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POLIS
CITIES AND REGIONS FOR TRANSPORT INNOVATION

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WHAT'S ON THE (MOBILITY) MENU?

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What is 'Cities in motion'?

'Cities in motion' is **POLIS' magazine** - a place for answers, analysis, and inspiration about the intense and evolving relationship between cities, transport and, essentially, our lives as citizens and mobility actors.

Developed **entirely in-house**, Cities in motion brings together all the inputs on urban mobility that our members have to offer in one convenient place.

For both those who are already vanguard of all things sustainable mobility and those who want to sink their teeth into the world of transport for the first time, 'Cities in motion' quenches a thirst for topic knowledge, and then some.

Do you wish to contribute to the next 'Cities in motion'?

Contact **Alessia Giorgiutti**, POLIS' Communications Lead, or **Karen Vancluysen**, Secretary General at POLIS.

FOREWORD

Karen Vancluysen

Secretary General
POLIS

Urban mobility is a menu, and every city and region serves its own selection of specialties—from the earthy staples of walking, wheeling, and cycling, to the more complex courses of buses, trains, shared vehicles, and micromobility solutions.

Some cities offer a lavish spread : options that are abundant, balanced, and accessible to everyone. Others leave tables nearly empty, offering only little bites that satisfy a lucky few. Some choices may look expensive on the menu but fail to delight (or simply satisfy), while others appear more modest or overlooked, yet surprise the mobility palate, revealing flavours that transform travelling into something nourishing, joyful, and even indulgent. Choosing what to taste, mixing and matching courses, and discovering hidden gems is at the heart of designing mobility that truly serves everyone.

This issue of Cities in motion explores how cities can curate a menu that works for all—where health, sustainability, and equity are not side dishes but the main course.
Across the world, new recipes for mobility are being tested. Sam Johnson of the World Bank makes a bold proposition : dedicate up to 10% of national road budgets to active mobility—a simple ingredient that could reshape the flavour of our cities, improving public health and tackling climate change. Professor Jan Peter Balkenende, former Prime Minister of the Netherlands and now Chairman of the New Mobility Foundation, explores mobility poverty as a social hunger that still leaves too many without access to education, work, or healthcare, and shows how targeted, inclusive initiatives can bring everyone to the table.

From Catalonia's carefully crafted menu of interurban and demand-responsive services to Japan's Smart Mobility Platform, where smaller towns mix local ingredients —technology, health promotion, and community—to serve mobility that keeps seniors active and connected, each course reveals how thoughtful planning and collaboration can create systems that truly nourish everyday life.

In Örebro, Sweden, a well-seasoned mix of push and pull measures, anchored in smart parking policy, shows how cities can guide travel choices while winning political and public approval. Meanwhile, Helmond in the Netherlands proves that even small, data-informed bites can make a lasting impression when served with citizen engagement and local flavour.

Innovation, too, is reimagining the ingredients of daily mobility. Lyft Urban Solutions' adaptable micromobility networks and Europe's Smart Cycling Roadmap add a certain je ne sais quoi—making active travel safer, greener, and more connected. Projects like URBANE in Mechelen and Karlsruhe experiment with shared parcel networks and autonomous deliveries, finding new ways to lighten the load on our streets. Yet even the most creative kitchens face the occasional failed dish. Some pilots never get plated, but every misstep adds to the collective recipe book, proving that transport innovation, much like cooking, thrives on experimentation.

A well-rounded menu is not only about variety, but also about fairness, and ensuring that everyone, regardless of their mobility appetite or ability, is served. MobiliseHER in India demonstrates how participatory, data-driven planning can empower women and marginalised communities, while efforts to design streets and transport for people with visual impairments show that accessibility must be baked into every stage of planning, not sprinkled on top.

At the systemic level, coordination and foresight are the head chefs behind mobility's transformation. Switzerland's long-term rail vision and Europe's road transport research under STREnGth_M and LeMesurier projects illustrate how collaboration, data, and strategy can refine the recipe for zero-emission transport—ensuring innovation reaches the streets, communities, and citizens who depend on it. Mobility is not just about the next meal : it is about ensuring that the kitchen keeps running for generations to come.

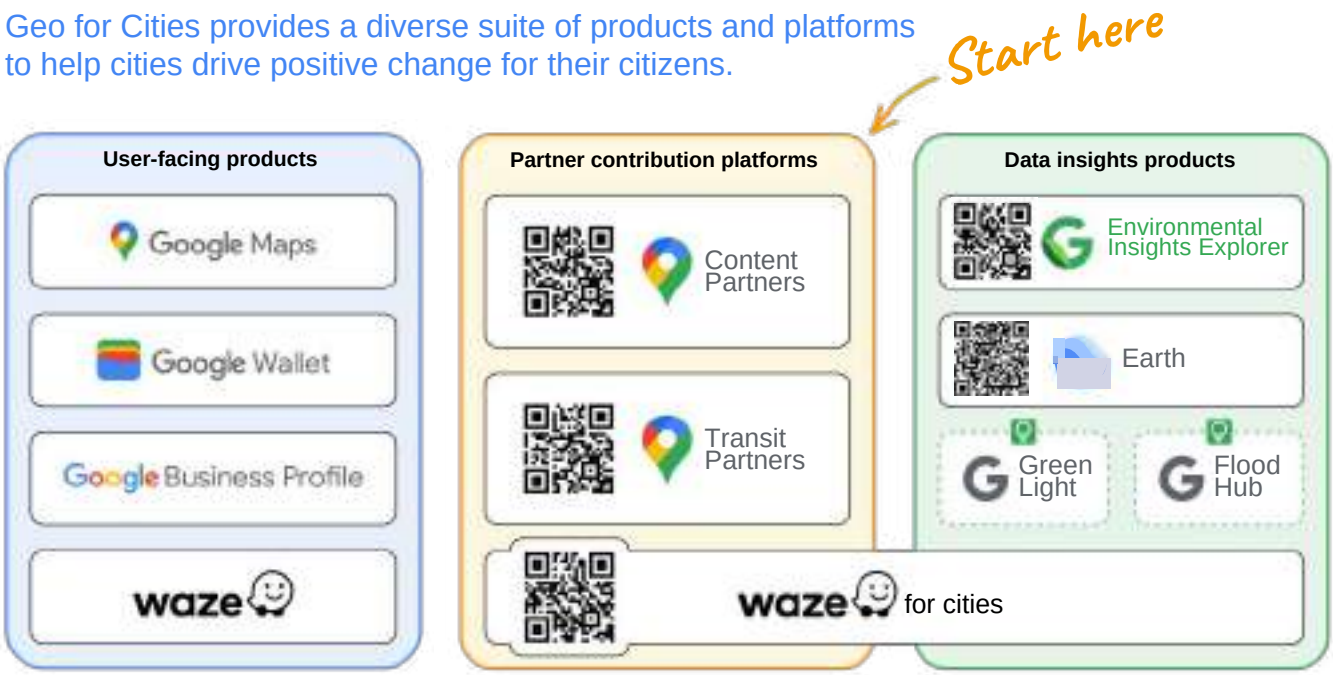
The menu of urban mobility has never been more diverse—and also, more urgent to get right. Within these pages, you will find practical recipes, bold experiments, and inspiring stories of cities, regions, and private entities that are moving beyond car dependence, embracing equity, and redesigning streets as places to gather, connect, and thrive. Because in the cities of the future, every journey should be safe, sustainable, and full of possibility—and every citizen should have a seat at the mobility table.

Bon appétit!

Karen Vancluysen
Secretary General of POLIS Network

Geo for Cities: Partnering with cities worldwide to improve mobility, environmental sustainability, and economic growth in their communities.

Geo for Cities provides a diverse suite of products and platforms to help cities drive positive change for their citizens.



User-facing products *(for constituents)*

Helping citizens, visitors, and businesses navigate cities efficiently and safely while promoting sustainability and inclusivity.

Google Maps

Over two billion monthly active users rely on Google Maps to navigate safely and efficiently, with features such as real-time traffic, speed limits, detailed street maps, eco-friendly routing, cycling routes, EV charging stations, low-emission zones, and real-time transit updates with service alerts.

Local Guides
Users access trusted local insights and recommendations about where to go, what to do, and how to get there.

Street View Locals and tourists can virtually explore destinations and plan itineraries or future travels in immersive 360º resolution.

Google Wallet

Transit users can seamlessly store digitized transit passes, track travel activity, and receive notifications from transit authorities.

Google Business Profile

Local businesses can convert people searching for their goods and services on Maps and Search into new customers, while city authorities can claim ownership of government buildings and venues to ensure their information is accurate and up-to-date.

waze

Drivers can navigate safely and stay informed with real-time alerts about crash history, emergency vehicles, speed limit changes, and road hazards—assisted by contributions from Waze's active community.

INTERVIEW WITH
SAM JOHNSON

ELABORATED BY
ALESSIA GIORGIUTTI

HAPPY IF HEALTHY

As the UN Decade of Sustainable Transport begins, Sam William Johnson, World Bank Sustainable Transport Specialist, urges governments to rethink priorities. His upcoming publication makes a bold case : invest at **least 10% of the road budget in liveable streets by 2035**—transforming cities, improving health, and tackling climate change.

Cycling in Amsterdam, The Netherlands
Dutch Cycling Embassy

POLIS: Your upcoming publication argues for something both bold and provocative: that governments should invest up to 10% of their road budgets into liveable streets (i.e. streets that enable active mobility), in all 193 UN member states. Why 10%?

Sam Johnson: The upcoming inaugural United Nations Decade of Sustainable Transport (2026-2035) can serve as a permission slip for governments to act fast. If enabling active mobility is not spotlighted during this decade, it will remain an afterthought and continue receiving only crumbs. Investing 10% of road budgets into liveable streets by 2035 is a clear, memorable target—and big enough to be transformative, yet achievable in practice. We have already seen national governments move even faster: Ireland's, for instance, increased its national active travel budget from 2% to 20% of the country's transport capital budget in 2021.

However, what I am advocating is a more gradual, incremental scale-up and mainstreaming trajectory. Put simply, for the UN Decade, each national, regional, and local agency should nominally invest 1% more of their total road budget on liveable streets than the year before. To catalyse this scale-up, national and regional road agencies should each create dedicated 'Liveable Streets Investment Programmes'. I will present a step-by-step pathway to design and operate such schemes in my presentation during the Annual POLIS Conference 2025's Opening Plenary, informed by similar schemes already in operation around the world.

POLIS: How can the economic case for active mobility be combined with the ethical and political one—particularly around fairness, children's rights, and public health?

Johnson: Investing in active mobility is a no-brainer economically: studies show benefit-cost ratios as high as 16:1, largely thanks to health gains. That means every $1 spent can return up to $16 with a mean return of $5.3 for every $1 in benefits—from reduced healthcare costs to higher productivity. But it is also about fairness and wellbeing: every child has a right to a safe route to school, and every community deserves clean air and streets that do not put lives at risk. When kids can walk or bike freely, it is a sign our cities and towns are healthy—children are like the 'canary in the coal mine' for urban livability. Cleaner air, fewer road deaths, and more exercise mean not just longer lives, but stronger economies, as a healthier population is more resilient and productive.

POLIS: How do we make sure the 10% target for liveable streets leads to real, high-quality, people-focused infrastructure, and not just symbolic projects?

Johnson: The key is accountability with standards. We should not just spend 10% for the sake of it—we must tie funding to clear quality criteria. For example, Active Travel England now reviews walking and cycling projects and only funds them if they meet high design standards. That model—essentially 'money with strings attached'—ensures that a bike path is not just a line of paint, but truly safe and well-designed. We can also require projects to show measurable outcomes (like increases in walking or cycling, or reduced accidents) to access the budget, creating a built-in incentive against half-hearted, token efforts.

POLIS: Design and engineering standards often lock countries into car-centric infrastructure. How do we change those standards to embrace walking and cycling?

Johnson: It starts with rewriting the street design code. Many countries are now updating their road design manuals to put people on foot and bike at the centre, not the margins. Updating road design manuals to be livable streets by design and prioritise active mobility should be a precondition for receiving grant funding.

Sam Johnson

Sustainable Transport Specialist
World Bank

Cycling in Vilnius, Lithuania
Dutch Cycling Embassy

POLIS: How do you balance national mandates with the need for community-driven, locally relevant solutions?

Johnson: A national mandate is powerful because it creates urgency across the country, rather than leaving cities and towns to go it alone. But one size does not fit all, so local authorities need flexibility in how they achieve that goal. Think of it like a framework: the nation provides the vision, funding, guidelines, and political expectation, but each city or village designs their approach based on locally determined needs.

POLIS: Can active mobility realistically compete with the entrenched lobbying power of the oil, auto, and construction sectors? How can advocates avoid being dismissed as idealistic?

Johnson: It can compete, and it already is, because the narrative is shifting. The best approach is to show that investing in liveable streets is not a fringe cause: it is a mainstream benefit. For example, investing in bike paths and sidewalks still creates plenty of construction jobs and contracts; it is infrastructure, just of a different kind. We can tell the road-building industry, 'You will not be out of work—we are just asking you to build different stuff'. Many car companies also see the writing on the wall—some are investing in e-bikes or mobility services, knowing the future is multimodal.

To avoid being labelled idealistic, we arm ourselves with data and success stories. We highlight cities that boosted local businesses with bike paths, or show how cycling reduces congestion for drivers, too. Public opinion often favours safer, cleaner streets—even if a loud minority or legacy lobby disagrees. Framing active mobility as about giving people choices rather than 'anti-car' isolates extreme voices. Finally, this is not ideology—it is problem-solving; we have real issues (pollution, road deaths, sedentary lifestyles—you name it), and active mobility is a practical answer.

POLIS: How should rural and peri-urban areas be included in your vision, given their very different realities?

Johnson: All communities, whether in rural, urban or peri-urban areas, want to become more livable places. In less-dense areas, trips tend to be longer, so our approach shifts. For example, we might invest in greenways connecting villages and small towns, allowing people to bike or walk safely between communities. E-bikes and bike-sharing play a big role here, effectively shrinking distances and making cycling viable beyond city limits. We also focus on safe routes to rural schools (so kids do not have to rely solely on cars or experience unsafe walking conditions) and better integration of walking and cycling with, say, local buses or trains. The point is: rural residents deserve mobility choice and safety just as much as city dwellers.

POLIS: What role do private-sector initiatives, like bike-sharing, play in complementing public transport to scale active mobility?

Johnson: The private sector can be a fantastic partner in scaling up active mobility investments. Take bike-share schemes—these are often run by private companies or public-private partnerships, and they provide a convenient entry point for people to start cycling without owning a bike. If cities build safe lanes, companies can supply the bikes or e-scooters to navigate them. We have seen this synergy in Asia, Europe, and the U.S., where affordable, dockless bike rentals grew rapidly once decent infrastructure was in place. Governments should support this with policies (like designated space for bike-share stations) and co-funding, while letting the private sector innovate.

Employers and developers can also help by offering cycling-to-work benefits, installing showers and bike parking, and designing real estate developments around walkability. Public transport remains the backbone of the system.

Walking, cycling, wheeling, buses, and trains should integrate seamlessly, which means building bike lanes that directly lead to transit hubs, having safe bike parking at stations, and even permitting bicycles on board trains and buses where feasible. When we integrate, say, a 3-km bike ride with a 15-km bus/metro trip, people can leave their car at home even for longer commutes. As we know, active mobility and public transit reinforce each other, reducing congestion and emissions.

POLIS: Beyond emissions, economics, and safety, what does joy, freedom, or happiness mean in your vision of an active mobility future? And how do you make governments take seriously the idea that mobility should deliver joy, not just efficiency?

Johnson: This might be my favourite question. Ultimately, a great city or town sparks joy in everyday life. Mobility is not just about moving people efficiently; it is about quality of life. When I envision streets teeming with walkers and cyclists, I see smiles, interactions, the freedom kids feel riding a bike in the park. There is a reason people speak fondly of strolling down a beautiful boulevard or biking along a riverfront—it makes them happy.

To get governments to take this seriously, we frame it as 'livability', a core goal by which cities are increasingly judged. Happiness is not 'fluffy'—it translates into concrete outcomes like better mental health, stronger social cohesion, and even economic appeal, as people and businesses are drawn to places where life is good.

***Top right*: Children cycling in Leiden, The Netherlands**
Dutch Cycling Embassy

***Bottom right*: Bicycle boulevard in Delft, The Netherlands**
Dutch Cycling Embassy

INTERVIEW WITH
JAN PETER BALKENENDE

ELABORATED BY
ALESSIA GIORGIUTTI

SERVING BETTER MOBILITY

Former Dutch Prime Minister Jan Peter Balkenende, now Chairman of the New Mobility Foundation, tackles one of today's most urgent issues : **mobility poverty**.

He explores how targeted initiatives can open access to healthcare, education, and work, and shares his vision for inclusive, sustainable mobility.

Ministers' Roundtable at the ITF Summit in Leipzig
International Transport Fortum (ITF)

POLIS: Your commitment to addressing mobility poverty is well-known. What inspired you, and how has your motivation evolved over the years?

Jan Peter Balkenende: My engagement with mobility poverty stems from the conviction that mobility is not a luxury, but a precondition for participation in society. During my time as Prime Minister of the Netherlands, I saw first-hand how many people are excluded simply because they cannot access essential services. Over the years, this understanding has evolved into a mission to create systems where mobility empowers rather than excludes.

Within the New Mobility Foundation (NMF), we work independently in the dynamic space between government, society, and the private sector. This position allows us to connect policies with practice, combining the public interest of inclusion, the innovative strength of business, and the everyday realities of citizens to develop solutions that ensure sustainable mobility is also accessible and equitable for all.

POLIS: Mobility poverty limits access to healthcare, education, work, and social life. Which of these areas do you see as most urgently affected—and why?

Balkenende: Access to healthcare is often the most urgent. When people cannot reach medical appointments, the consequences are immediate and sometimes life-threatening. But the effects go beyond the individual. A society where people can access healthcare in time is healthier, more productive, and contributes directly to the national economy.

At the same time, mobility barriers rarely exist in isolation. Inability to travel to work, school, or social activities reinforces inequality and may trigger exclusion over time. That is why the New Mobility Foundation takes a holistic approach, ensuring that access in one domain, such as healthcare, strengthens access to others.

True inclusion begins when all dimensions of daily life are connected through fair and reliable mobility solutions.

POLIS: Reflecting on your time in government, are there policies or initiatives you now wish had done more to address transport inequities? How have these experiences influenced NMF's current strategy?

Balkenende: Policies often overemphasise infrastructure and efficiency, leaving people-centred needs under-dressed. Our strategy fills this gap by focusing on inclusion, affordability, and accessibility, learning from communities rather than imposing top-down solutions.

POLIS: Sustainable transport is increasingly prioritised, yet accessibility and affordability remain critical. How do you navigate these sometimes competing goals in developing inclusive mobility solutions?

Balkenende: We believe sustainability and inclusion are deeply complementary, not conflicting. A truly sustainable mobility system must also be socially sustainable: environmental progress loses its meaning if it leaves people behind.

Our approach starts from people's actual mobility needs and connects environmental objectives with social equity through smart policy design, shared mobility, and local collaboration. In this way, green solutions become accessible and affordable—sustainability and inclusion reinforce each other when clean mobility is within everyone's reach and social participation becomes part of the sustainability agenda.

Smart subsidies, mobility credits, and local community initiatives help ensure that sustainability, accessibility, and affordability advance together, forming one inclusive mobility ecosystem rather than separate goals.

Jan Peter Balkenende

Chairman
New Mobility Foundation

POLIS: Could you provide some concrete examples of projects or initiatives that the New Mobility Foundation is currently implementing to address mobility poverty?

Balkenende: Several pilot projects in the Netherlands illustrate this approach. Tworby transforms a standard bicycle into a stable three-wheeler, giving people with reduced mobility the freedom to cycle safely and independently. It combines inclusion, sustainability, and cost efficiency in simple design.

