EIT URBAN MOBILITY
ACADEMIC RESEARCH BOARD
ANNUAL REPORT:

STRATEGIC RESEARCH PRIORITIES AND GAPS

eit Urban Mobility

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Foreword

I'm delighted to share the first *EIT Urban Mobility Academic Research Board annual report: strategic research priorities and gaps.*

Recognising the growing importance of research in shaping policy and driving innovation in a rapidly evolving world, EIT Urban Mobility has prioritised strengthening collaboration with the research community. This effort aims to deepen our understanding of the current knowledge landscape and to identify critical gaps that future research must address.

To support this mission, we established the Academic Research Board — a diverse and distinguished group of experts tasked with capturing the perspectives of the research community, offering insights into pressing challenges, and proposing research funding priorities in the urban mobility domain.

The board's contributions extend beyond shaping research agendas. Their work provides strategic guidance for innovation projects, informs focus areas for startup support, and steers broader initiatives in alignment with Europe's sustainability goals.

I would like to express my sincere appreciation to each board member for their invaluable contributions. Their deep expertise across various urban mobility disciplines has made this first report a vital resource — offering a comprehensive overview of research needs and serving as a foundation for knowledge exchange within EIT Urban Mobility and among our key stakeholders.

Together, we are addressing the transformation needed to build a sustainable urban mobility system and move towards more liveable, inclusive, and climate-resilient European cities.

Marc Rozendal
CEO, EIT Urban Mobility

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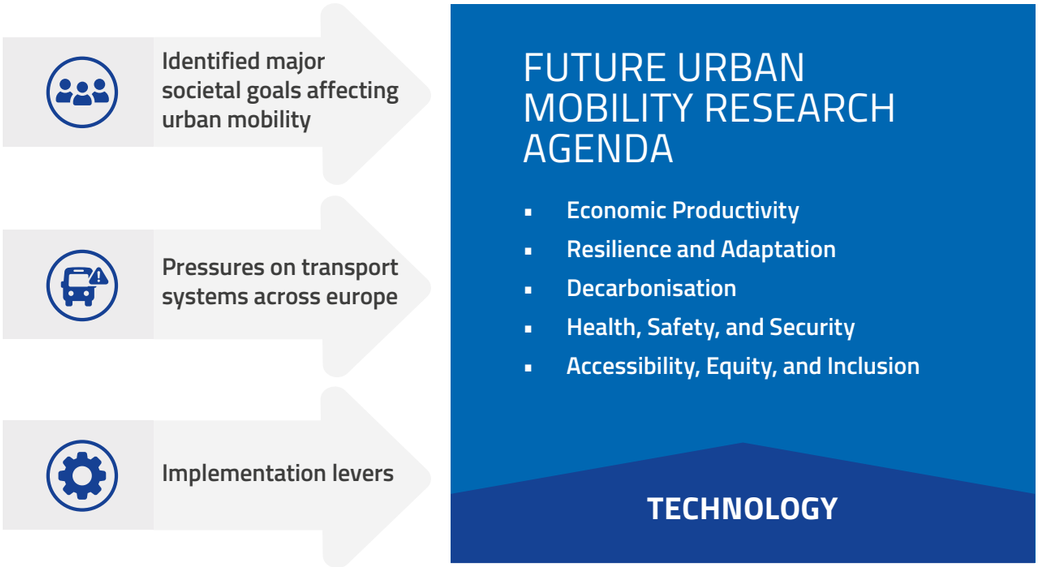
Executive summary

EIT Urban Mobility, an initiative of the European Institute of Innovation and Technology (EIT), a body of the European Union, has established an Academic Research Board to provide guidance on research and innovation in urban mobility across Europe.

The board initiated this effort by first establishing a framework that (1) aligns with the societal goals outlined by organisations within the framework of the European Community, (2) addresses systemic pressures on the transport system that necessitate immediate action to provide accessible and high-quality mobility options, (3) identifies key implementation levers or mechanisms to drive progress in sustainable, equitable, and resilient urban mobility, and (4) recognizes the cross-cutting role that technology will play in the transport sector innovation. These are all inputs to defining a mobility research and innovation agenda for Europe.

