a crucial time for public authorities at all levels – local, regional, national

and trans-national – to get together with industry representatives, experts and citizens to remove obstacles on our path towards carbon neutrality in mobility. We are seeking inspiring ideas from across Europe.

What are the main challenges facing Europe from a political perspective?

As Transdev Group's CEO Europe, I see the main challenges as: decarbonization and how to finance it, and support for the right energy mix, as well as the development of public transport to reduce car use in peri-urban and rural areas.

Within transport, a shortage of drivers is also a real issue, involving questions of how to attract and recruit drivers. This also ties in with the immigration question.

Europe will also need to accelerate adaptation. How do we adapt to rising temperatures? Together with clients, public mobility authorities, we need to target our investment for this adaptation, whether for vehicles, buildings or infrastructure. This includes air conditioning, canopies for shade, energy-saving measures and changes to working conditions.

Is there a single solution that can work for all places in the world?

No, of course not. The wider reality of mobility encapsulates extremely diverse situations and challenges, from the north of Swe-

den to the south of Portugal, from the inner city of Dublin to the countryside of Moravia in the Czech Republic.

In Sweden, for example, we equip our buses with a special battery thermal management system made for extreme climatic conditions.

And sometimes, urban rail networks are the best solution, like in Rabat, Morocco, where we operate the light rail urban network that has boosted daily passenger numbers to 150,000.

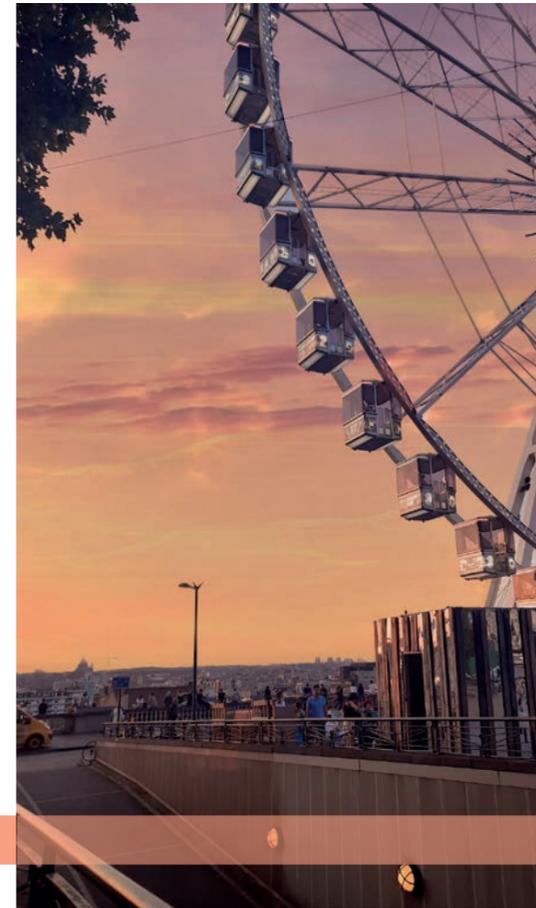
We always seek solutions best-adapted to the location, according to culture, habits and climate.

What they all have in common is our key idea: we don't move vehicles around, we move people around.

You mentioned "thinking outside the box"... Do you have an example?

Sometimes an original idea is also simple. For example, we often hear that roads are the enemy because road transportation is a huge contributor to CO₂ emissions.

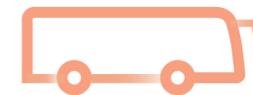
But the problem is the polluting vehicles, not the roads. So by putting high-capacity electric buses powered by renewable energy on those roads we transform part of the problem into part of the solution.



THE MOBILITY SPHERE

Next Stop Brussels

The Mobility Sphere forum in Amsterdam was the first step on our think tank's journey. More will follow in Brussels on the theme of **"Mobility as a driver of social cohesion"**. Brussels is both an example for the challenges facing urban mobility, and for showcasing innovative mobility solutions.



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PROFILE

Elke Van den Brandt

Brussels' combative mobility minister



People won't change their habits because of climate change, but they will change their habits if their street and neighborhood become better, more attractive, nicer to live in.



FIGURES

70%
share of Brussels space occupied by cars*

30%
share of young people in Brussels with public transport subscriptions*

65 km
length of cycling paths added in Brussels since Elke Van den Brandt became minister*

* Source: City of Brussels



Brussels Clout

Her smile can light up a room, her energy inspires large audiences, and she gets things done. Europe listens when Elke Van den Brandt talks about improving Brussels, where she has been Minister for Mobility, Public Works and Road Safety since 2019.

“My goal is to make Brussels a nicer place to live in,” she told the Mobility Times in an interview in Amsterdam during the Mobility Sphere’s inaugural forum. **“We need to talk about mobility, which is the instrument I’m using to offer more quality of life to the people of Brussels.”**

This means taking space back from cars, which take up 70 percent of all public space in Brussels, either on car lanes or parking spots. **“If we can get a little bit of that space, we can put in trees, and terraces for cafes, we can create playgrounds, cycling lanes, bus lanes,”** Van den Brandt said. **“You create a dream and you make people see what the future can be.”** But for the dream to catch on **“you need to offer alternatives, you need to invest in public transport, you need to put in place cycling lanes”.**

The Politico news organization awarded her a spot in the “Dreamer” category on its list of influential people in Europe in 2022, but she has also drawn hostility from opponents who want her to back off. **“I’m probably among the public figures that a minority loves to hate, and that a minority loves to love, but most people understand that I’m undertaking necessary reforms,”** she told the Mobility Times.

The Green minister is often seen on public transport, but even more often on a bike which **“is a moment just for me”**, she said. **“I’m out in the fresh air and that puts me in a good mood”.** Van den Brandt is pragmatic enough to know that people can find it hard to respond to arguments about global warming alone. **“People won’t change their habits because of climate change, but**

they will change their habits if their street and neighborhood become better, more attractive, nicer to live in.”

“It’s important to show that it’s a win-win and that those things go together.” The city has “to make sure that we offer something that is attractive and nice to use, and that you feel comfortable the moment you take public transport”.

Whenever she ponders the future of Brussels, Van den Brandt thinks of the children – she herself has two – growing up here. **“I’m a mother, and that’s the first job I have. I think we should have a city that’s on scale for all those little ones.”** Van den Brandt believes that once ideas gain wider support, financial constraints become less important. **“We will find the money if an idea is supported by the population and politicians.”**

The minister is sensitive to the argument that any failure to decarbonize mobility hurts people in low-income areas disproportionately. **“In Brussels the air quality is the worst in the poorest neighborhoods,”** she observed. **“Not tackling this issue means having a continuing social health issue.”**

Van den Brandt is delighted that Europe and the world have begun to look to Brussels for inspiration about mobility and better living. **“Brussels is a very international city. It’s helping Brussels to have people coming from other places.. Having this interaction between people makes the richness of our city.”**