Changefied is a virtual training environment that allows people to experience public transport digitally before travelling. This helps vulnerable groups, such as those with anxiety disorders or cognitive limitations, build confidence and overcome fear of using buses or trains.

The Dutch initiative Heen en Weer (in English, ‘back and forth’) is a relatively young Amsterdam-based start-up that demonstrates the power of local communities. Volunteers provide electric, emission-free rides for people who cannot travel on their own, ensuring that no one is left isolated. Together, these initiatives show the potential of community-driven innovation to create systemic impact, making mobility more inclusive, sustainable, and humane.

POLIS: How can the projects and the initiatives of the NMF inform broader national or European mobility policies?

Johnson: Pilot projects provide valuable insights into what works in real-life contexts and bridge the gap between practice and policy. By sharing these lessons through networks such as POLIS, EUROCITIES, and the International Transport Forum, the New Mobility Foundation connects local innovation with European policymaking. Dialogue with the European Commission and contributions to the ITF Summits in Leipzig help translate practical experience into systemic inclusion across national and European mobility networks.

POLIS: Digital and hybrid mobility solutions are advancing rapidly. How can these innovations be designed to ensure they do not inadvertently exclude vulnerable or less digitally literate populations?

Balkenende: Digitalisation offers great potential, but it can also leave people behind if inclusivity is not built in from the start. People with limited digital skills often struggle with app-based systems, which is why accessibility should extend beyond technology alone: clear design, personal assistance, and offline options remain essential. Technology should bring people closer to opportunities, not create new distances between them.

POLIS: Tackling mobility poverty requires alignment between governments, NGOs, and the private sector. From your perspective, what approaches or strategies create the most effective and lasting collaborations?

Balkenende: Lasting collaboration starts with recognising that no single actor can solve mobility poverty alone. Governments provide the frameworks, businesses bring innovation and capacity, and Non-governmental organisations keep the human perspective central. The key is to align these strengths around a shared mission rather than separate agendas—that means co-designing solutions from the start, testing them locally, and learning openly from both successes and failures.

POLIS: Looking back on both your political career and your current work with the New Mobility Foundation, what do you consider the next critical step to ensure mobility becomes a right rather than a privilege, and what legacy would you like to leave in this field?

Balkenende: 'Leave no one behind' is the central, transformative promise of the United Nations 2030 Agenda for Sustainable Development. It captures exactly what mobility should stand for. Without access to healthcare, work, education, and social life, people are excluded from full participation in society. Mobility is the enabler that gives access to these opportunities.
The next step is to make this vision part of everyday decision-making. Mobility should no longer be treated as a secondary issue, but as a measure of how fair and inclusive a society truly is. I hope the New Mobility Foundation can help shape and embed this understanding, turning inclusion from ambition into standard practice. When mobility becomes a shared right rather than a personal struggle, we will have created a lasting impact.

Expert interview with Mr Balkenende
International Transport Fortum (ITF)

Previous page, top left: Tworby poster 'I get on and off again without stress'
Tworby

Bottom left: Changefied offers innovative gamification and serious games solutions
Changefied

ACCESS

The Access pillar, encompasses the Access and Parking Working Groups and the Just Transition, Urban Nodes, and Urban Air Mobility Taskforces.

These work together to tackle the diverse challenges of urban mobility, ensuring that cities and regions can deliver transport systems that are accessible, inclusive, and sustainable for all.

The **Access Working Group** brings together cities and regions to tackle access-related challenges across social, economic, physical, digital, and regulatory dimensions. Topics include UVARs, pricing, inclusive infrastructure, and new mobility modes. The group promotes knowledge exchange and cross-sector collaboration to shape policies that balance sustainability, accessibility, and innovation.

The **Parking Working Group** connects local authorities to address parking policy and innovation. Key areas include curbside management, EV charging, public-private cooperation, and data standards. The group supports cities in aligning parking strategies with broader goals in mobility, energy, and digitalisation, while contributing to EU-funded projects and data harmonisation.

The **Just Transition Taskforce** ensures the shift to sustainable urban mobility is fair and inclusive. It promotes equity by addressing affordability, accessibility, and social justice—especially for vulnerable groups. Through events, research, and collaboration, the Taskforce integrates just transition principles across transport policies to ensure all citizens benefit from and shape the mobility transition.

The **Urban Nodes Taskforce** helps cities meet TEN-T goals through peer exchange, tools, and joint action. Supporting over 60 cities, it focuses on 2027 targets including SUMPs, mobility data reporting, and multimodal access. The group fosters governance coordination, monitors Urban Mobility Indicators, and connects members to funding and innovation.

The **Urban Air Mobility Taskforce** supports cities in integrating aerial services into local mobility systems. It facilitates knowledge exchange, links members with innovation networks, and promotes regulatory readiness. By addressing governance, safety, public space use, and acceptance, it empowers local authorities to shape sustainable, inclusive urban airspace

PUSH, PULL, PARK

Sticks (and carrots) for more sustainable travel habits

Facilitating more sustainable travel patterns is not enough to drive real change : policy packages combining push and pull measures are required. **Parking policy** is a powerful yet often underutilised tool available to all cities.

Experience from **Örebro** demonstrates that, with the right arguments, measures can gain acceptance across the political spectrum.

WRITTEN BY
PER ELVINGSON
HANNA MALM

Örebro Municipality has long pursued ambitious goals to change travel habits, aiming to create a cohesive, attractive, accessible, and socially sustainable city. The city built high-quality cycling infrastructure, sought to avoid urban sprawl, and carried out numerous campaigns promoting sustainable travel.

Despite these efforts, travel habits have remained relatively stable. A key reason is that car users have been able to continue driving with nearly the same ease as before. In recent years, awareness has grown that more powerful policy instruments are needed to bring about real change. Research shows that 'sticks' are what drive results, but 'carrots' are needed to lower barriers and build acceptance.

Digital signage directes to parking garages in and around the city centre of Örebro, Sweden
Örebro Municipality

Among the locally available instruments, access to and cost of car parking is perhaps the most powerful tool for influencing transport choices and travel patterns—parking policies can be nearly as effective as congestion charges.

At the same time, we know that parking fees are controversial and face resistance from motorists, property owners, and retailers. However, with the right packaging, these obstacles can be overcome. This will be explained shortly—but first, a brief journey through time.

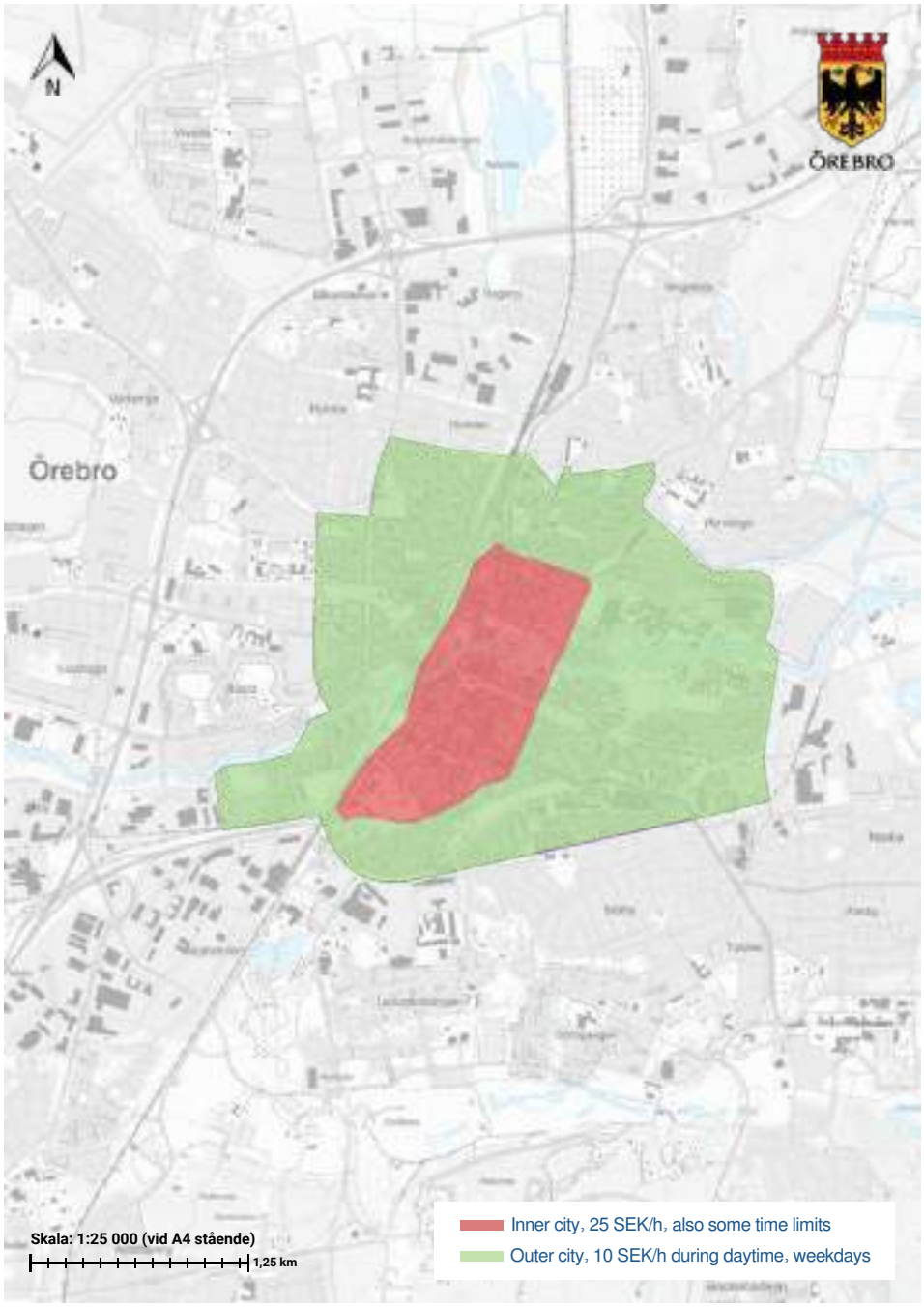
Four years of major change

In 2021, Örebro implemented its first major parking fee reform in 15 years. Progressive fees were introduced in the city centre to favour short visits and direct long-term parkers to multi-storey car parks or alternative modes of transport. In the zone surrounding the city centre, parking fees were increased fivefold, and residential parking permits were introduced.

In 2022, inventories revealed that the goals of the fee reform had not been fully achieved: streets remained crowded while parking garages had ample space. That year also saw a broad survey in which residents were asked how they believe traffic in the city should be designed.

In 2023, a review of the parking situation in the southern districts of the city showed that parking was heavily subsidised both in public spaces and on private plots, creating social injustice and artificially high car ownership.

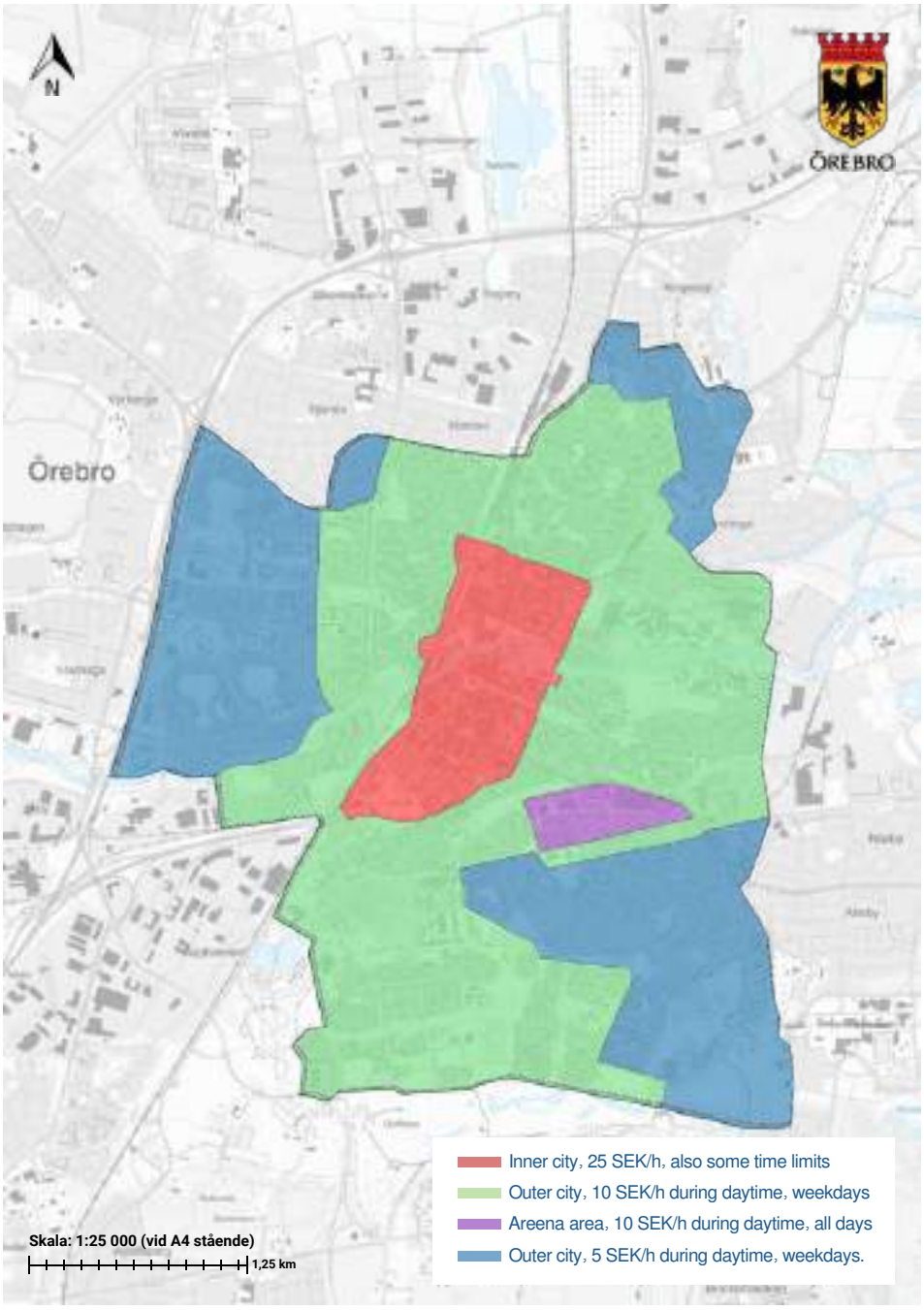
In 2024, the Swedish Transport Agency announced its decision to reject the appeal against the 2021 fee reform. This ruling, along with inventories and other studies, laid the foundation for a new reform. In October 2024, the City Council decided to more than double the size of the fee zone and increase residential parking fees by 50%. The progressive fee in the city centre, originally intended to increase turnover, was replaced by higher fees and time restrictions.



Parking zones in Örebro in 2021
Örebro Municipality

The new decision in 2024—just three years after the previous fee increase—was partly to correct details but also reflected growing awareness of how much of the cost of storing private cars is borne by people other than the car owners.

Throughout 2025, the new fees have been gradually introduced, despite the decision being appealed. The city has also developed a proposal for a new mobility standard, allowing property owners greater freedom to choose whether to build parking or prioritise other mobility solutions in new developments. A decision on this is expected later this year.



Parking zones in Örebro in 2025: In comparison to 2021 (previous page), the area has doubled in size

Örebro Municipality

Building trust over time

The development of parking as a policy instrument has occurred alongside two other major municipal projects: the expansion of a Bus Rapid Transit (BRT) system through the city centre (2021–2029) and the creation of a new mobility strategy (2021–2024).

These three processes have reinforced each other through close collaboration between the administration and senior politicians, building consensus and trust.

It was particularly within the framework of the mobility strategy—developed over three years—that parking issues were discussed both broadly and in depth. This fostered mutual trust and enabled politicians to make bold decisions that went against vocal opposition and conventional interpretations of legislation. A key support in this was a 2022 survey, which showed that a broad majority of residents want the city's transport system to develop in a more sustainable direction.

A major success factor has been that the process was knowledge-driven, grounded in research, inventories, modelling, and follow-ups. This gave politicians confidence in their decisions and the ability to justify them in debates and media.

In a local newspaper interview, for example, the councillor from the largest party, social democrat Kemal Hoso, stated, 'Of course car traffic must decrease, because it is not a sustainable mode of transport', while the representative of the second-largest party, conservative Johan Kumlin, said in a radio interview, 'I would rather have a city with trees, greenery, and artistic features than long rows of cars lining the streets'.

A market that does not work

Generally, all actors are poor at charging for the actual cost of parking. Örebro's calculations show that an average car-free household in newly developed areas pays significant monthly sums for parking to their car-owning neighbours.

The market failure is largely due to outdated parking standards that have forced more parking than is demanded at real cost, and the fact that street parking in large parts of the city has long been free.

By quantifying the extent of parking subsidies and introducing the concept of 'mobility justice', parking as a policy tool has increasingly gained support from both parties, favouring a functioning market economy and those advocating for greater social equity.

The parking reforms are also indirectly a consequence of the BRT investment, as calculations ahead of its expansion showed that increased parking fees were a key factor in encouraging motorists to switch to improved public transport.

The road ahead

Parking must be addressed as part of a broader whole, where the main goal is not to eliminate cars in the city but to create green, safe, and attractive environments. To achieve this, push and pull measures must be combined. In Örebro, higher parking fees have been balanced with urban development, cycle paths, and more efficient public transport.

There is always resistance to change, but the loudest opponents are often a relatively small group. One research report showed that half of all negative comments about BRT in the local newspaper came from just five individuals. Surveys capturing the 'silent majority' clearly show that a broad majority of residents want change, with less space for cars—fully in line with the municipality's mobility strategy and parking reforms.

The car norm remains strong, and restricting and increasing the cost of parking is still controversial. Many are critical, especially regarding parking in the most central parts of the city. A strategy for the city centre will be developed in the coming year to build consensus among retailers, property owners, residents, and the municipality about the kind of city it wants in the future.