FIGURE 1: Major topic identification logic



Based on the inputs shown in Figure 1, the board has identified five major topics for a Future Urban Mobility Research Agenda, together with several subtopics under each of the five major topics as follows:

TABLE 1: Major topics and subtopics for a Future Urban Mobility Research Agenda

Economic productivity	Resilience and adaptation	Decarbonisation	Health, safety, and security	Accessibility, equity, and inclusion
Technology development for urban transport innovation	Planning and preparing for short term shocks and long-term disruptions to the transport system	Efficient use of transport capacity	Access to health and other facilities	Challenges facing older adults and people with disabilities, digital equality and mobility limitations
Management of ageing infrastructure	Managing and recovering from shocks and disruptions when they occur	Electrification and energy efficiency	Physical and mental health, and liveability	Non-travellers and suppressed demand
Urban mobility efficiency and space management	Adaptation of the system ahead of time to reduce impacts when they occur	Policy and investment	Personal security	Addressing socioeconomic and spatial inequalities in urban mobility
Urban logistics		Individual and business purchase and use of low carbon and zero carbon services and technologies	Traffic safety	Addressing environmental impacts and consequences
Pricing mechanisms for sustainable growth				

The current report serves as a foundational framework for establishing the context for the initiative. It sets the direction for addressing the most urgent and transformative challenges in urban mobility in Europe. Building on this foundation, the next steps of this initiative will delve deeper into specific urban mobility research topics under each of the subtopics identified above, providing actionable insights that can shape funding and policy decisions. As part of this process, the board plans to release the next set of outputs in early 2026. The documents produced by the EIT Urban Mobility Academic Research Board will ultimately support Europe's ambitions for sustainable, inclusive, and resilient urban transport systems while ensuring the adaptability needed to address emerging threats and opportunities related to the future of mobility in Europe.

The report is structured into four sections: (i) an introduction, which lays out the context for the report; (ii) an outline of the broad mobility research topic areas and their associated societal goals; (iii) a discussion of how these research topic areas interrelate, highlighting their multi-dimensional nature; and (iv) next steps and considerations for future research and policy development.

Introduction

From a geographic standpoint, the EIT Urban Mobility Academic Research Board focuses on topics and regions where Europe can exert influence and that have a direct impact on European urban mobility, prioritising broader regional and global challenges over strictly local issues.

For the purposes of this report, "urban" includes metropolitan areas and cities, i.e. both the urban core of cities and the surrounding suburban and exurban areas. Thematically, the board's primary focus is on urban mobility, while also considering the interplay with larger-scale systems that shape and intersect with transport systems and the mobility of the European community. This balanced approach allows for a strategic starting point, with room to expand and refine its focus over time. By identifying critical research gaps and exploring ways to address them, the EIT Urban Mobility Academic Research Board aims to shape the research agenda, support evidence-based decision-making, and foster a coherent framework where research, innovation, and implementation converge to tackle the pressing urban mobility challenges facing Europe and the world. Additionally, the board is emphasising a human-centric approach, prioritising urban transport issues that address people's needs and well-being, and fostering inclusive, accessible, and sustainable mobility solutions.

Several key issues motivate the preparation of this research agenda. For example, certain population groups, including individuals with limited economic resources, people with disabilities, children, older adults, and women, continue to face persistent mobility disadvantages, limiting their access to employment, education, healthcare, and social participation. Transport-related fatalities and serious injuries also remain a major concern across Europe, with vulnerable road users such as pedestrians, cyclists, and motorcyclists disproportionately affected. Technological solutions, including artificial intelligence (AI) powered solutions and investments from the high-tech sector are quickly disrupting the transport sector, creating new solutions for digitalisation in urban mobility and data management, causing at the same time potential threats (e.g. loss of more traditional jobs) but also opportunities for growth and innovation. Another growing issue is the increasing size and weight of private vehicles, particularly SUVs and light trucks. While the transition to zero-emission vehicles is a promising development, the trend toward larger vehicles offsets many environmental, safety, and efficiency gains by increasing energy consumption, reducing space efficiency, contributing to congestion, intensifying demand for parking and road infrastructure, and exacerbating safety risks for vulnerable road users. These examples illustrate the importance of shaping an urban mobility research agenda that responds to immediate societal needs, prepares for future challenges, and aligns with Europe's broader economic competitiveness, sustainability and equity goals.