***Top right*: View of Örebro city centre**
Örebro Municipality

***Bottom right*: Parking Sörbyängen**
Örebro Municipality

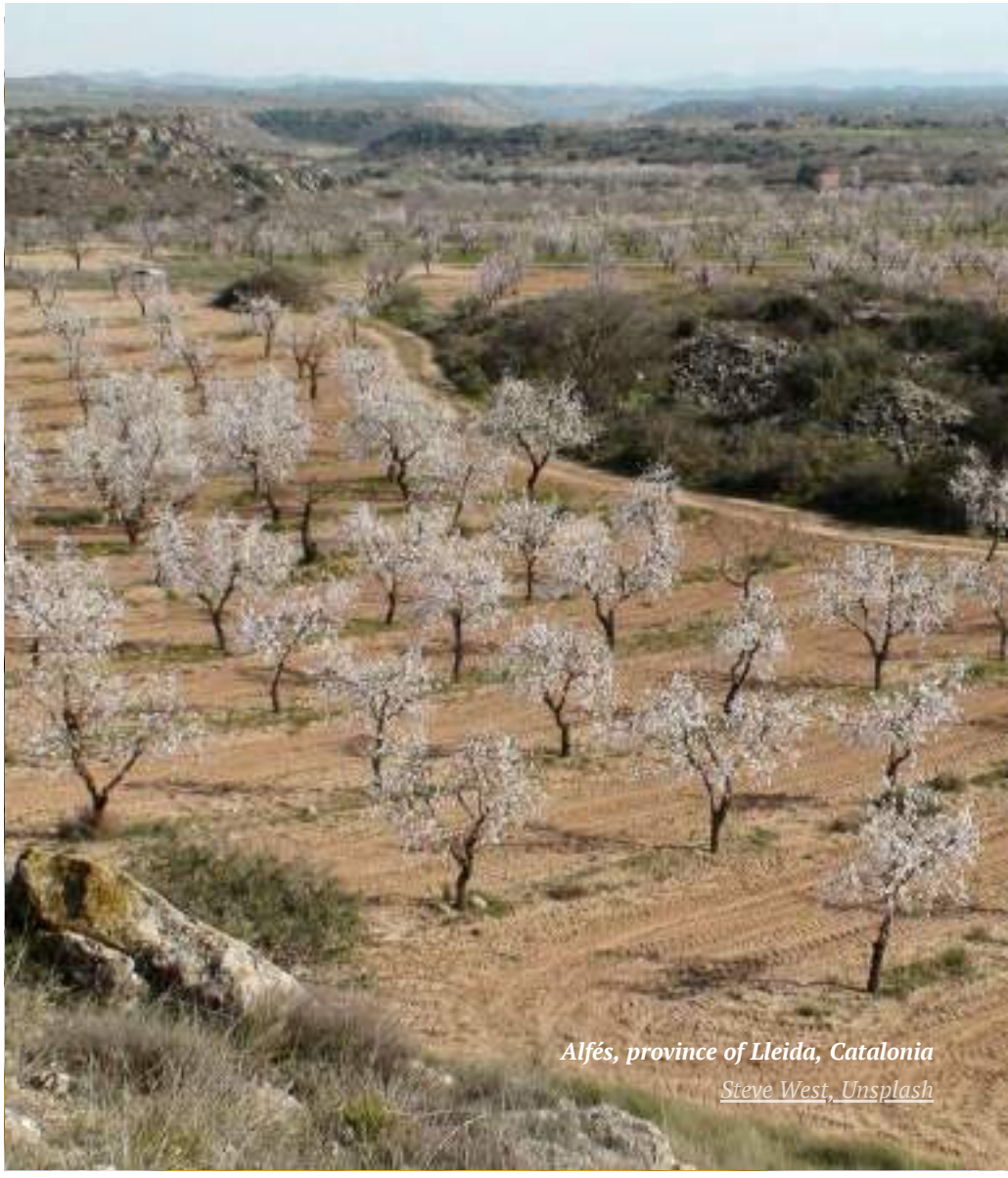
PUBLIC TRANSPORT, REIMAGINED

A look into Catalonia's interurban transport initiatives

WRITTEN BY
CRISTINA POU
ALBERT GUILLAUMES
ORIOL FONT

From rural demand-responsive services to zero-emission bus–train integration, **Catalonia**'s **interurban transport initiatives** show how smart planning and coordination can strengthen efficiency, sustainability, and regional connectivity, reflecting a clear commitment to improving mobility for both people and the environment.

Together, they illustrate how existing resources and innovation are shaping an accessible and eco-friendly mobility model for the region.



Alfés, province of Lleida, Catalonia
Steve West, Unsplash

Thoughtful planning and innovative thinking can reshape public transport, even in rural areas or protected natural spaces. Catalonia definitely knows something about it.

Indeed, by integrating services, using existing resources more efficiently, and embracing sustainability, the region is building a stronger, more accessible network that meets the needs of both residents and visitors.

Digital on-demand transport in rural areas

In rural areas, such as the comarca (county) of Les Garrigues, the Clic.cat digital on-demand service connects several small towns to the capital, Les Borges Blanques, significantly improving accessibility. To maximise resources, Clic.cat routes are strategically coordinated with the Exprés.cat bus line, which links Les Borges Blanques to Lleida, the capital and largest town in Segrià county, the Ponent region, and the province of Lleida. This integration ensures smooth transitions between different modes of transport, providing more efficient and reliable journeys. The results speak for themselves: Clic.cat demand increased by 21.95% between 2022 and 2024, while the Exprés.cat line saw an impressive 60.1% demand increase, demonstrating the success of this integrated approach. By combining local and express bus resources and aligning timetables, the network reduces travel time and increases overall efficiency.

Electric bus feeders to train stations

Catalonia is also integrating different transport modes using electric buses as feeders to trains, creating a zero-emissions, fully integrated network. Four lines of electric buses are designed to connect passengers seamlessly with train services, further reducing private car use. One of the most notable innovations is the use of energy from regenerative braking on the Ferrocarrils de la Generalitat de Catalunya (FGC trains), which is transferred to electrically power the buses, creating a circular energy system. Recently, this initiative has proven highly effective: between 2022 and 2024, demand for the bus services rose by 37%. This approach not only improves energy efficiency but also reduces the environmental impact of both bus and rail, advancing Catalonia's goal of net-zero emissions.

Connectivity from different cities to the univerisity campuses

The Universitat Autònoma de Barcelona (UAB) benefits from 20 bus lines connecting over 30 towns and cities across Catalonia—an extensive, robust service that ensures accessibility for students and staff from both metropolitan and more rural areas. Between 2023 and 2024, demand for campus bus services grew by 20%, highlighting the increasing reliance on public transport as a sustainable alternative to private cars.

Key aspects of this successful network include:

- Well-coordinated routes connecting diverse municipalities;
- Timetables synchronised to align with university hours for convenience;
- Seamless integration with surrounding transport networks, allowing smooth and efficient journeys from a wide range of locations to the campus.

Access to national and natural parks

Public transport also supports sustainable tourism in Catalonia's natural parks. Services connect visitors with prominent

Bus routes from Les Garrigues, Catalonia

Generalitat de Catalunya

***Top left:* Bus that provides service to the university, near the bus station**

Mobility and Transport Direction, Generalitat de Catalunya

***Bottom left*: Electric bus next to its train station**

Mobility and Transport Direction, Generalitat de Catalunya

prominent natural parks, such as the Montseny and Garrotxa regions, helping reduce car congestion. The Parc Natural de Aigüestortes i Estany de Sant Maurici—one of the most iconic natural parks in the Catalan Pyrenees—is also accessible by public transport.

The Aigüestortes bus service connects the town of Espot to the park, offering a sustainable travel option for visitors. This service is especially popular in the summer months, when demand increases significantly: it not only reduces the environmental impact of private vehicles, but also facilitates easy access to hiking trails and stunning viewpoints, making the park more accessible while promoting its conservation.

Additionally, integrated train-and-bus services make two major Catalan natural parks—the Montseny and the Sant Llorenç del Munt i l'Obac—accessible year-round.

Visitors can reach Montseny Natural Park with a convenient combined ticket that includes a train from Barcelona and a connecting bus ride to the park. Sant Llorenç del Munt i l'Obac Natural Park is equally easy to access, thanks to a coordinated train and bus service on the FGC lines running every weekend and public holiday. These initiatives reduce traffic congestion, promote environmentally friendly travel, and support the conservation of these protected areas.

Optimising school buses for public transport

In many rural areas, school buses are the primary form of public transport: Catalonia has embraced this as an opportunity to extend their use beyond school hours. In the Segarra region, with a population of just 22,000, school buses—which traditionally only ran during school hours—now serve passengers on available seats during non-school hours, providing a proper demand-responsive transport system, with additional bus services scheduled when vehicles and drivers are free. Between 2021 and 2024, demand increased by 30.2%.

The commitment of a region

Overall, these strategies reflect a broader shift in Catalonia's approach to mobility. They show the region's commitment to coordination, flexibility, and sustainability. From small, rural towns to university campuses and natural parks, public transport is being reshaped thanks to a better use of existing infrastructure, as well as the alignment of services with local rhythms and needs of daily life.

AGEING GRACEFULLY, MOVING FREELY

Japan's quest for senior mobility

WRITTEN BY
HARUO ISHIDA
FUMIHIKO NAKAMURA

Japan is redefining senior mobility. From shared electric vehicles to redesigned bus services, small and medium-sized towns are combining technology, health promotion, and community collaboration to keep older residents active, independent, and connected.

Explore how the Smart Mobility Platform is **transforming mobility for ageing populations**.

Niyodogawa, Kochi Prefecture
SAND555UG, Shutterstock

Japan's population is ageing faster than that of any other developed country. While this may be less evident in large metropolises such as Tokyo, small and medium-sized cities and rural areas face a much harder reality: a significant portion of residents are over 65, and ensuring everyday mobility to support seniors' daily lives and needs has become a serious challenge.

As people age, their physical abilities decline, making driving difficult and eventually impossible. At the same time, these areas are heavily car-dependent, and low population density makes traditional public transport hard to sustain and provide. With most Japanese public transport services operated by private companies that have been forced to cease operations, some seniors experience reduced mobility —in the most extreme cases, they may even face 'mobility lock-in', meaning that they can no longer leave their homes. This can seriously contribute to social isolation and affect seniors' quality of life.

To tackle these challenges, Japan is turning to a mix of traditional methods with innovative approaches. One such response is the 'Smart Mobility Platform Development' programme, part of a Cabinet-level initiative called the Strategic Innovation Programme (SIP). The SIP aims to eliminate mobility divides, and by redesigning mobility services and integrating digital technology, the programme is giving seniors the freedom to stay active and connected.

Here are two inspiring examples.

Nishio, Aichi Prefecture

Nishio, Aichi Prefecture, is a typical small, low-density city with a population of around 160,000.

After private bus operators withdrew services, the local government began running community buses at public expense. To improve access to bus stops and railway stations along these routes, the city also launched a low-cost taxi service.

However, the service faced challenges: complex registration and fare payment procedures, along with an inefficient dispatch system, hampered its growth and usability. To address these issues, members of the Nagoya University project team worked closely with the community, introducing a more efficient dispatch system and QR code payment options.

These improvements simplified fare payment for users, streamlined operations for drivers, and increased dispatch efficiency. As a result, the number of users skyrocketed, and local residents began taking trips more frequently, alleviating mobility challenges.

Encouraged by these outcomes, the local government is now exploring the expansion of this approach to other areas and different types of services. The operator has also become more cooperative, demonstrating how technology can strengthen collaboration between service providers and municipal authorities.

Affordable taxi service with convenient smart payment in Nishio, Aichi Prefecture

Cross-ministerial Strategic Innovation Promotion Program (SIP)

Niyodogawa, Kochi Prefecture

Niyodogawa is a small, remote community of 4,000 residents nestled in the mountains of Kochi Prefecture. For several years, a team from the Japan Automobile Research Institute has collaborated with the elderly community to promote frailty prevention. Their approach integrates daily health management, wellness activities, and mobility support.

As part of this initiative, the team introduced a community-shared electric vehicle service, the 'Sakura' car, and held discussions with local public transport planners to better meet seniors' needs. This combination of health and mobility created new and enjoyable opportunities for seniors to go out, promoting both physical activity and social engagement.

A local non-profit organisation that had been running frailty prevention activities joined the effort, helping ensure that many elderly residents could access the electric vehicle service and, by default, their activities. This then led to the introduction of a shared small electric vehicle service sharing service that opened up new destinations for outings, encouraged social interactions, and fostered improvements in both physical and mental health. Notably, some seniors—previously only passive recipients of support because of this initiative—have now become active contributors and even service providers themselves, highlighting the transformative impact of this integrated approach.

The 'Sakura' car is a community-shared electric vehicle service in use in Niyodogawa, Kochi Prefecture

Cross-ministerial Strategic Innovation Promotion Program (SIP)

A new approach

These examples demonstrate how small and medium-sized towns, as well as rural communities, can maintain sustainable mobility despite ageing populations and the disappearance of private transport services. Central to this effort is SIP's 'mobility service redesign', which leverages all available mobility resources—including conventional buses, taxis, car-sharing, and shuttle vehicles—enhanced by digital technology.

Collaboration between government agencies, residents, and businesses ensures that these solutions are practical, sustainable, and adaptable to local needs.

Since 2020, Japan's transport policies have supported various reforms in response to population decline, an ageing society, and the dwindling of private-sector passenger transport services in small and medium-sized, low-density cities. The SIP has contributed by providing guidance, expertise, and innovative strategies, helping communities implement effective mobility solutions.

The results have been encouraging: seniors regain independence, communities remain connected, and mobility services are now integrated with healthy promotion efforts. Combining these previously separate goals not only improves the physical and mental well-being of elderly residents, but also strengthens regional care policies, particularly in areas with limited medical resources.

Japan's small towns are proving that, with creativity, technology, and cross-sector collaboration, mobility challenges do not have to lead to isolation. Instead, they can become an opportunity for innovation, community building, and a better quality of life for all.

FINDING THE WAY

How people with visual impairments navigate our cities

Rather than becoming more accessible, many city streets continue to function as daily obstacle courses for **people with severe or partial visual impairments**.

Building truly equitable urban spaces requires holistic strategies that embed accessibility into every aspect of planning and policy—starting with a deep understanding of **how people with blindness or low vision navigate the city**.

WRITTEN BY
VITTORIA MADDALENA

Surface tactility provides rich environmental information for people with visual impairments

ThomsonD, Shutterstock

Vision is our most dominant sense. We rely on it in daily life—for reading, learning, and walking. We take it for granted, yet over time, almost everyone will experience at least one eye condition requiring professional care.

According to the World Health Organisation, more than 2.2 billion people globally live with near or distance vision impairment, of whom around 285 million experience complete blindness or moderate to severe distance vision loss. Most vision impairment and blindness occur among people over 50, and as global populations age, these numbers are expected to further rise.

The term 'visual impairment' encompasses a spectrum of vision loss resulting from various eye conditions that alter the systems, structures, or functions of the eye. It includes both low vision, where some sight remains, as well as conditions of blindness. People with low vision may retain partial functional sight but often experience reduced central or peripheral vision, blurred vision, light sensitivity, and night blindness.

Globally, the leading causes of vision impairment include refractive errors such as myopia, hyperopia, astigmatism, and presbyopia, as well as cataract, diabetic retinopathy, glaucoma, and age-related macular degeneration. Many of these conditions can be prevented or managed with timely access to eye care, reducing their personal and societal impact.

People with low or no vision face considerable challenges in travelling independently and accessing public spaces—factors that strongly influence social inclusion, employment opportunities, and overall quality of life. Outdoor mobility is one of the greatest difficulties, affecting everyday activities such as shopping or socialising, and often contributing to feelings of fear, isolation, and loss of independence. Moreover, the high cost and limited availability of reliable assistive technologies exacerbate these barriers.

The economic implications are also profound: global productivity losses linked to vision impairment are estimated at around 356 billion euros annually, far exceeding the 21 billion euros required to close the gap in unmet vision care needs.

Moving without relying on vision

The way cities are designed can greatly affect how easily—or how difficultly—people with visual impairments move through them. Many walk more slowly, often due to balance issues or fear of tripping, and tend to stay within familiar areas where they can rely on known landmarks and routes.

The inability to read monitors on buses and trains is a common issue that could be solved with auditory announcements

Ground Picture, Shutterstock

According to the Royal National Institute of Blind People (RNIB), the main barriers to pedestrian journeys for blind and partially sighted people are, respectively, cars and other vehicles parked on pavements, poor quality of pavements, temporary street obstacles, paths shared with cyclists or e-scooter riders, and the lack of accessible crossings.

Colliding with obstacles is indeed one of the main issues. A 2015 survey by the RNIB found that, over a three-month period, most respondents had bumped into parked cars (70%), bins (64%), fixed street furniture such as benches (60%), and advertising boards (49%). Two-thirds (67%) reported feeling unsafe at road crossings. To make matters worse, temporary objects, cyclists on footpaths, and the recent surge of near-silent e-scooters only add to the daily uncertainty, often described by respondents as a 'nightmare'.

Crossings, in particular, pose significant challenges. Many people with visual impairments struggle to detect them, align themselves correctly, or determine when it is safe to cross. Reading signage can also be a barrier, especially on public transport, where it may be difficult to read screens or identify route numbers, and lighting conditions can further complicate navigation, as shifts between indoor and outdoor spaces or travelling after dark can affect orientation and spatial awareness.

Paying attention

Inclusive cities aim to simplify mobility, ensure equitable access to information and services, and enhance liveability for all residents. Accessibility must not be treated as an afterthought, but as a core urban requirement. Moreover, because visual impairment exists along a spectrum, design solutions must accommodate the full range of visual abilities.

People with visual impairments navigate cities by relying on their remaining senses—especially sound cues—for orientation and wayfinding

i3rownara, Shutterstock

Urban planners can enhance visual accessibility through thoughtful design interventions, such as controlled road crossings and well-placed bus stops.

Sound cues are especially valuable for wayfinding: pedestrian crossings with audio signals not only help people cross safely, but also assist with spatial orientation. Similarly, auditory announcements on public transport and lift floor indicators are essential for passengers who cannot rely on visual displays.

Rapid advances in mobile and location-based technologies are also reshaping how people with visual impairments navigate cities. Many accessible navigation apps now use GPS and audio guidance to provide real-time information about routes, crossings, and points of interest. For instance, Google's Lookout app, developed in collaboration with the blind and low vision community, uses computer vision and generative AI to interpret visual data and describe surroundings. Likewise, Wayfindr is a digital navigation system that uses Bluetooth beacon systems and 5G networks to guide people with visual impairments through urban environments. It was successfully tested in the London Underground system, proving the potential of audio navigation.

These emerging technologies promise great independence. To further enhance them, it would be crucial to improve locational accuracy and the identification of building entrances. Expanding affordable para-transit options and reducing the cost barriers of ride-hailing services can also widen mobility choices. Looking ahead, access to autonomous vehicles could also be transformative, eliminating one of the most significant mobility constraints: the inability to drive.

Cities should leverage the full potential of smart technologies. For this purpose, urban data can help identify weaknesses in transport infrastructure and guide evidence-based improvements. Smart city initiatives like Mobility as a Service (MaaS), which integrates various transport options into a single digital platform, can deliver real-time travel updates and personalised routing.

Urban spaces must be designed to simplify mobility, ensure access to information and services, and enhance livability for all

Kinga, Shutterstock

However, while smartphones are indispensable for these innovations, less tech-savvy users, particularly seniors, may struggle to engage with them. True inclusion, therefore, requires not only advanced technologies but also accessible design, affordability, and user training.

Reshaping urban spaces

Marburg, Germany, is a leading example of how a city can become genuinely accessible to people with visual impairments. Often called 'Blindenstadt' ('city for the blind'), its commitment to inclusion dates back to the early 20th century with the founding of the German Federation of the Blind and Visually Impaired (DBSV) and a pioneering institute for blind education. This longstanding dedication has transformed the medieval town into a model of accessibility: public transport is equipped with tactile guidance systems, audible signals, and Braille signage, while streets and public spaces feature tactile paving and strong colour contrasts to support independent navigation.

Spain also stands out for its inclusive approach, largely driven by the influential work of ONCE, the National Organisation for the Blind. In Valencia, a city recognised as the European Capital of Smart Tourism in 2022, all buses are equipped with NaviLens technology, which provides real-time audio and visual information.

Vienna, Austria, offers another notable example. Winner of the 2025 Access City Award, it has introduced intelligent traffic lights and ensured that over 95% of metro, bus, and tram stations are accessible through tactile systems, low-floor vehicles, and multisensory emergency technologies.

These initiatives demonstrate that building more inclusive cities is possible. Governments and local authorities must be fully aware of the aids and adaptations that enable people with sight loss to get around safely and independently. Crucially, understanding and actively engaging with blind and partially sighted communities should be the first step in developing policies and practices that reflect real needs. Only by doing so can we ensure that the urban environment supports, rather than hinders, progress, participation, and independence.

ENVIRONMENT AND HEALTH

POLIS addresses the intersection of environment, health, and urban mobility through two dedicated Working Groups—Active Travel & Health and Clean Vehicles & Air Quality—as well as the Climate-Neutral Cities Mission Taskforce.

The **Active Travel & Health Working Group** promotes walking, wheeling, and cycling as vital to sustainable mobility. It explores links with urban planning, health, and environmental goals, supporting knowledge exchange and inclusive design. The group works with partners to help cities embed active modes into broader strategies for healthier, more equitable, and resilient urban mobility.

The **Clean Vehicles & Air Quality Working Group** helps cities reduce transport emissions and improve air quality. It focuses on clean fleet deployment, smart EV charging, non-exhaust emissions, noise pollution, and regulatory alignment. By sharing knowledge and engaging with policy, POLIS supports cities in meeting EU environmental targets and advancing cleaner urban mobility.

The **Climate-Neutral Cities Mission Taskforce** supports selected POLIS Mission cities in accelerating transport decarbonisation. Through peer-to-peer exchange, the group promotes concrete action aligned with the EU Cities Mission, focusing on governance, funding, public-private cooperation, and impact measurement—driving the shift to climate-neutral urban transport systems.

HAPPY—RELUCTANTLY

INTERVIEW WITH
MAARTEN DE SCHEPPER

ELABORATED BY
ALESSIA GIORGIUTTI

How Hasselt rewrote the rules of city mobility

Shopping street in Hasselt, Belgium
Wolf-photography, Shutterstock

Hasselt's historic city centre is being transformed into a space that is accessible, safe, and attractive for everyone.

With low-traffic zones, green corridors, and shared streets, the city balances mobility, commerce, and leisure, showing how thoughtful design and inclusive planning can create a vibrant, **people-centred urban heart**.

POLIS: The 'Accessible City Centre' project reimagines Hasselt's historic centre by balancing accessibility, shared space, and aesthetics. How did the city define its objectives, and what trade-offs were considered between mobility, commercial activity, and public space?

Maarten De Schepper: With the Accessible City Centre project, our ambition was to make Hasselt's heart accessible for everyone, including people with reduced mobility.

Our vision is simple: the right mode of transport in the right place.

We wanted to reconcile 'low-car traffic' with 'accessible for everyone'. Pedestrians and cyclists take a more prominent role in our new mobility plan, but there is still room for motorised vehicles. It is not about banning cars, but about balance—creating a city that remains lively, reachable, and comfortable for all.

Smart technologies support this goal, but so does strong participation. We made sure that everyone affected had a voice in shaping the plan.

POLIS: How were stakeholders—particularly residents, businesses, and people with reduced mobility—involved in shaping the plan?

De Schepper: The whole project was developed during the COVID-19 period, so we had to be creative in how we involved people. We worked with a wide range of stakeholders—people with reduced mobility, seniors, healthcare professionals, shopkeepers, and residents. Because we could not meet in large groups, I did many individual meetings and even organised what we called '1.5-metre walks' in small groups through the city.

We also launched an online participation tool that 1,523 people completed. In total, we received more than 600 suggestions on how to design and lay out the city centre. Three clear themes emerged: better comfort for cyclists and pedestrians, more greenery, and sufficient parking availability.

All that input formed the foundation of our sustainable accessibility plan, which aims to meet both current and future needs.

POLIS: The plan is based on four core principles. Could you explain these in more detail?

De Schepper: Yes, the plan rests on four main pillars that together define our new approach to accessibility. First, we need better connections between the city centre and the surrounding areas.

Our historic core is surrounded by a ring road, which we have transformed into a green boulevard that allows smooth movement from one side of the city to the other. At the same time, we wanted to break through the barrier the ring creates, so we designed comfortable, pedestrian-friendly openings with trees and greenery—quiet walking routes that lead straight into the city.

Through-traffic across the city centre is now a thing of the past. We have divided the area into four zones—what we call our Four-Leaf Clover principle—so that if you enter the centre by car through one quadrant, you must leave through the same one. You can no longer drive across the centre. This eliminates cut-through traffic and discourages loop driving, freeing up space for cyclists and pedestrians.

The centre itself is a shared space for everyone, and that means mutual respect is essential. Cars are still welcome, but their speed has to match that of cyclists and pedestrians. The same goes for e-scooters: they need to adapt to the most vulnerable road users. To make this work, we have introduced four traffic zones: a pedestrian zone, a low-traffic zone, school streets, and a low-speed zone.

Finally, accessibility should also look good. Mobility improvements give us the opportunity to add greenery and enhance the city's appearance. By redesigning streets façade to façade, we are creating high-quality, barrier-free environments that are both functional and attractive, and we plan to extend this approach to other streets across the centre.

POLIS: How does the plan specifically address accessibility for people with reduced mobility?

De Schepper: Accessibility was at the core from the beginning. We identified eight strategic access points that ensure all main destinations in the car-free zones are within a five-to-ten-minute walk, based on a walking speed of one metre per second.

We assessed each route leading to and from those points based on walking surface,

Maarten De Schepper

Team Coordinator Sustainable Mobility and Modal Shift
City of Hasselt

obstacles, signage, crossing design, parking layout, and street furniture. Every route received both a technical score and feedback from our test group of people with reduced mobility.

We also appointed an accessibility coach who visits residents and entrepreneurs personally to help them deal with accessibility or delivery issues. That one-to-one support makes a big difference.

POLIS: How did the city manage adaptation among residents and drivers, especially during such a major transition?

De Schepper: Communication is everything: it is even more important than the content itself. In our case, the communication team was larger than the technical team.

We prepared a general information brochure, a dedicated website, and several short videos to explain the project clearly. We also made targeted brochures for specific audiences—for example, shopkeepers or healthcare providers—so that everyone got the information relevant to them. And the accessibility coach I mentioned earlier also played a huge role in helping people adapt. They visited citizens and entrepreneurs on-site and provided practical assistance with the transition.

POLIS: How does Hasselt ensure these new green and low-traffic spaces remain both safe and pleasant over time?

De Schepper: Safety and comfort are two sides of the same coin. Shared spaces only work when users respect each other.

By designing continuous pedestrian routes, limiting speed, and adding greenery, we create an environment that feels calm, safe, and pleasant.

We are also constantly evaluating—getting feedback from residents, businesses, and especially people with reduced mobility—to fine-tune details and improve as we go.

Where Hasselt is now

Where Hasselt is going

POLIS: Looking back on the implementation process, including challenges during COVID and stakeholder engagement, what key lessons would you share with othercities?

De Schepper: Not everything went perfectly, but overall we implemented most of the measures without major protest. A few lessons stand out for me:

- Bring different interest groups together and let them discuss their priorities.
- Be honest—if you don't know something or aren't sure about an impact, say so. It makes you more human and trustworthy.
- Be prepared: anticipate as much as possible, ideally with objective information, but also consider emotions.
- Go step by step, and choose your battles wisely. Make a list of what's necessary versus what's nice to have.

And one more thing: as a mobility expert, you make people happy, and sometimes... you do so against their will. That is just the nature of the job.

POLIS: What comes next for Hasselt's mobility landscape?

De Schepper: We are not there yet, but step by step we are realising our ambitions. The long-term goal is to redesign all streets from façade to façade—creating more space for greenery, outdoor seating, and accessible routes.

Our aim is to give every road user, from drivers to pedestrians, and every group—shopkeepers, suppliers, residents, doctors—a clear and comfortable place in the city. Bit by bit, we are building a more beautiful, more inclusive, and more accessible Hasselt.

***Previous page*: Present and future of Hasselt's city centre**
City of Hasselt

Hasselt's pedestrian zone
Wolf-photography, Shutterstock

UNDER THE LENS

Measuring L-vehicle Pollution

WRITTEN BY
NIKLAS SCHMALHOLZ

Motorcycles and other **L-vehicles** symbolise freedom and agility, yet their real-world emissions reveal a different story.

The **LENS project** exposes how noise and exhaust emissions challenge cities striving for cleaner, quieter, and healthier urban environments.

BMW motorcycle with a portable emission measurement system
Stephan Schmidt, TU Graz

Motorcycles, mopeds, Vespas, and even trikes—vehicles within the broadly defined 'light category' come in all shapes and sizes. These L-vehicles are often associated with freedom, rebellion, agility, speed, and holidays. Such feelings have been portrayed in films since the dawn of cinema, from Audrey Hepburn riding her Vespa through Rome to the iconic bike chases in Arnold Schwarzenegger's 'Terminator' movies.

L-vehicle manufacturers capitalise on these emotional connections to sell their products, while critics highlight the issues of excessive noise and air pollution.

Yamaha motorcycle with a portable emission measurement system
Stephan Schmidt, TU Graz

There's no doubt: pollution is a growing challenge!

The European Environment Agency (EEA) reports that air pollution alone claims at least 250,000 lives in Europe each year. Long-term exposure to noise above recommended limits disrupts sleep, heightens anxiety, impairs cognition, harms mental health, and is linked to about 48,000 new cases of heart disease and 12,000 premature deaths annually.

Additionally, noise pollution is the other noteworthy and widespread challenge, as approximately 20% or 100 million European citizens are exposed to unhealthy levels of road traffic noise. This is significantly caused by cars and motorcycles in both urban and rural areas.

These challenges will remain with more than 250 million registered passenger cars in the EU27 and nearly 40 million L-vehicles. The latter group creates a severe problem according to the German citizens' initiative against motorcycle noise (Bundesverband gegen Motorradlärm). Their spokesperson, Holger Siegel, emphasised that motorcycle manufacturers use 'noise as a business model by catering to the demand of motorcyclists'.

What did the LENS tests and laboratories reveal?

LENS project experts assessed L-vehicle emissions by thoroughly testing more than 150 vehicles on test benches, in laboratories, on real roads, and during roadside measurements. For all three aspects—noise, emissions, and real-world performance—new sensing tools were developed by partners across Europe.

From Aachen to Paris and Thessaloniki, teams of experienced drivers and technicians spent days testing everything from tiny two-stroke mopeds to large quads.

Emissions: Still behind the curve

Pollutants measured included, among others, CO2, hydrocarbons, NOx, and particulate matter. Results show that most of the existing fleet still falls under the EURO3 category, with only limited adoption of Euro 5 technologies. This points to a slow market shift toward cleaner models replacing outdated vehicles.

Although limits for L-category vehicles are nominally aligned with Euro 6 light-duty cars, real-world emissions often exceed laboratory results. Particle and NOx emissions remain the biggest contributors to the environmental impact of these vehicles, especially under dynamic driving conditions.

Overall, today's L-vehicles remain a significant source of urban air pollutants. To match the performance of modern light-duty vehicles, both stricter Euro 5 enforcement and advances in emission control technologies are needed.

Noise: Louder on the streets

Noise tests using on-street microphone arrays, test-track setups, and on-board mounts revealed that motorised two-wheelers are considerable contributors to noise pollution in both urban and rural areas. Despite tougher regulations and stricter testing procedures, there is still a significant gap between controlled test results and actual noise levels in real-world conditions.

This was demonstrated using bespoke on-board systems specifically designed for the measurements, which recorded real-time noise and GPS data. The results showed that real-world driving often produces noise levels that exceed regulatory thresholds.

Researchers used these recordings to define fourteen typical real-world driving patterns, including aggressive accelerations, gear changes, throttle variations, and decelerations.

On-street L-vehicle noise- and air pollution measurement setup in Leuven, Belgium
Niklas Schmalholz, POLIS

The project concluded that real-world noise emissions are complex and influenced by numerous factors, including driving behaviour and environmental conditions. The new driving patterns could help refine testing and enforcement so that regulations better reflect daily vehicle use.

What are the conclusions of the project?

POLIS spoke with project coordinator Leonidas Ntziachristos from EMISIA, who provided insights into the multifaceted challenge:

'We need faster fleet renewal by replacing older vehicles to drastically cut pollution: this gives a substantial overall benefit. Also, we need to measure more pollutants in smarter ways by improving testing methods, which can match real-world driving conditions. Authorities should invest in better tools for on-road testing with miniature and portable sensing equipment and use robust methods to determine exhaust flow on diverse engines so results are increasingly reliable'.

At the latest LENS consortium meeting, the partners agreed that stricter European regulation and regular emission tests will accelerate the phase-out of older L-vehicles—a trend already observed in the data of the LENS emission tests on different EURO-categories.

Takeaways for cities and regions

Are motorcycles and other L-vehicles major polluters or valuable alternatives for cities? As with most things, the answer lies somewhere in between.

L-vehicles are fast, space-efficient, and often more cost-effective than passenger cars—well-suited for cities. Yet tighter emission limits, regular vehicle monitoring, and smarter regulation remain effective measures to reducing their environmental footprint and promoting more sustainable behaviour among L-vehicle users.

However, meaningful progress also depends on dialogue and a deeper understanding among stakeholders, as actions by manufacturers, legislators, and registration authorities can be severely undermined by rider behaviour. The LENS analysis shows that motorcyclists themselves have a major impact on noise and emissions through their driving style and, in some cases, vehicle tampering.

Curbing such legal or illegal modifications will require stronger police enforcement. While automatic solutions such as noise cameras could help—detecting high-decibel events, recording license plates, and potentially issuing fines—they have not been deployed in European countries due to remaining legislative gaps.

The LENS stakeholder group visits the on-street L-vehicle noise- and air pollution measurement setup in Paris, France

Niklas Schmalholz, POLIS

GOVERNANCE AND INTEGRATION

Governance and Integration focus on the core challenges local and regional authorities face when designing policies to accelerate sustainable urban mobility, enhance equity, protect public interest, and manage emerging innovations.

The **Governance & Integration Working Group** supports authorities in advancing sustainable mobility through inclusive governance, innovation management, and cross-sector collaboration. Key themes include shared mobility, Mobility as a Service (MaaS), public transport governance, workforce adaptation, and tackling transport poverty. The group promotes equitable access, behaviour change, and public-private cooperation while helping cities address digitalisation, automation, and climate resilience to build people-centred mobility systems.

The **Urban Freight Working Group** aids cities and regions in developing sustainable urban logistics via knowledge exchange, partnerships, and innovation. It addresses challenges such as last-mile delivery, zero-emission zones, and freight planning digital tools. Collaborating with ETP-ALICE and EU projects, the group fosters public-private dialogue and supports decarbonisation strategies to reduce pollution, congestion, and improve freight efficiency.

The **Small & Medium-Sized Cities Platform** unites smaller cities to tackle mobility governance and common challenges through tailored solutions. It encourages innovation, knowledge sharing, and political engagement via the SMC Ambassadors Initiative. Priorities for 2025 include reducing car dependency, citizen engagement on public space and Low Emission Zones (LEZs), navigating TEN-T implications, strengthening European-level representation, and linking projects to boost research and innovation for sustainable mobility in smaller cities.

The **Regions Working Group** brings together regional and metropolitan authorities to address transport challenges across urban, suburban, and rural territories. It focuses on policy coherence, interconnectivity, and sustainable mobility at a regional scale. Key 2025 priorities include bridging urban-rural divides, expanding active travel infrastructure, managing access regulations, refining Functional Urban Area definitions, and enhancing multilevel governance to better integrate regional transport with city and EU networks.

The **Capitals Working Group** supports national capitals by providing a forum for peer exchange on their unique mobility challenges, such as heavy traffic, major events, and security concerns. It connects technical experts and political leaders to develop shared solutions focused on decongestion, decarbonisation, air quality, and safety. Priorities for 2025 include capitals' roles in TEN-T implementation, climate action, and managing tourism and major event impacts on urban mobility.

STEERING CHANGE

WRITTEN BY
VERENA WAGENHOFER
SIMON EDWARDS

Two Horizon Europe initiatives are steering Europe's road transport toward sustainability. **STREnGth_M** sets the direction—aligning research and expertise—while ***Le*Mesurier** tracks the real-world impact of the 2Zero Partnership through data-driven insight. Together, they form a powerful alliance, keeping Europe firmly in the driver's seat of sustainable mobility innovation and ensuring **research** translates into real progress on the road.

Leuven, Belgium
Tina Vander Molen, Shutterstock

Europe is at a pivotal moment in the journey towards climate-neutral, smarter, and more sustainable mobility. At the heart of this transformation, innovative research acts as a lifeline, with two Horizon Europe projects —STREnGth_M and *Le*Mesurier—playing a central role in shaping the future of road transport.

Running from February 2023 to February 2026, STREnGth_M lays the strategic foundations, identifying research priorities, updating agendas, and fostering collaboration across Europe and beyond. Complementing this and running from January 2024 to December 2025,

*Le*Mesurier considers how ambition turns into measurable impact, monitoring the 2Zero Partnership's Key Performance Indicators (KPIs), assessing progress and how bold plans could deliver real results.

Strengthening research, laying the foundations

In the pursuit of climate neutrality and smarter urban mobility, the STREnGth_M project has emerged as a crucial strategic initiative, coordinating and supporting Europe's efforts in road transport research. Acting as a Coordinated Support Action (CSA) for the European Road Transport Research Advisory Council (ERTRAC), the project plays a key role in shaping the future of sustainable transport.

STREnGth_M is a catalyst for collaboration, policy alignment, and knowledge exchange across Europe and beyond. Bringing together 23 partners from ten countries, it unites a diverse network of stakeholders committed to transforming road transport into a sustainable, inclusive, and globally connected system.

At its heart, the project seeks to identify future research priorities, update Strategic Research Agendas (SRAs), and coordinate the development of roadmaps for road transport research. It fosters ongoing dialogue among Horizon Europe partnerships, national programmes, and international platforms, ensuring that collective efforts move in the same direction.

Looking outward, STREnGth_M maintains a global perspective. It monitors the progress of electric mobility worldwide and assesses the potential of innovative transport solutions in emerging markets across Africa, Asia, and Latin America. This international outlook is essential for strengthening cooperation, overcoming barriers to the deployment of research results, and aligning global ambitions for cleaner mobility.

***Top right**: STREnGth_M has supported the creation of the Road Transport Vision 2050 which was adopted by ERTRAC*

STREnGth_M

***Bottom right**: The Road Transport Vision 2050 envisions a green and digital transformation in transport*

Kinwunz, Shutterstock

Education and training also sit at the core of the project's mission. STREnGth_M recognises that the transition to sustainable mobility depends on skilled professionals and inclusive frameworks. Through workshops, conferences, and dissemination activities, it highlights how road transport research contributes to the European Green Deal and the Paris Agreement, reinforcing the sector's vital role in achieving climate objectives.

As cities face mounting environmental and social challenges, STREnGth_M offers a forward-looking blueprint for collaborative road transport research. It is a project that not only drives innovation but ensures its benefits reach the markets, streets, communities, and citizens who stand to gain most from technological progress.

LeMesurier is generating brief reports related to each of the forty or so KPIs of 2ZERO

LeMesurier

Measuring impact, accelerating change

The 'Towards Zero Emission Road Transport' Partnership, or 2Zero Partnership, is a European initiative funded by Horizon Europe to accelerate the transition to a climate-neutral road transport system. Launched in 2021, it brings together a wide range of stakeholders—including industry, research centres, and public bodies—to develop and deploy zero-emission vehicle technologies, improve air quality and urban mobility, and secure Europe's future leadership in this sector. Building on the success of previous automotive partnerships, it operates with a clear set of objectives, supported by defined measures of success and KPIs.

The 2Zero Partnership's KPIs are diverse, covering a three-layer structure of objectives—general, specific, and operational—as outlined in its Strategic Research and Innovation Agenda (SRIA). The *Le*Mesurier project, a CSA led by a consortium of 14 partners, is establishing a common framework to monitor these KPIs, including their sources, methodologies, and reporting formats.

It generates KPI values and projections for the coming decade based on the ongoing projects within the Partnership and evaluates the overall impact of the portfolio. This CSA also identifies and quantifies interactions, impacts, and the effectiveness of the Partnership within the road transport sector, providing recommendations for the further development and analysis of measurement and evaluation methods.

Additionally, *Le*Mesurier disseminates and communicates its findings to a wide range of stakeholders—across the road transport sector, EU Member States, and the general public—through various media and events.

Its consortium represents multiple sectors of Europe's road transport community. Its work is guided by a strong Advisory Board, bringing together vehicle manufacturers, suppliers, Research and Technology Organisations (RTOs), operators, infrastructure providers, technology partnerships, joint undertakings, and other representative organisations from across Europe.

To date, *Le*Mesurier has tracked over forty KPIs from the ongoing activities of the first thirty or so 2Zero projects. Early indications are positive, showing that the Partnership is on course to achieve the majority of its objectives. Moreover, the methods developed by *Le*Mesurier can be adopted directly by the Partnership, enabling consistent and timely assessment of 2ZERO's achievements throughout the second half of its mandate.