While this report focuses on urban mobility, it also acknowledges the broader transport systems that influence and intersect with urban mobility dynamics. Transport systems refer to the technical, infrastructural, logistical, and service aspects that enable mobility. These systems encompass networks, vehicles, and operational frameworks that facilitate movement. Urban mobility, defined as the ability for people and goods in metropolitan areas and cities to move or be moved to desired destinations, is directly related to transport systems but also extends beyond them. Urban mobility is deeply interconnected with broader societal, economic, and environmental factors that shape mobility choices and accessibility. Further, urban mobility reflects how transport services and infrastructure contribute to larger societal goals, such as equity, economic development, public health, and environmental resilience. Throughout this report, both terms (urban mobility and transport) are used, as appropriate, to provide a comprehensive discussion of urban mobility challenges and opportunities. However, the primary focus remains on urban mobility, in alignment with the mission and objectives of EIT Urban Mobility.

Societal goals

Recognising the pivotal role of urban mobility in advancing sustainability and equity across societies, the preparation of this programmatic report began with a review of the societal goals outlined in key EU documents (e.g., *European Council: A New Strategic Agenda 2019-2024, European Commission: Building Europe's Societal Resilience, Aims of the European Union*). The societal goals identified by European organisations provide a strong foundation for shaping the board's efforts to guide research and innovation in urban mobility in Europe. This review ensures that the challenges, opportunities, and research topic areas discussed in this document are connected to Europe's broader societal ambitions. Additionally, by linking these goals to systemic pressures, this document ensures that the urban mobility research topic areas that have been identified address both immediate challenges requiring action and long-term objectives aimed at fostering a prosperous, equitable, inclusive, healthy, safe, and environmentally responsible European society.

The following section explores how these societal goals translate into specific priorities for mobility research, which are later connected to the key topic areas addressed in this report. Based on a review of EU policy frameworks, five primary societal goals have been identified to guide this effort:

Economic growth: Enhance economic productivity and resilience through better financing mechanisms for sustainable infrastructure, technological innovation, workforce development, streamlined logistics, increased competitiveness, and the promotion of innovation and sustainable growth.

Resilience: Ensure that the transport sector (and society) is able to deal with, adapt to, and recover from severe and sudden shocks, as well as long-term disruptions, whether caused by humans, natural disasters, or public health-related reasons.

Environmental and community enhancement: Achieve climate neutrality by reducing greenhouse gas emissions; mitigate air and noise pollution; foster sustainable urban development; and enhance community well-being through improved public spaces and strengthened social cohesion.

Enhanced health, safety, and security: Advance health, safety, and security by mitigating transport-related pollution, improving safety across transport systems, encouraging active travel and enhancing resilience to crises such as climate-related shocks, security threats, and pandemics.

Equity and inclusion: Ensure equitable access to opportunities; reduce inequalities and social exclusion; foster social cohesion; and promote justice, inclusion, and protection for vulnerable populations and across all societal groups.

These five societal goals provide a structured framework for understanding and advancing the interconnected priorities that underpin Europe's strategies for research and innovation related to urban mobility. Following the identification of the goal statements, the board explored the pressures on the transport system, and implementation levers, i.e. means to address these pressures and achieve these goals in Europe. Figure 2 illustrates the interconnected elements shaping the future of urban mobility.

FIGURE 2: Detailed mobility research framework

Figure 2 highlights key pressures on transport systems, such as digitalisation, ageing societies, extreme weather, obsolete and ageing infrastructure, international pressures, migration and diversification, transformation of commerce, and economic competitiveness, and their connections to the major societal goals of environmental and community enhancement; equity and inclusion; economic growth; enhanced health, safety, and security; and resilience. Beyond the infrastructural aspects of urban mobility, these pressures shape how people experience, navigate, and participate in urban life. Addressing these pressures requires solutions that support individuals' ability to engage in work, education, and community life, ensuring that transport systems remain adaptable, equitable, and responsive to human needs. Their broader implications and how they influence future research directions are further elaborated later in this section.

To respond effectively to these pressures and translate societal goals into actionable outcomes, urban mobility must be shaped by governance frameworks, planning strategies, and economic instruments. To this end, the board also identified primary implementation levers, namely governance, regulation, pricing, and urban planning. These implementation levers provide the necessary political, economic, and planning mechanisms to ensure mobility systems remain sustainable, equitable, and resilient. Figure 2 illustrates how these levers interact with societal goals and pressures on transport systems. Their specific roles in shaping urban mobility are further elaborated later in this section.