Driving change... Together

STREnGth_M and *Le*Mesurier are two sides of the same coin when it comes to advancing Europe's road transport research, in particular the activities of Horizon Europe Technology Platforms and Partnerships. Findings from one project often flow directly into the other—for instance, STREnGth_M's work supporting ERTRAC helps shape the analytical methods *Le*Mesurier uses to tackle the most complex 2Zero KPIs.

Looking ahead, ERTRAC's future research planning, especially in urban mobility and undertaken as part of STREnGth_M, could spark new calls within the 2Zero Partnership work programme portfolio, with *Le*Mesurier providing the tools to measure their impact.

These two projects form a tightly connected, coordinated research ecosystem, driving Europe's road transport innovation from strategy to tangible, real-world impact. While the road ahead may present challenges, together they are at the wheel, navigating the complexities that comes with change and charting a clear course for the future of the sector. Their collaboration shows how coordinated research, shared expertise, and strategic vision can turn ambitious goals into meaningful progress—a powerful reminder that, when it comes to sustainable mobility, there is also strength in numbers.

HEALTHY LIVING BY DESIGN

INTERVIEW WITH
SENNA MAATOUG

ELABORATED BY
CARLOTTA INSERRA

With its bold 10-minute city vision and citizen-driven mobility policies, Utrecht is redefining what sustainable, people-centred, and healthy urban living looks like. Alderman Senna Maatoug shares lessons from the city's transformative journey as it wraps up its POLIS presidency.

People walking and cycling in Utrecht, The Netherlands
Christian Mueller, Shutterstock

As Utrecht gets ready to host the 2025 Annual POLIS Conference and wrap up its POLIS presidency, we sat down with Senna Maatoug, Alderman for Mobility, Climate & Energy, to reflect on the city's achievements and its journey within the network.

With a bold vision to become a 10-minute city that prioritises walking, cycling, and shared mobility modes, Maatoug reveals Utrecht's strategies for creating a healthier, accessible, and more liveable urban environment. From world-class cycling infrastructure to a new Walking Strategy and innovative citizen engagement initiatives, the city is taking practical yet innovative steps to advance its sustainable mobility transformation.

POLIS: As a host city, what would you like to tell all participants of the Annual POLIS Conference?

Senna Maatoug: Welcome to Utrecht! It is an honour to have you. We live in interesting times in which we all have an important role to play.

For more than twenty years, Utrecht has been a member of POLIS, a uniquely diverse network that brings together cities, regions, transport authorities, public transport providers, mobility agencies, research centres, and universities. The expertise, knowledge, and willingness to learn from one another have been invaluable to us as a member, and we hope that this year's Annual Conference continues this proud tradition of collaboration and exchange.

We invite all conference participants not only to observe, but to engage: ask questions, challenge assumptions, share your local context, and use this event to help shape solutions that reach far beyond a single city.

POLIS: Utrecht aims to become a '10-minute city,' prioritising walking, cycling, and shared mobility. What guided this vision, and how does the city balance key elements such as accessibility, liveability, and economic vitality?

Maatoug: It is indeed a complex balance, creating a city that remains both vibrant and compact. The idea behind the 10-minute city is that people should be able to reach daily amenities within a short walk or bike ride.

We know that when people live closer together and streets are not dominated by car traffic, social connection increases. Cars take up valuable public space, so encouraging alternatives simply makes sense. At the same time, we are learning from other dense cities how to combine housing, amenities and economic activity in ways that strengthen rather than compete with each other.

POLIS: Utrecht is widely recognised as a European leader in active travel. Which recent measures have most effectively promoted everyday cycling and walking, and how have these initiatives contributed to improving public health?

Maatoug: Healthy Urban Living is one of the key principles that drives our policies across the board, which means providing residents with an environment that enables healthy choices, supports physical and mental wellbeing, and offers equitable access to amenities, nature, and mobility.

We try to make active travel the easiest way to start or end your journey, and it encourages thousands of people to combine cycling and public transport every day. The entire station area around the railway station has been redesigned to prioritise pedestrians and create a welcoming, walkable environment. We had realised that our strong focus on cycling over the past decade sometimes meant less attention for walking. That is why we have now developed a dedicated Walking Strategy to give pedestrians the same priority.

We continue to invest in cycling by expanding networks, reducing car speeds to

Senna Maatoug

Alderman for Mobility,
Climate, & Energy
City of Utrecht

30 km/h in most areas, and improving connections between neighbourhoods and public transport. These measures reinforce one another: the more people walk and cycle, the healthier, safer, and more xxsocial the city becomes. Ultimately, Healthy Urban Living is about that balance, and designing a city that keeps people moving and feeling connected.

One key lesson is that a city also keeps moving and governing requires looking at the facts and redirecting where needed.

Utrecht wants to be a city in which health and quality of life are paramount
City of Utrecht

POLIS: Utrecht's 2040 vision also emphasises putting people and their needs at the centre. How has the city involved citizens, including those from underrepresented communities, in shaping its mobility and urban planning policies?

Maatoug: We do not design the city from behind our desks. We actively go out into the neighbourhoods to listen to residents. We organise city-wide conversations, but also smaller meetings with community and sports organizations to reach people who might not normally take part in consultations. For specific projects, our teams literally go into the streets with a cargo bike to talk to residents about their wishes and concerns. These local conversations help us make better, fairer decisions and build trust between residents and the municipality.

POLIS: Looking ahead, what are the main challenges you foresee in making healthy urban living a reality, both for Utrecht and for other European cities following your lead?

Maatoug: We see two major challenges. The first is equity—ensuring that everyone can participate in the mobility transition. It is one thing to design a 10-minute city for those living in dense central areas; it is quite another in peripheral neighbourhoods, or for residents with lower incomes, fewer mobility options, or less access to infrastructure.

The second challenge is to keep growing without losing the city's character. Utrecht is projected to be one of the fastest-growing cities in the Netherlands: for this growth to be sustainable, we must invest in public transport, high-quality public space, and strong local communities, as these are the foundations of social,

economic, and environmental resilience. At the same time, we must manage land use, mobility, and housing in such a way that the city's identity and liveability remain intact. In uncertain times—due to the climate crisis, economic stress, and demographic change—strong communities make cities thrive. Our task, therefore, is to embed resilience into mobility and urban design.

For all European cities following a similar path, my advice would be to prioritise modes that use less space (walking, cycling, shared mobility), while also planning for growth, inclusion, and the preservation of local identity.

POLIS: As Utrecht's term as POLIS President draws to a close, what reflections do you have on this period of collaboration, and what advice would you offer to the next city or region taking on the presidency?

Maatoug: During our presidency, we learned how crucial it is for cities to engage with the European Union and with each other, especially now that more aspects of transport, housing, and mobility are regulated at the EU level. The new requirement for Sustainable Urban Mobility Plans in designated urban nodes gives cities both responsibility and influence.

My advice to the next presidency would be to mobilise the collective knowledge, expertise, and energy of POLIS members. We were proud to welcome new members from Ukraine, for example, expanding the network's reach. I hope the network will continue to grow, because it is increasingly through shared learning and peer exchange that cities can accelerate the sustainable mobility transition.

Father and child cycling on rainbow bike lane in Utrecht
Martin Woortman, Unsplash

FROM CAR TRIPS TO TRAVEL CHAINS

Helsinki, Finland
ArtBBNV, Shutterstock

WRITTEN BY
PASI KOUHIA

In **Eastern and Western Uusimaa**, the car still dominates. But a bold new project is proving that small, smart improvements—better bike paths, faster buses, and seamless connections—can transform how people move. From mapped **travel chains** to **quality corridors**, Uusimaa is showing how sustainable, climate-friendly mobility can work in practice, one journey at a time.

In much of Finland, the car remains king. In Eastern and Western Uusimaa, over two-thirds of trips are made by car, while buses, trains, cycling, and walking lag far behind: indeed, 68% of domestic journeys in Eastern Uusimaa and 71% in Western Uusimaa are done by car. Put together, walking, cycling, and public transport account for less than a third of trips.

It was against this backdrop that the Sustainable Travel Chains in Eastern and Western Uusimaa project was launched. Led by the Uusimaa Centre for Economic Development, Transport and the Environment (ELY Centre) in collaboration with the Helsinki-Uusimaa Regional Council, the project had a clear but ambitious mission: identify the most

significant sustainable travel chains, prioritise them systematically, and define concrete actions municipalities and agencies could adopt to make these chains attractive, competitive, and climate-friendly.

Linking the links

What makes this project stand out is its shift in perspective. Every trip is seen as a series of steps: commuting might involve walking to a bus stop, catching a bus, changing to a train, then cycling the final stretch. Success lies in how smooth, seamless, and stress-free those steps are.

To achieve this, the project team mapped 113 travel chains and applied a traffic-light-style ranking. Chains where public transport was fast, many people lived within walking or cycling distance, and switching between modes was easy, were given top priority. In total, 25 travel chains earned a 'green light', marking them as great candidates for future investment.

Equally innovative was introducing the concept of 'quality corridors'. These are not just lines on a map, but travel routes where high demand, climate benefits, and practical improvements converge. Concentrating efforts on these corridors prevents resources from being spread too thinly, while creating strong, reliable backbones for everyday travel.

Trains and buses remain essential, but cycling and micromobility were given equal weight. Secure bike parking, safe access to stations, and space for bicycles on trains and metros are core elements of the system, not optional extras.

Results on the ground

The results of the project and study are tangible. As mentioned above, 113 travel chains were identified across the region, with 25 ranked as first-class. Unsurprisingly, rail links such as Kirkkonummi–Helsinki topped the chart, being fast, competitive with driving, and low in emissions.

Eastern Uusimaa Quality Corridor: First-Priority Travel Chain Hubs and Prioritised Cycling Measures

Sustainable Travel Chains in Eastern and Western Uusimaa project

Across the region, 261 key hubs and stops were mapped and categorised—from major terminals, like Porvoo or Lohja bus stations, to smaller but vital local interchanges—with clear targets for services, such as real-time digital information, improved shelters, and cycle facilities.

Cycle routes received equal attention to bus lines, connected to hubs, and mapped with suggested service standards, including continuous surfaces and logical wayfinding. Meanwhile, three 'quality corridors' were singled out for focused investment—routes where the greatest shifts away from car travel can realistically occur.

The recommendations go beyond infrastructure. Better timetables, unified ticketing across municipalities, and real-time information systems are all part of the plan, designed to make public and active travel genuinely more appealing than private cars.

What we learnt

Working together beats going it alone: with 15 municipalities involved, success depended on dialogue. Workshops and interviews gave local voices real weight, which built commitment to change. Prioritisation was equally important—focusing on the most promising chains and 'quality corridors' ensured resources are used wisely.

Western Uusimaa Quality Corridor: First-Priority Travel Chain Hubs and Prioritised Cycling Measures

Sustainable Travel Chains in Eastern and Western Uusimaa project

The study showed that while data is essential, people's insights are valuable, too. Combining hard evidence, like commuting flows, with local knowledge made the findings both credible and actionable.

It also confirmed that cycling and micromobility are not side issues, but key parts of an inclusive transport system—truth is, recognising bikes and e-scooters as part of the solution strengthens connectivity and widens access.

The quality of the travel experience is everything—or at least, it matters just as much as the infrastructure. A poorly lit or unsheltered bus stop will never win over drivers; comfortable, safe, and well-connected hubs are just as important as extra services.

And finally, climate-friendly mobility wins bring other wins: beyond reducing emissions, sustainable travel chains support healthier lifestyles, fairer access to services, and more resilient local economies.

Beyond Helsinki-Uusimaa

While the study is about a specific Finnish region, its lessons have wider relevance. Across Europe, cities and regions are trying to cut emissions, improve accessibility, and reduce congestion. The Uusimaa model shows that the solution is not always building new motorways or expensive mega-projects, but stitching together what already exists, making buses, trains, bikes, and walking routes work together as one chain.

The project demonstrates that small, targeted improvements can reshape and shift travel habits. A safer cycle path to a station, a reliable bus link timed to meet trains, or a single ticket valid across municipalities can make the difference between someone choosing sustainable travel or defaulting to their car.

Rethinking regional mobility

The sustainable travel chains project in Eastern and Western Uusimaa provides a compelling model for regional mobility planning. Its innovations, such as its prioritisation framework, the concept of 'quality corridors', and the full integration of cycling and micromobility, demonstrate how sustainability can be operationalised on a regional scale.

The identification of key chains, classification of hubs, service-level targets, and concrete improvement measures offer a clear roadmap. Meanwhile, the lessons learned underline the importance of collaboration, focus, adaptability and user-centred design.

MICROMOBILITY, MACRO SHIFT

From e-bikes to equitable access, **Lyft Urban Solutions** is redefining how cities move. With innovative hardware, adaptable stations, and people-first design, they show how **micromobility** can be safe, sustainable, and inclusive—transforming urban streets for riders, cities, and the planet alike.

INTERVIEW WITH
MICHAEL BROUS

ELABORATED BY
ALESSIA GIORGIUTTI

Bicing bikeshare system in Barcelona, Spain
Lyft Urban Solutions

POLIS: You have had a diverse career in urban mobility—what drew you to micromobility, and how has your background shaped your leadership at Lyft Urban Solutions?

Michael Brous: Having lived in major cities for much of my life, I have seen firsthand the impact of reliable, accessible transport. After more than a decade in bikeshare, I am driven by how micromobility can transform urban mobility when strategy, technology, policy, operations, and finance align.

I came to micromobility through finance, which taught me to evaluate whether businesses actually work beyond the pitch deck.

Michael Brous

Head
Lyft Urban Solutions

When I joined Motivate, I saw bikeshare's operational complexity, city partnerships, and capital needs up close. When Lyft acquired Motivate in 2018, I helped integrate the business and took on different roles in Strategy and Growth, Operations, and Finance—each showing me that clarity on strategy, operational excellence on the ground, and financial discipline are essential to run this business successfully.

What keeps me engaged is building real infrastructure that cities will use for decades. We are not just operating bikeshare, but also developing new hardware, electrifying systems, expanding internationally, and proving that public-private partnerships can deliver. It is operationally complex, which makes it interesting: hardware, software, city relationships, field and depot operations, supply chains, and the financial model all have to work together.

Success comes from combining strategic clarity with operational rigour and financial discipline.

Our team cares about getting things right—whether that is bike design, operational algorithms, or the financial models that prove to cities we are a reliable partner. And ultimately, we are building something that lasts.

POLIS: What do you see as the most important qualities for leading innovation in such a fast-changing sector?

Brous: Leading innovation in shared mobility means collaborating closely, staying agile, and designing with the future in mind.

Innovation starts with strong collaboration. At Lyft Urban Solutions, we are proud to work closely with trusted local partners—from cities to operators—to understand each city's unique needs and design solutions that are adapted to local realities.

Just as important is listening closely to our riders and evolving mobility trends. Innovation only matters if it reflects real-world demand.

In Moinesti, Romania, 75% of trips were on e-bikes, despite representing only a third of the system's fleet, highlighting the need to invest in new e-bikes and expand in-dock charging infrastructure.

Agility is also key in a fast-evolving sector shaped by new technologies, regulations, and expectations. For example, we integrated a station-based model with flexible parking capabilities, blending dock-based order and reliability with the flexibility brought by dockless solutions.

Finally, strong leadership requires long-term vision. We need to build today's innovations for the cities and riders of the next decade.

POLIS: Lyft Urban Solutions recently launched the Astro and Metro bike models. How do these fit into your vision for the future of shared mobility?

Brous: The new Lyft Astro e-bike and Lyft Metro pedal bike mark the next generation of bikeshare—innovative, flexible, and built for both cities and riders.

Drawing on insights from our existing products, these bikes combine the very best features tested and loved by riders throughout the years, meeting the diverse needs of riders, cities, and operators. For example, the Lyft Astro e-bike is optimised for cities with charging station networks, ensuring high availability without the need for battery swaps.

For cities and operators, both bikes integrate seamlessly into station-based systems while also supporting out-of-station parking, boosting operational efficiency and rider flexibility. With real-time diagnostics and charge-first and solar-powered components, they simplify maintenance and reduce environmental impact.

For riders, every detail—from safety features and responsive handling to comfort and full connectivity—is engineered for a smoother, safer, and more enjoyable experience.

Lyft Urban Solutions' new Astro e-bike
Lyft Urban Solutions

Together, these bikes embody the future of urban mobility: seamlessly integrated, sustainable, and built to make every journey more enjoyable.

POLIS: How do you balance innovation in vehicle design with the need to ensure reliability, affordability, and inclusivity for users?

Brous: Backed by a decade of experience, strong equity programs and initiatives, and hundreds of millions of rides across over 55 systems worldwide, we design for reliability and durability, with our bikes and stations built to last: in fact, 98% of bikes deployed a decade ago are still in operation, with theft rates below 1%.

Through our equity-focused programs, we make bikeshare more affordable and accessible for those who need it most. In our U.S.-operated markets in 2024 (Lyft has partnered with city governments to operate in Boston, Chicago, New York, Portland, San Francisco, and Washington D.C.), reduced-fare ridership grew by 19% compared to 2023, and 21% of all rides now start or end in low-income areas. For example, Boston's Bluebikes income-eligible pass expanded by more than 320% in 2024, significantly broadening access to cycling.

Inclusivity is central to how we build and grow our systems. In 2024, 50% of our U.S. riders were people of colour, 41% identified as women, and 23% as LGBTQ+. Lyft also supported over 700 community events across operated systems in New York City, Chicago, and more, partnering with local organisations to expand cycling access and build more inclusive ridership—for example, with Barcelona's Escola d'Oficis de Bicing, which trains women as bike mechanics, breaking barriers in a traditionally male-dominated field and creating new opportunities within bikeshare.

POLIS: European cities vary widely in size, density, and mobility culture—how does LUS adapt its services to meet such different contexts?

Brous: Our modular, scalable technology and strong local partnerships allow us to tailor each bikeshare system to the unique context of every European city.

European cities vary widely in regulations, infrastructure, cycling cultures, and density. At Lyft Urban Solutions, we design systems that are both modular and adaptable: for example, our new Pillar dock can be deployed in a wide range of configurations and station sizes, from

compact layouts in dense urban centres to larger installations in more spacious areas. Stations can even be split across medians or placed around obstacles, maintaining agility and seamless integration. In our Citi Bike system, one station operates across two segments on opposite sides of a street, as a single, unified station. From Madrid to Monaco, Clermont-Ferrand to Dej, Romania, the core technology is the same, but every deployment is tailored to local needs.

We build trusted relationships with local partners who truly understand the realities of their markets. In Spain, we have a long-standing partnership with Serveo, with whom we have successfully deployed seven systems, such as Bicing in Barcelona and Bilbaobizi in Bilbao. In Romania, we collaborate with SUMS, a trusted partner with whom we have delivered five systems, including Sibiu BikeCity in Sibiu.

Integration with public transit is also key. Bikeshare works best when it complements existing networks, offering riders a flexible first- and last-mile option.

Monabike in the Principality of Monaco
Lyft Urban Solutions

By situating stations near transit stops, we offer greater predictability and connectivity. In Monaco, for instance, the Monabike bikeshare system has been integrated into the Citymapper app and linked with the city's transit card, enabling seamless access and real-time information for riders.

POLIS: Looking ahead, what are the key opportunities and risks for the micromobility sector in the next five years?

Brous: The next phase of micromobility will be defined by electrification and infrastructure investment, supported by adaptable technology and sustainable business models.

Over the next five years, our industry will reach a defining moment. Electrification is a major opportunity: riders consistently prefer e-bikes over pedal bikes, and demand keeps growing. Expanding e-bike fleets and in-dock charging networks is now essential. In Zaragoza, Spain, 40% of Bizi stations offer charging, maintaining an impressive 95% e-bike availability.

Policy support is accelerating progress. Initiatives like the Next Generation EU funding are helping cities like Sibiu, Moinesti, Hunedoara, Valladolid, and Zaragoza expand bikeshare, proving that strategic public investment can scale sustainable mobility while keeping it accessible.

But challenges remain. Regulatory fragmentation across cities can slow innovation, which is why our latest fleet is designed for adaptability—from hybrid bikes to flexible parking that fits any local framework. Financial sustainability is another focus: in many systems, e-bike per-minute fees already generate more revenue than memberships, strengthening long-term viability.

Finally, true progress depends on safe, connected infrastructure. Building protected bike lanes and charging networks is critical to making cycling practical, reliable, and appealing—people will only ride when they feel safe.

MEDITERRANEAN METAMORPHOSIS

Urban changes in Southern Europe

Barcelona and **Marseille** showcase contrasting approaches to transforming public spaces and mobility. From Superblocks to gradual boulevard redevelopments, these cities reveal how planning rhythms, design, and strategic vision shape the future of urban movement and shared streets.

WRITTEN BY
LUIS GARCIA RIOS

Since the late 1990s, European cities have been rethinking how public space is shared. Under the banner of sustainability, many have sought to curb car dominance in favour of walking, cycling, and public transport through pedestrian zones, cycling networks, and the expansion of tram and bus systems. This approach aligns with the broader framework of sustainable development, aiming to curb the impact of polluting and space-consuming mobility. Over the past decade, new forms of mobility, notably electric scooters, e-bikes, and other personal mobility devices, have emerged, reshaping the ways public spaces are used. This diversification of mobility forms and practices, while encouraging a reduction in car use, raises new questions about how different users coexist, given their differing speeds and spatial demands.

The revitalisation of Place Castellane, Marseille. France
Luis Garcia Rios

Within this context, examining the two Mediterranean cities of Barcelona and Marseille highlights two distinct ways of translating sustainable mobility ambitions into public space design. Although both face similar challenges, such as pollution, congestion, pressure on coastal areas, and city-centre attractiveness, their contrasting urban trajectories influence how projects are ultimately realised.

From planning to practice

To understand these differences, it is necessary to look at how strategic plans are turned into tangible urban transformations. The contrast between Barcelona and Marseille becomes then particularly evident.

In Barcelona, the Superilles or Superblock's principle, introduced in the 2013–2018 Urban Mobility Plan of Barcelona's City Council, proposes a reconfiguration of the city's public spaces. The concept limits motor traffic to the perimeter streets of each block, calms internal streets, creates new public squares, and integrates local urban logistics within each defined Superblock area.

The Superblocks are especially noteworthy as they demonstrate how an urban design principle can integrate mobility, public space, and quality of life. The 2016 case study of the Poblenou neighbourhood—a former industrial neighbourhood in Barcelona's Sant Martí district—illustrated the city's capacity to rapidly transform ordinary streets into places for social life through tactical interventions such as ground markings, temporary street furniture, and plantings.

What began as a temporary, low-cost experiment soon evolved into a permanent urban transformation. Lessons from Poblenou informed later projects such as the Sant Antoni Superblock and, more recently, the Green Axes, which extend the same principles of traffic calming and public space creation, as seen on Consell de Cent Street in Barcelona.

Superblock in the Sant Antoni neighbourhood in Barcelona, Spain

Luis Garcia Rios

By contrast, Marseille's approach reveals a more gradual process. Since 2010, the city has implemented transformations to public spaces and traffic circulation, such as the partial pedestrianisation of the Vieux-Port, the redesign of Cours Lieutaud, and the Jarret bypass. These transformations have had a significant impact on reducing car traffic in the city centre of Marseille. With the 2020–2030 Mobility Plan of the Aix-Marseille-Provence Metropolis (AMP), the city outlines strategies such as calming central areas and developing Multimodal Urban Boulevards to redistribute street space among different transport modes. Recent examples of these strategies include the redesign of La Canebière Avenue in 2019 and the Place Castellane in 2025.

The pedestrianisation of La Canebière Avenue, for example, returned part of the street between Quai des Belges and Cours Saint-Louis to pedestrians and cyclists: the kerbs were removed to create a single-level shared space, and speed limits were introduced for light motorised vehicles. More recently, Place Castellane has been entirely reconfigured as part of the north–south extension of tram line 3. The car-dominated roundabout has been replaced with a large pedestrian square equipped with urban furniture and planted areas. Today, this square serves as a major intermodal hub, connecting metro, bus, and tram networks.

Together, these examples illustrate Marseille's step-by-step approach—focused on key nodes rather than systemic reconfiguration, and while these interventions reflect a will to reduce car dominance and promote intermodality, they lack a comprehensive conceptual framework comparable to that of Barcelona's Superblocks.

Convergences and divergences

Barcelona and Marseille share several ambitions: reducing car dominance, promoting active mobility, improving intermodality, and advancing decarbonisation goals. Their main differences lie in the degree of integration and implementation capacity.

In many ways, these differences reflect their respective governance traditions and planning cultures. Barcelona benefits from a consolidated metropolitan tradition that fosters alignment between plans and urban projects. Marseille, with its vast and heterogeneous territory, is moving forward gradually, relying on specific interventions in public spaces with a technical approach based on a reorganisation of traffic flows. However, there is currently no established conceptual planning model to guide the development of these public spaces. These contrasts also highlight a difference in the timeframes of urban mobility planning: Barcelona works in short, five-year cycles, guided by monitoring indicators that allow for ongoing adjustments and course corrections. Marseille, however, operates on a ten-year horizon, implemented progressively through Local Mobility Plans, which can make it more difficult to respond rapidly to emerging forms of mobility.

Mobility planning and public space interventions advance in a coordinated way in Barcelona, reinforcing the overall coherence of projects. Marseille, by contrast, tends to move forward through parallel but separate processes—mobility planning and public space projects share similar goals but are often developed independently. This divergence suggests that integrating mobility planning and public space design remains a key challenge for many cities seeking greater coherence in their transformations.

The pedestrianisation of La Canebière Avenue, Marseille, France

Luis Garcia Rios

Superblock in the Poblenou neighbourhood in Barcelona, Spain
Luis Garcia Rios

Tactical interventions have also played a defining role in Barcelona's approach, allowing urban design principles to be tested in a reversible way before being made permanent. Marseille's projects, meanwhile, tend to rely more on large-scale and lasting redevelopments. Both approaches offer valuable lessons on balancing experimentation with long-term urban vision, showing that cities can benefit from combining small-scale experimentation with long-term, durable transformations.

Beyond governance and design culture, the rhythm of urban mobility planning itself directly influences how cities adapt to emerging mobility forms. Barcelona's relatively short five-year cycles encourage quick and regular adjustments, whereas Marseille's longer ten-year horizons foster a more gradual evolution—less reactive, but more stable. In other words, planning rhythms are not merely technical parameters, but key determinants of a city's adaptability.

Two sides of the same coin

In a context of diversification of mobility forms and practices, Barcelona and Marseille illustrate how approaches can vary widely—sometimes highly integrated and conceptually driven, other times gradual and fragmented and gradual—yet both reveal that successful sustainable mobility relies as much on aligning strategic mobility planning with the design of public spaces as on infrastructure alone. Public spaces remain essential arenas for observing, testing, and regulating the ongoing transformation of how cities move and function.

URBAN(E) SPARK

Big ideas are not the preserve of large cities. Through the **URBANE project**, **Mechelen** and **Karlsruhe** are redefining what is possible in urban logistics—from autonomous deliveries to shared parcel networks.

Their journey demonstrates how creativity and collaboration can transform everyday delivery challenges into cleaner, smarter, and more connected solutions, and spark a new era in **sustainable logistics**.

INTERVIEW WITH
ROOS LOWETTE
THOMAS BENZ

ELABORATED BY
MARINA MARTÍN VILCHES

From top to bottom:
Robot and tram in Karlsruhe, Germany

Autonomous delivery robot in the multifunction area of a tram in Karlsruhe

Children and visitors discover how autonomous robots support city logistics in Karlsruhe

Picking up a package from an autonomous delivery robot in Karlsruhe
AEN/Paul Gärtner

POLIS: What role does your city play within the URBANE project?

Thomas Benz (AEN/Karlsruhe): Karlsruhe serves as the Twinning Living Lab for Helsinki within the URBANE project. Both cities are exploring the use of autonomous robots for last-mile delivery solutions. However, while in Helsinki the robots handle the entire delivery process from origin to destination, Karlsruhe integrates its existing tram network into the system.

Roos Lowette

European project coordinator
City of Mechelen

Thomas Benz

Project Coordinator
AEN

In our approach, the robots cover only the first and last segments of the journey—from the pickup point to the nearest tram stop, and from the exit stop to the final destination. This setup allows us to test how public transport infrastructure can be efficiently combined with autonomous delivery technologies to create a more sustainable and scalable urban logistics model.

Roos Lowette (Mechelen): Mechelen participates in URBANE as a Follower City, observing and adapting insights from frontrunner cities such as Bologna to its own context. In Mechelen, parcel lockers are almost entirely operated by bpost, which has agreements with DHL and GLS.

However, interoperability is limited: DHL parcels are integrated into bpost's network, while GLS can only deliver to larger lockers with screens—a restriction that limits impact in a city where many lockers lack screens. For a small- or medium-sized city (SMC) like Mechelen, this lack of open access is a structural barrier to achieving its ambition of zero emission city logistics, as it forces operators into door-to-door delivery, increasing traffic and emissions and slowing progress.

POLIS: So far, how has the project influenced sustainable logistics in your city?

Lowette (Mechelen): Through URBANE, we realised that open locker systems are no longer a technical barrier—the technology already exists and works well. The real challenge in Mechelen lies in developing a workable governance and business model: bringing together current locker owners and potential competitors, agreeing on shared access, and defining fair pricing arrangements. This insight has been crucial, as it shows that the obstacles are no longer technical but organisational and economic.

Benz (AEN/Karlsruhe): When it comes to Karlsruhe, the new delivery system is currently at the prototype stage and has not yet been implemented in regular operation. Nevertheless, the development and testing phase has already provided valuable insights into how autonomous delivery systems can interact with existing public transport infrastructure.

These early results help us understand the technical and logistical challenges of integrating such solutions into real urban environments and lay the groundwork for more sustainable and efficient delivery services in the future.

POLIS: What do you see as the biggest challenges for SMCs in developing and implementing innovations in this field? What actions could help address these challenges?

Lowette (Mechelen): As a city, we are only a small player within a much larger system. Take open locker access, for example: a Belgian law already requires interoperability, but it is not enforced.

This leaves cities in a weak position: while we know that open lockers would reduce door-to-door transport for all operators and make urban logistics far more efficient, we cannot mandate it ourselves. Stronger action at the regional or federal level to require and enforce open access could be a real game-changer.

Benz (AEN/Karlsruhe): The main challenges are regulatory in nature. Passenger transport within public transport systems is governed by very strict rules and safety requirements. At present, these regulations do not permit the transport of goods within the same infrastructure. Only when the legal framework is adapted to allow goods transport alongside passengers will it be possible to implement such a service in regular operation.

Updating these regulations would open the door to new, more flexible, and sustainable logistics models that make better use of existing public transport capacity.

POLIS: What strengths do SMCs bring as demonstration cities in projects like URBANE?

Lowette (Mechelen): SMCs like Mechelen add value in two ways. On one hand, we can demonstrate the transferability of solutions piloted in larger cities, showing how they can be scaled down and adapted. On the other hand, our smaller size allows us to be faster and more agile in setting up pilot projects—sometimes even testing ideas before they are introduced in metropolitan areas. This flexibility makes SMCs powerful laboratories for innovation.

Benz (AEN/Karlsruhe): SMCs are, indeed, often more flexible and agile in testing and applying new systems and operational models than larger cities or companies.

Their manageable size, close cooperation between departments, and shorter decision-making processes make it easier to experiment, adapt, and learn quickly. This agility allows SMCs to act as effective living labs, where innovative concepts like those developed in URBANE can be implemented and evaluated under real-world conditions, providing valuable insights that can later be scaled up to larger urban contexts.

Bpost employee dropping off and picking up parcels in one of the parcel lockers in the city centre of Mechelen, Belgium

Kathy Goelen

POLIS: What key lessons from this project could benefit other cities?

Benz (AEN/Karlsruhe): Even highly futuristic systems can be developed and demonstrated within relatively short timeframes when partners work closely together. Moreover, our use cases have shown that these innovations can benefit the city beyond the technology itself. By enabling new types of services, such systems can help make urban areas more attractive and vibrant—not because of the technology itself, but because of the added value it creates for residents and businesses alike.

Lowette (Mechelen): For us, the main insight is that transfer requires translation: solutions must be adapted to the local scale, stakeholders, and culture!

POLIS: As a closing thought, what advice would you give other cities and transport operators for advancing sustainable logistics in SMCs?

Lowette (Mechelen): Follower cities can progress more quickly by learning from frontrunners and adapting solutions to suit their context. Start by testing ideas, demonstrate that they work, and then integrate them into the city's policies.

That final step is crucial: without political backing, pilot projects remain isolated experiments with no lasting impact. Securing the support of city leadership and embedding successful initiatives is ultimately what makes the difference.

Benz (AEN/Karlsruhe): Stay creative and open-minded when developing new solutions! Cities and transport operators should not restrict themselves to small, incremental steps but instead think on a larger scale. Sustainable logistics demands bold ideas and a willingness to rethink established systems. By embracing innovation and collaboration, SMCs can take a leading role in shaping the future of urban mobility and logistics.

EPIC FAILS

WRITTEN BY
LORENA AXINTE
MARIJ LAMBERT

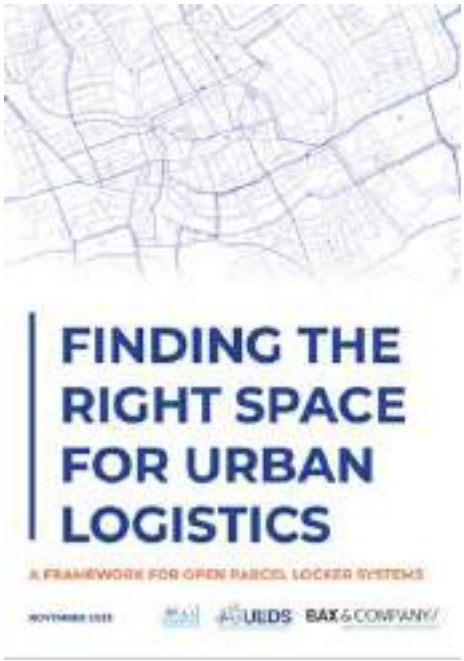
Embracing failure in EU projects

FlexCurb drive along in Leuven, Belgium
Marij Lambert

Urban freight is not always smooth : from apps that van drivers ignore, to parcel lockers that never get plugged in, European cities have learned the hard way. Discover how embracing these **'epic fails'** can foster more resilient solutions for sustainable logistics.

A perfect app that no van driver wants to use. A parcel locker just waiting to be connected to the electricity grid. A collaborative logistics pilot with no private partner companies willing to join. These are not unusual stories for anyone involved in European urban freight projects. Yet they rarely make it into reports or conference presentations.

Instead, the spotlight usually shines on 'best practices' and technological breakthroughs, while the setbacks are quietly forgotten. But behind every success story lie many small, messy failures that shape the path forward. Several such 'epic fails' from the cities of Leuven, Groningen, Mechelen, and Le Havre Seine Métropole illustrate how acknowledging missteps has helped improve governance, refine tools, and rebuild trust between public and private actors. Embracing failure, rather than hiding it, has become one of the most valuable and effective strategies to drive real progress in sustainable urban logistics.



This ULaaDS study, developed by Bax Innovation, supported the City of Groningen to better integrate logistics services (such as parcel lockers) within its public spaces

ULaaDS

When good ideas go wrong

In Leuven, the FlexCURB project set out to create a digital tool for logistics drivers. The concept was simple: real-time information about loading and unloading zones, allowing drivers to reserve space while giving the city better data on parking demand. On paper, it was an elegant solution—in practice, it hit a wall. Most van drivers did not use smartphones on the road, nor did they plan routes digitally. Booking a loading bay through an app was simply not part of their daily routine: many ignored official zones altogether, opting for the practicality of parking on the curb.

Beyond behaviour, regulatory and technical challenges emerged. Due to misalignment with national regulations, dynamic curb management could only be simulated within a living lab, and the FlexCurb app relied on manual data updates—too time-consuming for city staff. As a result, the data-driven approach was compromised, limiting the effectiveness of the FlexCurb app.

FlexCURB's failure was not technological, but human. The project began with a technical concept rather than an understanding of real user needs. But this setback led to a shift: newer projects, such as GLEAM NSR and Smart City Logistics, now start by co-creating user stories and sessions before discussing technology.

In Groningen, another challenge emerged from an apparently simple idea: installing a parcel locker to facilitate last-mile deliveries. The project, part of ULaaDS, faced unexpected bureaucratic barriers. To install the locker, the city needed a land-use agreement, a building permit, and an electricity connection. The existing power source for a nearby bike-sharing system could not be shared, and a new connection required a waiting period of three to six months. As a result, the pilot stalled before it could even begin.

A similar story unfolded in Le Havre, where an e-commerce operator installed a bright, eye-catching parcel locker in a heritage area. Its colours clashed with the surrounding architecture, and after complaints from the local council, the Mayor requested its removal. What was intended as a step towards modern, convenient delivery instead became an example of poor urban integration.

In Mechelen, the goal was to make the 'first mile' more sustainable by bundling parcels from local shop owners for courier collection. A green operator was ready to handle the pick-ups and deliver them to various company hubs. However, the collaboration among logistics service providers, as well as their subcontractors, proved impossible. Despite goodwill from the city, talks dragged on for over a year before stalling completely. Technically, the project was feasible. The real obstacle was trust—or lack of it—between competing logistics firms.

Lessons in trust: Learning from the past

These experiences revealed a central truth: no amount of funding or technology can replace the slow, patient work of building relationships.

In the follow-up GLEAM NSR project, Mechelen, Leuven, and Le Havre Seine Métropole (along with Rotterdam and Aarhus) established structured city dialogues focused on trust-building and long-term cooperation. Groningen, meanwhile, developed a city-wide framework for parcel lockers, integrated with its broader mobility hubs strategy instead of a piecemeal approach.

At first, acknowledging failure felt risky. Within the EU project ecosystem, transparency can raise eyebrows. Admitting that a pilot did not work may raise questions from auditors or funders, and few organisations wish to be seen as 'the one that failed.'

Yet the cities that chose honesty found that examining what went wrong helped them redesign processes and, in many ways, achieve more meaningful results than if everything had gone smoothly.

Turning setbacks into progress

This shift towards honesty is already paying off. Flexible parking is now legally possible in Belgium—though not directly because of FlexCURB. Meanwhile, GLEAM NSR and GREEN-LOG are developing regional frameworks that integrate lessons on data, governance, and trust into new pilot designs.

Both projects devote significant time and resources to stakeholder engagement, though in different ways. Leuven, for instance, finds value in working with a horizontal partner (such as a university) to guide engagement methods and structure, while retaining leadership over on-site activities and local dialogues.

Perhaps the most important outcome, however, is cultural. Teams have learned that transparency does not weaken credibility—it strengthens it. Sharing what did not work helps others avoid similar pitfalls and builds a more resilient, self-correcting community of practice.

A culture of honest innovation

The 'epic fails' described here may sound discouraging, but they actually signal maturity. Urban freight is complex: it intertwines regulation, infrastructure, behaviour, and economics. Failure is inevitable when coordinating so many moving parts. What matters is the response.

By reframing setbacks as learning opportunities, cities are creating space for dialogue, adaptation, and genuine innovation. The next frontier is not just better tools or policies—it is better communication.

Imagine a community where project partners feel safe to say, 'This did not work—and here is why.' Such honesty and openness would save time, reduce frustration, and speed up progress toward sustainable, efficient logistics systems.

In the end, the greatest achievement may not be a new app or pilot, but a new mindset. By embracing one's 'epic fails,' the urban freight community is becoming stronger, more trustworthy, and ultimately far more effective.