Figure 2 also highlights the cross-cutting role of technology in shaping urban mobility and its transformative impact on the future of research efforts in Europe. While technology plays a central role in many aspects of urban mobility, including data-driven shared mobility services, automation, and electrification, its impacts vary by context. While certain areas, such as governance and regulation, could function effectively even without direct technological intervention, technology may serve as a valuable supporting tool in these domains. Technological advancements offer significant opportunities to improve access, reduce emissions, and enhance safety within transport systems. Innovations in artificial intelligence, connectivity, and real-time data analytics are driving new mobility solutions, such as Mobility-as-a-Service (MaaS) platforms, smart traffic management systems, and autonomous vehicle technologies, to name a few. The rapid pace of technological change also raises critical considerations regarding digital inclusion, data privacy, and cybersecurity. Ensuring equitable access to transportation technologies and infrastructure is particularly important to prevent widening gaps for disadvantaged groups, including those with limited economic means, individuals with disabilities, and residents of underserved areas. Addressing these challenges will be crucial to realising the full benefits of technology for all users. Finally, Figure 2 also presents five broad research topic areas, which will be explored further in sections to come.

Pressures on transport systems across Europe

The following discussion delves into the specific pressures that will shape the future of mobility in Europe. These pressures pose both opportunities and challenges, some of which require mitigation strategies. Ageing societies necessitate accessible and inclusive mobility systems and services tailored to older populations, as well as strategies to address broader workforce challenges that influence mobility operations and economic productivity. Extreme weather events, exacerbated by climate change, disrupt operations and infrastructure, increasing the urgency of resilience planning. International pressures, including geopolitical instability, war conflicts, shifting trade agreements, destabilized supply chains, displaced populations, and evolving regulatory frameworks, increasingly affect European transport networks. The war in Ukraine and the resulting sanctions on Russia have significantly impacted energy prices, while broader global supply chain disruptions have demonstrated the vulnerability of transport logistics to external shocks, further complicating transport planning. Management of ageing infrastructure requires significant investments in modernisation, maintenance, and replacement efforts to ensure safety, reliability, and efficiency.

At the same time, some of these pressures simultaneously create challenges and open pathways for innovation. Digitalisation, for example, can enhance efficiency, enable data-driven solutions, and improve accessibility. It can also widen the digital divide and increase system vulnerabilities to cyber threats. Migration and diversification, particularly in regions at the periphery of major migration flows, can create hotspots for urban mobility by overloading regional corridors and straining urban roads and parking infrastructure. They also present opportunities for innovation in inclusive mobility solutions that enhance accessibility and accommodate diverse cultural and linguistic needs. Economic competitiveness can drive investments in key urban and regional centres, accelerating advancements in artificial intelligence, automation, and electrification while boosting regional economic growth. However, concentrating resources in these hubs may widen regional disparities, leaving less-developed areas behind, and may result in affordability concerns as housing options and mobility solutions become unevenly accessible. Likewise, the increasing demand for urban deliveries and freight logistics driven by the transformation of commerce in general, and the growth in e-commerce in particular, places additional burden on urban transport systems, contributing to congestion, increased emissions, and the need for innovative solutions to manage last-mile deliveries effectively. Collectively, these pressures underscore the complexity of transport systems and highlight the urgent need for adaptive, resilient, and forward-thinking solutions to ensure a sustainable and inclusive future for urban mobility in Europe.

Implementation levers

Achieving societal goals and addressing the pressures on transport systems requires a combination of implementation levers, i.e. means or mechanisms to achieve the goals and address the pressures. The implementation levers span regulation, governance, pricing, and urban planning areas, all of which play a critical role in advancing sustainable urban mobility. Regulation and governance provide the frameworks necessary to enable these innovations, whether by mandating emissions reductions, establishing safety standards, or incentivising sustainable behaviours. Pricing mechanisms, such as congestion charging and carbon pricing, are effective tools for managing travel demand and for financing infrastructure investments, but their implementation is often hindered by political and public acceptance. Urban planning and the equitable design of urban spaces are equally crucial in ensuring that these implementation levers align with societal goals and support broader accessibility and inclusivity. Together, these implementation levers provide actionable pathways to translate societal goals into tangible outcomes, address transport system pressures, and drive the transformation of urban mobility in the European context.

Figure 2 identifies five broad urban mobility research topic areas, namely, economic productivity; resilience and adaptation; decarbonisation; health, safety, and security; and accessibility, equity, and inclusion. These areas reflect the interplay between societal objectives and practical solutions, offering a structured approach to guide future research and innovation efforts. The following sections outline these topic areas and their connections to the broader framework established in this report.