FlexCurb developed two tools for curb management: a planning platform for cities and a driver app

FlexCurb

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- Rear-motor braking recovers battery energy while you slow down

Accessibility:
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- Seat height 743mm to 1025mm to fit a wider range of riders

Safety:
- Front-mounted AI camera: Powers Pedestrian & sidewalk Detection + Parking Compliance Validation
- Triple braking system: Front and rear roller + rear regenerative brakes (industry first on shared bicycles)
- 2.8" LCD display for real-time city messaging and safety alerts

Book a demo

*cradle-to-grave approach methodology ensures a thorough examination of all material and energy flows, waste, and emissions from resource extraction through to the eBike's end-of-life treatment, each vehicle was analyzed with the Berlin context EB1 = 30.05g vs. EB100 = 65.79g; Ladera 2025

TRAFFIC EFFICIENCY

Traffic Efficiency is a key pillar within POLIS, focusing on the strategic and technical challenges of managing multimodal urban transport networks. It drives knowledge exchange on Intelligent Transport Systems (ITS), data digitalisation, automation, and policy developments to support smarter, more efficient urban mobility.

The **Traffic Efficiency Working Group** focuses on multimodal network management, integrating walking, cycling, public transport, and car traffic through strategic and technical approaches. It promotes knowledge exchange on Intelligent Transport Systems (ITS), automation, data digitisation, and European policies. The group collaborates with key platforms and projects to advance traffic management, support digital infrastructure, and prepare cities for connected and automated mobility, aiming for smarter, more efficient, and sustainable urban transport networks.

STARTING SMALL

Helmond is a renowned living lab for smart and sustainable urban mobility, which has successfully balanced **innovation**, **liveability**, and **citizens' engagement**. Not afraid of ambitious goals, the city is proof that starting small goes a long way.

INTERVIEW WITH
MATTHIEU GRAINDORGE

ELABORATED BY
VITTORIA MADDALENA

POLIS: As digitalisation and smart solutions in mobility increase, how can small cities like Helmond ensure these technologies respect citizens' needs and improve the quality of life?

Matthieu Graindorge: We see digitalisation and smart mobility as tools, not goals in themselves. In Helmond, we first focus on solving concrete challenges, like improving road safety for cyclists and pedestrians, reducing transport poverty, and making public transport more accessible. Only then do we choose the most suitable solutions or building blocks.

Our approach is rooted in co-creation and inclusivity because we believe that technology must serve people. That is why we use data-driven approaches and tools like digital twins to refine solutions before implementation.

MARQ is a brand new innovation and research centre for smart mobility on the Automotive Campus in Helmond, The Netherlands
TNO

In this regard, we have great expectations for the new living lab at the Automotive Campus—MARQ—which allows us to test innovations in a controlled yet realistic environment.

POLIS: Helmond has ambitious climate and mobility goals in its Mobility Vision and the Climate City Contract. What role does urban mobility play, and how can sustainable mobility improve liveability?

Graindorge: How we move affects everything: climate, health, and liveability. Transport cannot be approached in isolation; it must integrate with health, land use, housing, and social equity.

Our active mobility approach prioritises cycling in urban design, making it the easiest and safest choice over private cars. We want Helmond to be climate-neutral, but also vibrant and inclusive.

POLIS: Looking ahead, what challenges do you expect to face as a medium-sized city in the coming years, and how are you preparing for them?

Graindorge: Helmond is growing fast, with 15,000 new homes planned by 2040—a 30% increase compared to the current status—and the Brainport Region is aiming for 100,000 by 2050.

This growth, however, brings pressure on mobility, housing, and climate aspects. One of our biggest challenges is behavioural change: shifting from a car-oriented culture to one based on active mobility and seamless, multimodal transport.

To achieve this, we are working to:

- Reduce car dependency: by 2035, we aim to cut the main road Kasteeltraverse's capacity by over 50% by rerouting traffic and prioritising active modes, public transport, and clean vehicles.
- Integrate mobility with urban planning: new districts, like Stationskwartier, are being designed for active and shared mobility.
- Ensure social equity: Growth must benefit everyone, so we are working to improve access to jobs, healthcare, and daily facilities, using technology to make alternatives to the private car more attractive.

Finally, regional cooperation—notably through our Climate City Contract with Eindhoven—helps us align housing, transport, and energy planning so growth does not erode liveability.

POLIS: Helmond is a living lab and participates in many EU projects. What have been the most significant lessons so far, and how has the city changed?

Graindorge: Our experience as a living lab has taught us to start small, iterate, and scale what works. We have moved from isolated trials to integrated pilots, so innovations become part of how we operate daily. Success is measured in the end by the benefits delivered to citizens, not just technical milestones. Projects like MOVE2CCAM proved that co-creating with residents—notably vulnerable groups—ensures solutions like automated shuttles or smart cycling infrastructure truly meet their needs.

Partnerships with industry, universities, and research centres are equally vital: they help us turn experiments into operational improvements and embed innovations into city processes.

POLIS: Reflecting on the Urban C-ITS Award 2023, what were the milestones that enabled successful Cooperative Intelligent Transport Systems (C-ITS) implementation?

Graindorge: Helmond's C-ITS success stems from nearly two decades of consistent work and collaboration.

Matthieu Graindorge

Senior Project Manager
Smart & Green Mobility
City of Helmond

First, building a strong local ecosystem—our team, the Automotive Campus, and partners from industry, research, and European projects—enabled testing, learning, and deployment.

Second, we have evolved from car-focused pilots to a multimodal approach. Early C-ITS projects like Freilot or Compass4D targeted car or truck traffic, but over time, we expanded to include pedestrians and cyclists, with safety and sustainability as goals. Today, our systems optimise vehicle flow while protecting vulnerable road users.

Third, European cooperation has been crucial. Participation in multiple EU projects brought co-funding, expertise, and visibility, accelerating deployment.

POLIS: Are you planning to exploit Connected, Cooperative, and Automated Mobility (CCAM)'s potential in Helmond's broader transport system?

Graindorge: CCAM services are not yet operational, but we see them as key to complement public transport, reducing car dependency, and creating a smart, shared, and inclusive urban mobility. Our approach is gradual, transparent, and rooted in co-creation. Through projects like MOVE2CCAM, we have tested automated solutions and worked with citizens and stakeholders to develop real use cases.

We start with simpler environments, like industrial areas, before scaling to more complex urban settings. This phased approach ensures safety, legal compliance, and scalability.

Stakeholder cooperation is essential. We leverage our local ecosystem—partners like Eindhoven University of Technology, TNO, the Province of Noord-Brabant, and the City of Eindhoven—to align CCAM with broader regional goals. Networks like POLIS and the CCAM Partnership connect us with cities, manufacturers, and researchers worldwide, ensuring shared learning and best practices.

Top picture:
Co-creating with citizens, especially vulnerable groups, is a priority for Helmond
Matthieu Graindorge

Bottom picture:
Automated public transport solutions have been tested first in simple environments
Jim Eijkemans

Helmond aims to make cycling the first transport mode choice
City of Helmond

POLIS: How have these innovations impacted citizens, and how do you ensure less tech-savvy groups are included?

Graindorge: Innovation must be inclusive by design. We co-create with citizens to ensure accessibility and deploy user-friendly services. Technologies are designed to be intuitive and accessible for all ages, fostering independence and social connection, especially for elderly residents.

POLIS: Reducing car dependency is a challenging task. How does Helmond use technology to promote active travel, especially cycling?

Graindorge: Technology must enhance active modes. By 2035, we want a city centre designed for people, not cars. Cycling should be the easiest, safest, and most comfortable choice. C-ITS can prioritise cyclists at traffic lights and warn of hazards.

Digital twins help optimise cycle networks and reduce conflicts with cars. Real-time information shows the fastest, safest, or most comfortable routes, especially for elderly people. Our cycling strategy also prioritises accessibility: wider bike paths, smoother surfaces, and safer intersections.

POLIS: Any upcoming initiatives or projects you find exciting?

Graindorge: From next year, Helmond will participate in the Horizon Europe CoreSpaces and PeriAsty projects, which could boost our Climate City Contract locally and regionally. We will also start the Connecting Europe Facility (CEF) initiative TISGRADE, aimed at upgrading the availability, quality, and interoperability of real-time traffic data across Europe. Projects like INTERREG's CCAM Proving region and FLEX have recently begun—all exciting and diverse initiatives!

POLIS: What advice would you give other cities transitioning to smart and green mobility?

Graindorge: Start from the problems citizens experience and co-create solutions —some smart, some low-tech—that meet real needs. Begin small and scale gradually and sensibly: continuity is important, and change takes time.

Leverage partnerships, particularly local ones, because no (small) city can do it alone. Collaborating with industry, academia, and networks like POLIS accelerates both learning and action.

Finally, keep equity and inclusivity central: if benefits are uneven, public support evaporates.

SMART CYCLING REVOLUTION

WRITTEN BY
WIM DIJKSTRA

Europe's new **Smart Cycling Roadmap** turns bikes into a digital-first mobility solution.

From safer streets to smarter city planning, it shows how connected cycling can transform urban life and make sustainable, people-centred transport a reality.

People cycling in Utrecht, The Netherlands
luci.design, Shutterstock

The recently released European Roadmap for Smart Cycling outlines a clear and compelling strategy for integrating digital tools into cycling infrastructure and policy across Europe. It is more than a wishlist of tech upgrades—it is a blueprint for transforming how cities approach cycling as a serious, data-driven part of the transport mix.

What makes this roadmap significant is not just the technology it describes, but the way it reframes cycling in the context of connected mobility. For too long, cycling has been treated as low-tech and low-priority: this roadmap shifts the narrative, positioning bikes not as an afterthought in mobility planning, but as fully integrated components of smart transport networks.

This roadmap reflects the insights, ideas, and strategic vision generated through two European-funded projects in cycling and intelligent transport systems (ITS): MegaBITS and Meridian. Contributions from project partners and external stakeholders ensured a broad representation, diverse perspectives, and practical guidance for the proposed next steps.

A missing link

At its core, smart cycling refers to the use of intelligent systems—like real-time traffic data, connected devices, and cooperative safety alerts—to improve the experience, safety, and practicality of cycling. It is the cycling equivalent of the digital infrastructure already commonplace for motor vehicles. That means things like apps that adjust traffic lights in favour of cyclists, digital incentives for commuting by bike, and warning systems for hazardous road conditions. It also means using floating bike data and infrastructure sensors to build more responsive, evidence-based policy at the city level.

The impact on cycling

The roadmap arrives at a critical moment. Cities are under pressure to reduce emissions, cut congestion, and reclaim public space from cars. E-bikes adoption continues to grow, cycling is rising in political relevance, and climate targets must be adhered to.

Cycling in a city
VTT Studio, Shutterstock

The roadmap for smart cycling
See.Sense

Yet, while cars get connected systems and real-time data flows, cycling has largely been left out of the digital conversation.
This roadmap changes that: it sets out a path for integrating smart cycling into existing transport frameworks, making sure that cycling is not just safer or more convenient, but fully connected. If successful, it could help rebalance urban transport systems by making the bike not just viable, but the preferred mobility option.

What is more, the roadmap does not overpromise: it acknowledges barriers, such as fragmented data, funding gaps, privacy concerns, and the slow pace of regulatory change. If that was not enough, it also makes a persuasive case that none of these are deal-breakers: with coordinated effort, smart cycling can truly unlock major gains in safety, sustainability, and urban quality of life.

Next steps

At a time when cities are rethinking how people move, this roadmap makes a simple but overdue point: cycling deserves the same digital investment and strategic attention as any other mode of transport. If cities want healthier, safer, and more efficient mobility systems, making cycling smarter is not a 'nice to have'—it's a 'must have'.

Roadmap breakdown

Make smart cycling a policy priority
Smart Cycling should be embedded prominently in both active mobility and smart mobility policies at all government levels. The European Commission (EC) can lead by requiring smart cycling as a mandatory part of Sustainable Urban Mobility Plans (SUMPs) for urban nodes and as part of the program for the 100 climate-neutral cities. Additionally, smart cycling should be integrated into revisions of relevant Directives and Delegated Regulations, such as the ITS Directive, and the regulations on Safety-Related Traffic Information (SRTI), Real-Time Traffic Information (RTTI), and Multimodal Travel Information Services (MMTIS). National cycling plans should include smart cycling sections, and regional and local cycling plans should consider opportunities offered by these solutions.

Foster innovation and digitalisation in cycling
European and national smart mobility funding schemes should allocate dedicated budgets for the research, development, piloting, and deployment of smart cycling solutions (ITS and C-ITS), with minimum technical requirements to ensure seamless cross-European services. These solutions can target cyclists directly or indirectly benefit them through public authorities.

They may enhance cyclists' safety, reduce congestion, improve health, or boost urban liveability. Special attention should be given to developing guidelines for safe product and service design (HMI) to prevent cyclist distraction in traffic.

Enable smart cycling through data collection and standardisation

The EC should require Member States to submit national cycling data action plans. Authorities should collect more and better cycling data—including floating bike data—by using smart counting and other measurement tools and make it widely accessible, preferably free, via National Access Points and the European Mobility Data Space. Current standards for cycling data (such as infrastructure, counting, parking, real-time data and more) remain limited. Initiatives like NAPCORE have begun standardisation, but these efforts should be intensified. Attention must also be paid to data quality, privacy, and security related to collecting and sharing cycling data.

Raise awareness and build a smart cycling ecosystem

The EC should support the creation of a European Smart Cycling organisation or platform to act as a catalyst for research, innovation, deployment, and knowledge-sharing. This smart cycling ecosystem should bring together small cycling and ITS companies, research institutes, universities, cyclist organisations, and local, regional, and national authorities. Cooperation with other relevant existing platforms, such as NAPCORE (data standardisation) and C-ROADS (C-ITS specifications), is essential. Additionally, regular high-level political dialogues on smart cycling should be organised to drive uptake and integration at administrative levels.

Putting the 'road' in roadmap

The BITS (Bicycles and Intelligent Transport Systems) project was a four-year Interreg North Sea Region initiative (2019–2022) aimed at promoting cycling through Intelligent Transport Systems (ITS). It delivered over 30 projects across five countries, developed digital tools such as the CycleDataHub and BITS Directory, and built a community of more than 1,000+ stakeholders. These innovations supported better infrastructure planning and informed policy development, with the ultimate goal of increasing cycling uptake and reducing emissions. In October 2024, BITS was awarded the prestigious European REGIOSTARS award in the 'Connected' category.

Building on BITS, the MegaBITS project takes a more strategic and standardised approach. The province of Overijssel, the Netherlands, continues as lead partner, while new partners, including the cities of Copenhagen and Hamburg, have joined. MegaBITS expands core tools such as the Cycle Data Hub and BITS Directory, aligning data practices with NAPCORE and the EMDS. It also incorporates new data types—floating bike data, radar, GPS, and camera data—and collaborates with the CEF-funded Meridian project, establishing a Smart Cycling Task Force and co-developing a roadmap for smart cycling across Europe.

MegaBITS will conclude in 2026, but the work is far from complete. Cycling data is increasingly integrated into ITS and cycling policies, including the 'European Declaration on Cycling' (2024). However, the value of digital ITS solutions for cyclists themselves—enhancing the infrastructure they use daily—is still not fully recognised. Indeed, smart cycling has yet to reach the same level of visibility and integration as smart vehicles. The roadmap for smart cycling, alongside the other outputs of BITS and MegaBITS, aims to bridge this gap and take the next step toward a fully connected cycling ecosystem.

Cycling traffic signal shows green light, indicating safe passage for cyclists along the designated bike lane on city street

Lana P, Shutterstock

NEXT STOP

A mobility vision for Switzerland

WRITTEN BY
JULIAN MORITZ RENNINGER
PHILIPPE STADLER BENZ

Boarding the SBB train in Zurich, Switzerland
Lorin Both, Unsplash

Switzerland's transport system is the envy of many. The trains are safe, clean and punctual. A comprehensive service, with trains arriving every 30 to 60 minutes, covers almost the whole of Switzerland and ensures reliability. However, even the best system has its limits.

To guide the long-term development of Switzerland's mobility system, **a SBB project team has developed a whole new mobility vision**, showing that a transition to a more sustainable mobility system is feasible.

Switzerland's transport system is among the most admired in the world, known for its precision, reliability, and integration. But as the country looks into the future, this success story faces new pressures and expectations.

The next 30 years will be characterised by significant uncertainty and major challenges, including the consequences of climate change and population growth, as well as the need to use resources sustainably.

These challenges are already evident: for example, Switzerland's population has grown from approximately 7.2 million to 9 million over the past 25 years, and the federal government expects this figure to reach 10.5 million by 2050. Meanwhile, more people are seeking attractive public transport options and seamless door-to-door travel chains that enable smooth and comfortable journeys.

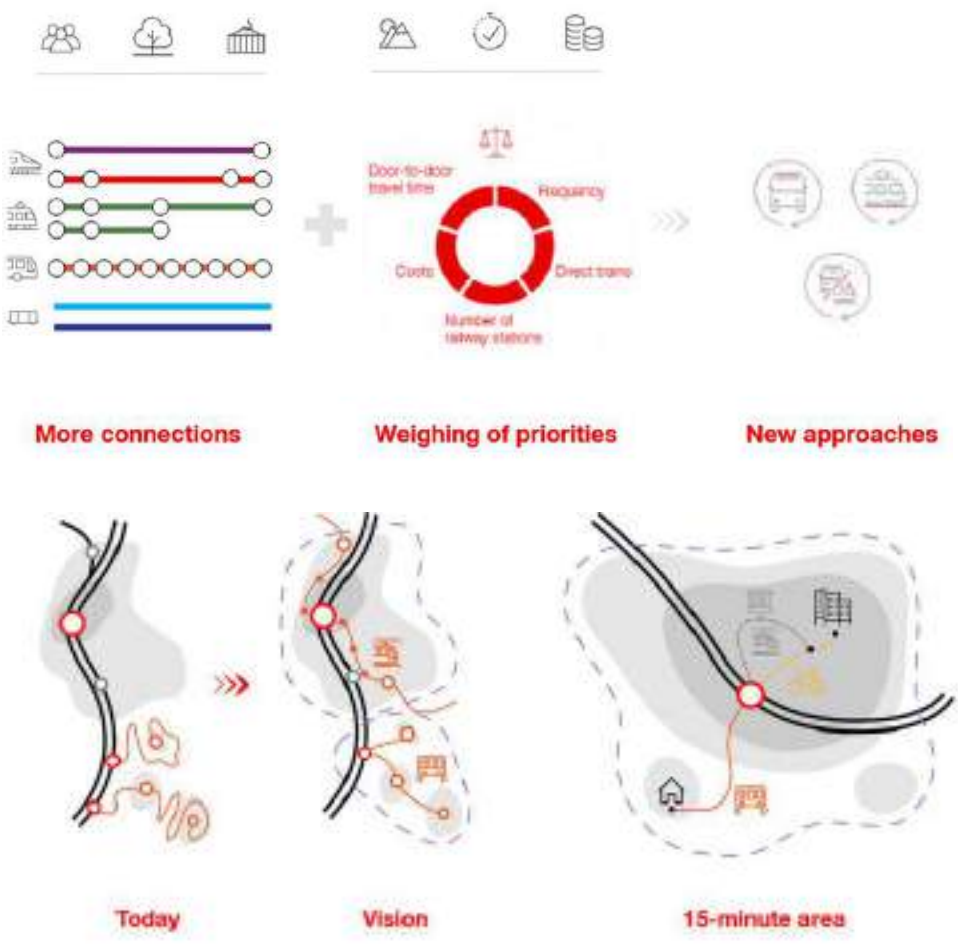
A matter of adaptation

One thing is clear: if the railways are to remain viable in the future, they must adapt to respond flexibly to new developments. New measures—such as double-decker trains and extended platforms—have already been implemented in Switzerland to accommodate more passengers. However, there is limited capacity for additional trains due to space constraints, tight budgets, and lengthy construction timelines. While the potential of new technologies and digitalisation is significant, it is not sufficient on its own. What is needed is a smarter, more efficient way to use the existing infrastructure, supported by a shift in how transport is planned—not just from station to station, but also from door to door.