Urban mobility research topic areas

Building on the societal goals, pressures on transport systems, and implementation levers outlined in this programmatic document, five broad research topic areas relate to the critical challenges and opportunities associated with urban mobility. These areas are not intended to be exhaustive or definitive, but they rather highlight important themes that shape urban mobility and align with Europe's long-term ambitions for sustainability, equity, and resilience:

- **Economic productivity** highlights the role of transport in fostering innovation, workforce mobility, and regional economic competitiveness. Research gaps include technology development for urban mobility innovation, infrastructure and transport management challenges, urban transport efficiency and space management, and pricing mechanisms for sustainable growth. Addressing these gaps will help optimise transport networks, enhance freight and passenger mobility, and ensure that economic growth aligns with sustainability and equity goals.
- **Resilience and adaptation** enhances the ability of the mobility systems to deal with, adapt to, and recover from sudden shocks and long-term disruptions. Research in this area addresses planning and preparing for shocks, managing and recovering from crises, and proactive adaptation strategies. Strengthening resilience requires cross-sector collaboration, emergency preparedness, and future-proofing infrastructure against climate-related and other systemic risks.
- **Decarbonisation** focuses on achieving climate neutrality, cleaner air, and more sustainable urban mobility. Research gaps include public acceptance of decarbonisation challenges and low-carbon/zero-carbon technologies, increasing the efficiency of transport capacity, advancing electrification and energy efficiency, identifying policy and investment strategies that accelerate decarbonisation, and promoting and adopting more sustainable travel behaviour. Effective policies must balance technological innovation, equity considerations, and behavioural incentives to ensure a just and effective transition toward low-carbon mobility.
- **Health, safety, and security** ensure that urban mobility systems protect the physical, mental, and digital well-being of all population groups. Research priorities include addressing access barriers to healthcare and essential services, assessing the impacts of pollution and urban design on public health, and improving personal safety and security in transport environments. Solutions should focus on ensuring safe, inclusive, and resilient transport systems through infrastructure improvements, policy measures, and technological advancements.
- **Accessibility, equity and inclusion** ensures that mobility systems promote accessibility, fairness, and opportunity for all. Key research areas include ageing population-related challenges, increasing income disparities, mobility barriers for non-travellers and those with suppressed demand, and a human-centric approach to transport planning that ensures public space enhancements do not lead to displacement or increased inequalities. Research should explore strategies such as age-friendly transport, digital inclusion, and equitable public space improvements.

By focusing on these key research areas, urban mobility research remains aligned with Europe's sustainability and economic development goals, while also responding to emerging challenges in transport systems.

Topic area I: economic productivity

Economic productivity plays a central role in fostering innovation and eventually providing opportunities for sustainable economic growth.

As metropolitan areas and cities are the economic engines of most European nations, the efficiency of urban mobility directly affects labour markets, business operations, and overall competitiveness. Access to reliable and affordable mobility options is essential for individuals to participate in the economy, connecting people to employment, education, and services. Better-connected and well-functioning transport networks also enhance productivity by providing significant time and cost savings for people and businesses. The 2024 report entitled *The future of European competitiveness* by former European Central Bank President Mario Draghi urgently calls upon the EU member states to improve productivity in the light of growing threats to Europe's global competitiveness (Draghi, 2024). Urban mobility plays a critical role in these efforts by enabling the efficient, timely, and cost-effective movement of people and goods, reducing congestion, increasing reliability, and ensuring that businesses can operate effectively (Filip, Momferatou, & Parraga Rodriguez, 2025; European Commission: Directorate-General for Mobility and Transport, 2017). Infrastructure constraints, digital transitions, and evolving economic models present challenges that require targeted research and innovation. To address these challenges, the following key research gaps deserve attention:

- **Technology development for urban transport innovation:** The transport sector is undergoing major transitions, particularly in urban environments where digital technologies play a growing role in reshaping mobility through innovations such as vehicle automation, electrification of fleets, traveller information, logistics platforms, and digital twins. These innovations have the potential to significantly improve the movement of humans and goods, reduce emissions, and enhance the overall accessibility within and between urban areas. However, their widespread adoption requires further research to understand how best to integrate them into existing urban transport networks. Key research priorities include traffic management systems that leverage artificial intelligence and big data analytics, vehicle automation solutions that enhance safety and efficiency, and logistics platforms that optimise freight movement in dense urban spaces. Additionally, digital twins for urban planning can help cities model and predict mobility patterns more effectively. The shift to new energy carriers, such as electrification and alternative fuels, is another essential area for research, particularly in terms of developing charging infrastructure, managing grid demand, and ensuring equitable deployment across urban areas. These are factors that are increasingly vital for enhancing economic competitiveness and sustaining economic growth in metropolitan areas and cities.
- **Management of ageing infrastructure:** The management of ageing infrastructure and growing urban populations present a critical challenge for maintaining mobility services. Many metropolitan areas and cities are experiencing increased strain on their transport systems, leading to congestion, reduced reliability, and higher maintenance costs. As urban areas densify, investments are shifting from building new infrastructure to maintaining and prioritising maintenance investments based on cost effectiveness, durability, and sustainability. Additionally, understanding how resilience planning can be integrated into urban transport management is crucial for mitigating the impacts of extreme weather events and other disruptions. Identifying scalable approaches to infrastructure renewal, including modular road construction and adaptive reuse of existing corridors, can help ensure that urban mobility remains efficient and cost-effective.
- **Urban mobility efficiency and space management:** The efficiency of urban mobility directly impacts economic productivity by influencing commuting patterns, freight movement, and accessibility to jobs and services. With rising urbanisation, cities face increasing competition for urban space requiring a fine balance among transport infrastructure, commercial activity, and public spaces. Managing limited urban space (e.g., resolving conflicts among parking, cycling infrastructure, and pedestrian pathways or zones) requires major investments and innovative strategies. Smart parking systems and adaptive traffic signal systems can help optimise space allocation and streamline operations. Research should assess how high-capacity public transport, shared mobility models, and congestion pricing can enhance productivity while maintaining equitable access.
- **Urban logistics:** The movement of goods and service professionals supports business operations but requires innovative solutions to address last-mile delivery cost, congestion, and space constraints. Priorities should include freight consolidation hubs, dynamic kerbside management, and digitally integrated logistics solutions to streamline freight movement while reducing urban congestion. As e-commerce continues to grow, further studies should explore how emerging delivery models, such as micro-distribution hubs and real-time logistics data integration, can ensure that cities accommodate increasing delivery demands without compromising mobility.
- **Pricing mechanisms for sustainable growth:** New pricing strategies are essential to balance economic productivity with sustainable growth. Congestion pricing, road-use charges, and emissions-based tolling are potential mechanisms that can reduce urban congestion while generating revenue for transport infrastructure and public transport investments. Additionally, freight access fees and taxation models must be optimised to encourage sustainable travel behaviour while maintaining economic competitiveness.
    - Further exploration is needed to determine how pricing mechanisms can be dynamically adjusted based on real-time traffic conditions, demand variations during the day, and environmental targets. New approaches to recycling tax revenues into transport infrastructure should also be explored, ensuring that cities can reinvest in projects that enhance economic productivity while promoting equity and sustainability. In addition, the potential role of private investment and public-private partnerships (PPPs) should be explored to complement these pricing strategies, providing additional funding streams for sustainable transport infrastructure and mobility innovations.

Economic productivity in urban areas is closely tied to the efficiency, adaptability, and resilience of urban mobility. Addressing key research gaps in technology, infrastructure management, transport efficiency, logistics, and pricing strategies will provide valuable insights to guide sustainable economic growth. By advancing research in these areas, cities can foster innovation, reduce congestion, and enhance mobility solutions that support businesses, residents, and long-term urban competitiveness. Furthermore, advancements in automation, artificial intelligence, and digital platforms not only influence transport planning and travel behaviour but also reshape job markets, create new business models, and open broader opportunities for innovation and economic growth. The ability of urban mobility to support growing economic demands while remaining inclusive and adaptable will be crucial in shaping the future of resiliency and productivity of European cities.

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Topic area II: resilience and adaptation

Ensuring resilience of urban transport systems is critical as metropolitan areas and cities face an increasing frequency of shocks and longer-term stressors that disrupt transport infrastructure and services.