To address these challenges and provide guidance on the long-term development of Switzerland's transport system, a project team at SBB has developed a mobility vision outlining how the mobility system should evolve to meet a broad range of long-term requirements. The guiding question was this: Can Switzerland provide every person with access to public transport every 15 minutes, to any destination, within a reasonable timeframe and budget?

Approaches for the future: Three principles, ten tools

The vision for the future of mobility is built on three guiding principles, supported by ten practical tools.



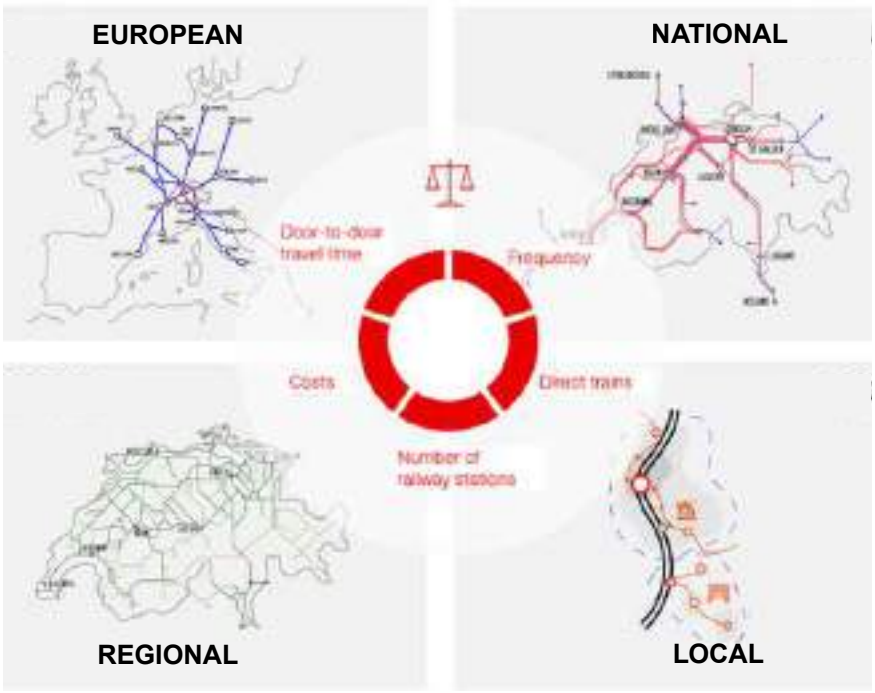
Together, they outline how public transport can expand and integrate across international, national, regional, and local levels, making the most of existing resources through better coordination between different modes of transport, including light rail, trams, and buses.

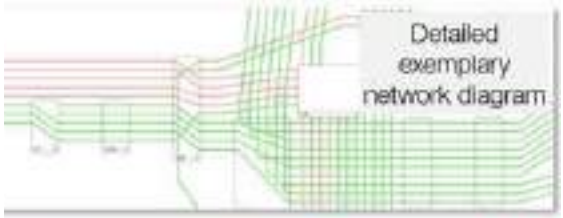
Complementing mobility

Rail is best suited for medium- and long-distance travel, moving large volumes of people and goods safely, quickly, and sustainably. But for shorter journeys, other modes are better suited. In cities and urban areas, trams and light rail provide more frequent services and better access to residential districts. In rural areas, smaller modes such as cars and buses—many of which will be autonomous in the future—play an important role in linking people to the network. The aim is to ensure that every mode of transport complements the others, rather than competing with them.

Top picture:
SBB's network continues to grow denser, requiring smarter planning and coordination
SBB

Bottom picture:
Strengthening local transport enables passengers to reach their destinations quicker, making the entire system more efficient
SBB





Applying the vision's principles through modelling demonstrates the feasibility of a 15-minute nationwide mobility system

SBB

Systematising rail transport

While trams and buses excel at short-distance travel, railways can focus on their strengths: serving medium and long-distance routes efficiently and at harmonised speeds. The vision foresees regional and long-distance trains, as well as freight trains, running at regular intervals —every 15 minutes within Switzerland and every 60 minutes to major European destinations. Achieving this will require targeted infrastructure expansion, new technologies, and operational innovations that allow trains to run more frequently on the existing network.

Integrating the overall system

The third principle calls for closer integration of transport planning, financing, and management with spatial planning. This means designing transport systems around complete door-to-door travel chains, ensuring all modes of transport, including rail and road, work together seamlessly. Intelligent coordination of existing planning tools and selective regulatory updates will be key to making this possible.

A worthwhile vision

To develop this vision, SBB experts analysed the three principles and ten associated tools in depth, developing a sample network diagram and simulating potential effects. The results were impressive: the share of public transport in the modal split could increase by around two-thirds, cost recovery ratio would improve, and the overall system would operate more efficiently. Yet, the results also show that supply alone is not enough.

A supportive regulatory framework is indeed essential to make the system work. One reason public transport is becoming more attractive is that private cars are losing ground in growing conurbations, where traffic congestion is higher, regulations are tighter, and parking is harder to find. These trends are already visible in SBB's models.

The 15-minute mobility vision demonstrates that a true transport revolution is possible. To achieve it, all modes of transport—including private cars—must play to their strengths, service must offer convenient, door-to-door travel every 15 minutes, and the regulatory framework must evolve to support these changes. With these steps, Switzerland's mobility system will be ready to meet the challenges of the next 30 years and beyond.

Pilot project 'iamo'

Improving local transport is essential to making public transport a truly appealing alternative to owning a car—or a second car. When implemented correctly, automated mobility can make public transport more flexible, reliable, and cost-efficient, whether through scheduled or on-demand services. In fact, if operating costs could be halved through automation, the same budget could deliver twice as much service.

To test this theory and expand the dialogue with stakeholders, SBB has launched the 'iamo' pilot project in Furttal, near Zurich, in collaboration with the cantons of Zurich and Aargau and the Swiss Transit Lab. The goal is to let both the public and experts experience automated technology first-hand—after all, 'riding is believing'. The project aims to move beyond theory and open an informed dialogue about the role of automation in public transport. Drawing on real-world experience and feedback, partners are working together to build the foundations for the mobility systems of tomorrow.

If all goes according to plan, residents in the region will be among the first in Europe to test a fully automated mobility service with no staff on board by the first half of 2026. The project team is currently conducting preparation and test drives to make this ambitious step possible.

Concept image of a train station in the SBB project team's mobility vision

SBB

SAFETY AND SECURITY

The Safety & Security pillar addresses the critical need to protect all urban mobility users, especially vulnerable groups, by advancing road safety and ensuring secure transport environments. It supports cities and regions in implementing effective strategies that reduce accidents, prevent violence, and enhance resilience against climate impacts, fostering safer, more inclusive, and reliable urban mobility systems.

The **Safety & Security Working Group** focuses on protecting vulnerable urban mobility users—pedestrians, cyclists, public transport, and shared micromobility riders—by advancing road safety and transport security. It promotes frameworks like Vision Zero and New Paradigm for Safe City Streets, integrates safety with sustainable mobility, and addresses emerging vehicle technologies. The group also tackles transport security issues, including gender-based violence and climate resilience of infrastructure, supporting safer, more secure urban transport systems.

MOVE WITH WOMEN

Designing gender-sensitive mobility systems

WRITTEN BY
HARSHITA JAMBA
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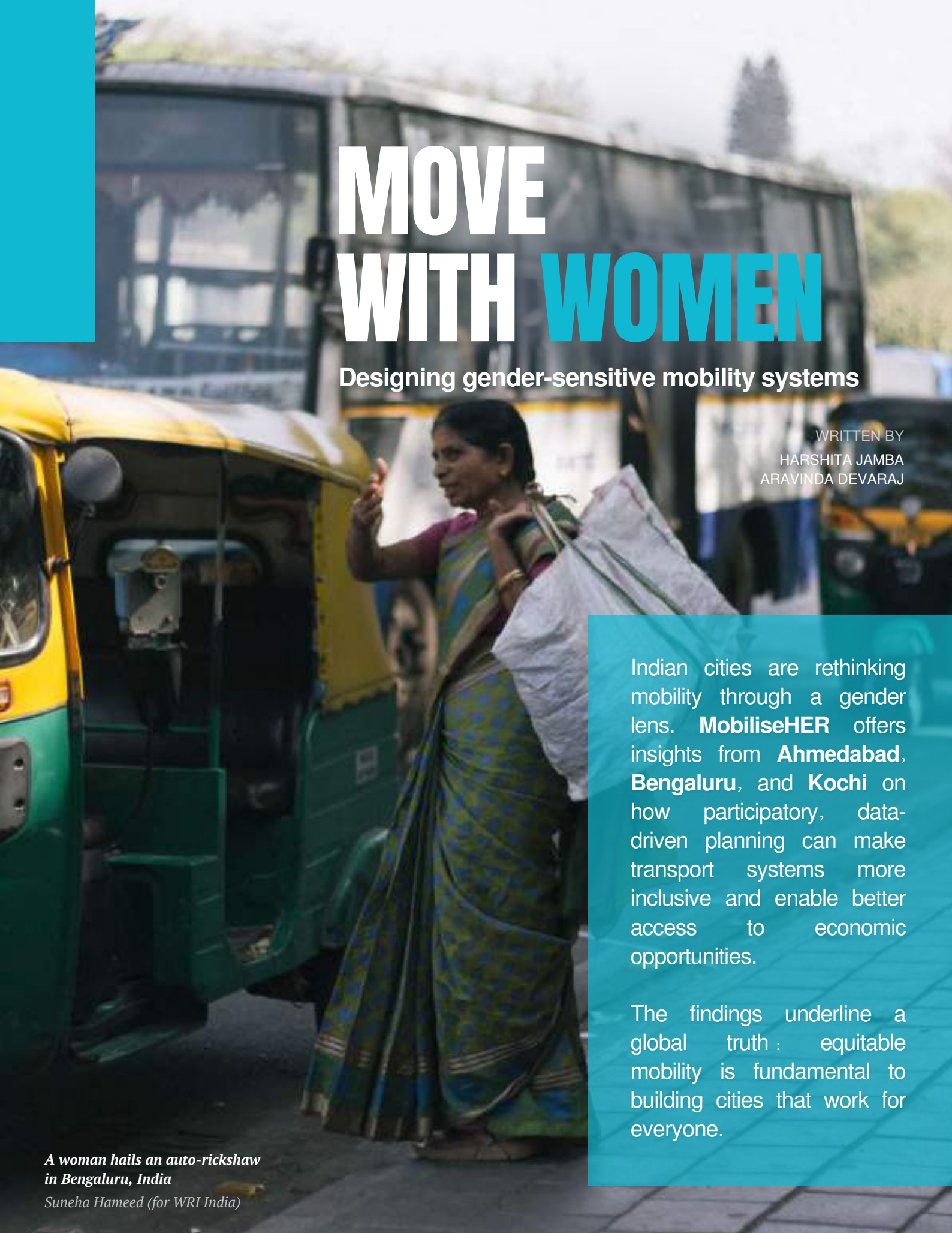

Indian cities are rethinking mobility through a gender lens. **MobiliseHER** offers insights from **Ahmedabad**, **Bengaluru**, and **Kochi** on how participatory, data-driven planning can make transport systems more inclusive and enable better access to economic opportunities.

The findings underline a global truth : equitable mobility is fundamental to building cities that work for everyone.

A woman hails an auto-rickshaw in Bengaluru, India
Suneha Hameed (for WRI India)

Indian cities are undergoing a transformation. Accelerating urbanisation is redefining how people move, connect, and access opportunity, presenting a powerful opportunity: to view mobility not just as an engineering challenge, but as a social one. Transport systems influence who can reach schools, workplaces, and hospitals—and who can participate in city life. To build cities that work for everyone, mobility planning must reflect the experiences of diverse users.

The growing emphasis on inclusive mobility in Indian cities, reflected in national missions, recognises accessibility, safety, and equity as key pillars of urban development. Civil society organisations are complementing this vision by working with communities to translate these goals into practice. Together, they are building pathways for more inclusive, people-centred urban mobility, where lived experiences are integral to how cities move.

Gendered differences in mobility stem from socially dictated gendered differences in daily activities. Global research suggests that men's travel patterns are dominated by work commutes, whereas women who shoulder a disproportionate share of unpaid domestic and care responsibilities travel for a wider range of purposes, including work and caregiving.

Women's trips are often shorter, more fragmented, and involve multiple stops or joint travel with mobility dependents, such as children and the elderly. Women tend to depend more on walking and public transport, as they have comparatively lower access to personal vehicles. Traditional transport planning often fails to address these nuances: indeed, the lack of female representation among decision makers and the absence of gender-sensitive mobility indicators are primary reasons for this gap.

MobiliseHER, an ongoing project by the Urban Electric Mobility Initiative (UEMI), WRI India, CEPT Research and Development Foundation (CRDF), and Participatory Research in Asia (PRIA), aims to advance gender-responsive urban mobility in Ahmedabad, Bengaluru, and Kochi. Supported by the European Union, the project focuses on strengthening the role of civil society organisations in shaping inclusive transport systems for women, gender and sexual minorities, and marginalised groups. MobiliseHER uses data to reveal gendered mobility patterns and gaps, working with CSOs and government authorities to build capacity and implement gender-responsive solutions. Through participatory planning, it seeks to co-create solutions that improve mobility, expand economic opportunities, and enhance quality of life for all.

Community ideation workshop in Bengaluru, India, co-develop ideas to make public transport and pedestrian networks safer and more inclusive for all

PRIA/MobiliseHER

Shared communities, streets, and mobility

For the project, the approach centred on listening: documenting how people, especially women and gender minorities, navigate the city, and identifying what enables or restricts their movement. Through large-scale surveys, participatory urban appraisals, and focus group discussions, the project engaged residents —particularly women, people with physical disabilities, and gender minorities—to understand how they move through cities.

The combination of quantitative and qualitative data painted a detailed picture of how gender shapes distinct mobility patterns in the three cities.

Civil society organisations (CSOs) played a vital role throughout, providing guidance and insights from citizen mobility enthusiasts, resident welfare associations (RWAs), advocacy groups, and non-governmental organisations (NGOs) working with religious, social, and gender minorities. Their involvement helped facilitate dialogue, strengthen community participation, and build awareness around gender-responsive and sustainable mobility.

CSOs' strength lies in facilitation and innovation. They bring community interests to the fore and into planning discussions, pilot new approaches, and create opportunities to test and adapt inclusive solutions. Whether it is improving pedestrian infrastructure, making public transport more accessible, or integrating gender-sensitive design, CSOs serve as catalysts for collaboration. By building trust between residents and institutions, CSOs enable planning that is both data-driven and deeply rooted in local experience.

Listening as planning

The most meaningful transformations often begin with dialogue. Insights from these discussions revealed that women's mobility involves balancing multiple roles while navigating time and cost constraints.

In addition to making shorter, multi-purpose trips, women tend to walk more and rely heavily on public and shared transport, often planning their days around familiar routes. Their travel choices are influenced by caregiving responsibilities, affordability, and safety concerns, and many combine commutes with care-related activities such as shopping, escorting children, or accompanying older family members. As a result, their mobility patterns are more localised and closely tied to neighbourhood-level services and amenities.

On average, women spend 140 minutes per day on caregiving—nearly double the 74 minutes spent by men. Although men's participation in caregiving has risen, the burden still largely falls on women (Time Use Survey, January-December 2024).

Focus group discussions in Ahmedabad, India, capturing diverse perspectives from women, gender minorities, and caregivers

PRIA/MobiliseHER

Interestingly, where public transport is reliable, women's access to education and employment improves.

Through MobiliseHER, community workshops brought together diverse neighbourhood stakeholders to discuss findings and co-develop practical solutions. These conversations surfaced simple yet powerful priorities: better transit connectivity, cleaner and safer public spaces, and visible signals that safety and dignity matter.

In Bengaluru, participants proposed improved bus frequencies and feeder links to metro stations. In Kochi, residents highlighted the need for clean toilets, seating, and shelters at bus stops. In Ahmedabad, women's groups suggested gender-sensitivity training for transport staff.

These ideas reflect universal principles of people-first planning: accessibility, comfort, and safety. They also demonstrate that inclusive mobility is not just a social imperative, but a pathway to sustainability. By encouraging more people to walk, cycle, or use public transport, gender-responsive planning supports broader climate and development goals.

From projects to practice

Drawing on insights from co-creation workshops—which invited local solutions and validated the data collected—the next step is to turn these learnings into practice: integrating gender and inclusion into planning processes, building institutional capacity, and piloting scalable solutions.

Riding a bus in Bengaluru, India
Suneha Hameed (for WRI India)

Experience from MobiliseHER's three cities shows that inclusive planning can be strengthened through improved city data systems, training transport planners and transit staff in participatory methods, and establishing regular forums for dialogue. As India's cities continue to expand, the opportunity lies in embedding inclusivity into the core of urban planning. Institutionalising the collection of gender-disaggregated data at city level is essential to developing an in-depth understanding of women's travel needs and challenges.

Towards equitable and sustainable cities

The path to inclusive mobility begins with partnership. Integrating women into the transport sector requires coordinated action across multiple levels and stakeholders. The ability to convene, experiment, and translate local experiences into actionable insights helps cities better cater to all mobility needs.

Currently, there is no formal mechanism to facilitate efficient exchange of data, learnings, or best practices between agencies—yet such cross-learning is essential to scaling and sustaining gender responsive initiatives. Moving away from issue-specific projects to comprehensive, programmatic approaches to gender inclusion will enable cross- and peer-learning, improve investments in inclusive mobility systems for women's mobility, and consolidate individual efforts and expertise. This, in turn, will help bridge existing gaps in the mobility ecosystem and ensure lasting impact.

In its next phase, MobiliseHER will support ten additional cities in India to adopt similar frameworks, such as building local capacity to design, test, and sustain gender-responsive transport initiatives.

Around the world, cities are reimagining mobility as a tool for equity and climate resilience. When cities listen to their residents, data gains meaning. When residents help design solutions, those solutions last.

Nivel

POLIS26
ANNUAL CONFERENCE

BRUSSELS — 2-3 DEC 2026

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Vancluysen was appointed as Secretary General of POLIS in September 2014, after having been the network's Research Director for 8 years. Since 1998, she has been involved in urban mobility networking, innovation, and policy activities as well as a wide range of European urban transport research projects.

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Lambert leads smart logistics initiatives, including GLEAM NSR, GREEN-LOG, and FlexCurb. Her work focuses on Urban Vehicle Access Control, curbside management, and Logistics-as-a-Service. Drawing on Leuven's living labs, she prepares data-driven policies to advance sustainable urban logistics.

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Head of Lyft Urban Solutions, Brous leads the company's bikes and scooters division, bringing extensive expertise in urban transportation, operations, and finance. Formerly VP of Finance at Motivate International Inc., he helped drive its acquisition by Lyft in 2018 and has since held multiple leadership roles. He holds a BS in Finance from the Wharton School and previously worked at REQX Ventures and Versa Capital Management.

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Dr Benz holds a diploma in Mechanical Engineering and a PhD in Civil Engineering from Karlsruhe University (now KIT). With extensive experience at the intersection of vehicle and traffic engineering, particularly in Intelligent Transport Systems (ITS), he has held various roles at PTV in research, business development, and sales.

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Dijkstra serves as a strategic advisor on mobility policy at the Province of Overijssel in the Netherlands. He identifies emerging priorities in mobility development and the transition to sustainable transport that require greater support and political attention, with smart cycling being a key focus. Under his guidance, the Province of Overijssel became the lead partner for the Interreg NS project BITS and its successor, MegaBITS.

Contributed articles:
'Smart Cycling Revolution'

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