The International Transport Forum has defined transport system resilience as the sector's capacity to deal with, adapt to, and recover from severe and sudden shocks (International Transport Forum, 2024). These shocks may be human caused (e.g., cyber-attacks), natural (e.g., flooding), or health-related (e.g., pandemics). Beyond these immediate disruptions, metropolitan areas and cities must also adapt to longer term disruptions, such as sea level rise, gradual temperature changes, and the increased incidence of terrorist events (Europol, 2023; World Bank, 2015; United Nations Environment Programme, 2023). Although considerable research has been conducted in this area, significant knowledge gaps remain in planning and preparing for short-term shocks and long-term disruptions to the transport system. Additionally, gaps also persist in managing and recovering from these shocks and disruptions when they occur, as well as equity-sensitive adaptation of the transport system ahead of time to reduce impacts when shocks or longer-term changes occur (Coleman et al., 2023). Addressing these challenges requires a multidisciplinary and multisector approach, with research needed across multiple dimensions:

- **Planning and preparing for short-term shocks and long-term disruptions to the transport system:** Risk, especially in the form of shocks and disruptions, needs to be more effectively incorporated into urban transport planning and asset management systems, and more closely aligned with resilience planning across other urban systems. This approach includes consideration and justification for system redundancy in the urban transport planning process - not just focusing on short-term efficiencies - to counteract disruptions in both urban passenger mobility and supply chains. While efficiency is often the primary goal in both passenger and freight transport, resilience planning requires intentionally incorporating a degree of redundancy into transport systems. This involves designing alternative routes, backup infrastructure, and reserve capacities, which may appear underutilised under normal conditions but are essential to ensuring continuity and recovery when disruptions occur. More research is needed on planning and preparing for the impacts of sea level rise on transport facilities in cities of coastal areas, on the impact of increasing temperatures, and on predictive impact assessment of increasingly severe and frequent extreme weather events on urban transport facilities. There is also need for research on more robust cyber-security systems in urban transport, especially related to the increasing use of artificial intelligence. Methodological improvements are needed for economic analyses to evaluate alternative resilience planning strategies, as well as for evaluating equity issues.
- **Managing and recovering from shocks and disruptions when they occur:** Additional research is needed on best practices regarding interagency coordination and decision-making during disruptive events, including mass evacuation operations and effective communication with the public. All processes must ensure that care is being taken for the most vulnerable populations. Restoring the transport system requires improved decision-making frameworks to set priorities, establish processes for IT system recovery after cyber-attacks, and coordinate operations across public and private transport operators. Digital communication platforms, including integrated mobility management systems and mobile alert technologies, can support more effective communication and coordination during crises.
- **Adaptation of the system ahead of time to reduce impacts when they occur:** Effective adaptation decisions require improved systems that incorporate vulnerability, risk, cost, and equity considerations, both for short-term shocks to the transport system, as well long-term climate-related impacts. Further research is essential to refine these approaches and ensure they support longer-term resilience strategies. This includes developing improved methods to evaluate the economic and financial case for adaptation projects, integrating redundancy and duplication where needed, and incorporating adaptation into project development processes. Additionally, highly digitalised urban transport systems require improved cyber-resilience in their IT systems, and artificial intelligence systems must be designed to include provident best practice policies for reducing risk and impact of shocks.

All three of these major topic areas will require development and evaluation of training and educational materials for policymakers, professionals, and the general public. All these groups need to be informed and prepared for short-term and long-term resilience-related issues. The frequency and impacts of shocks to the urban transport system continue to grow, which necessitates more focus on resilience and adaptation planning, management and operations. Lessons can be learned from experience with shocks that have recently occurred, as well as longer term trends that are affecting the urban transport system. It is also essential that planning for transport system resilience and adaptation be integrated with comprehensive urban planning and decision making.

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Topic area III: decarbonisation

Decarbonisation is essential for achieving climate neutrality, improving air quality, and fostering sustainable urban mobility solutions.

Decarbonisation involves reducing emissions through electrification and energy efficiency, while also reducing personal vehicle use by encouraging behavioural shifts to shared mobility, thus improving accessibility for disadvantaged individuals and communities (Jaramillo et al., 2022; UNEP, 2024). Many trends are in the "wrong" direction: vehicle use is generally increasing, personal vehicles are getting larger, and electrification needs to accelerate if decarbonisation targets are to be achieved. Beyond research and analysis, experimentation and pilot projects are needed to test how policies and technologies can effectively increase the purchase and use of low-carbon mobility (International Energy Agency, 2024). Four research gaps have been identified to guide both analyses and implementation strategies:

- **Efficient use of transport capacity:**
  Priorities in this area include:
  - increasing productivity and the utilisation of infrastructure, resources, and transport equipment to reduce energy use and emissions;
  - expanding and improving public transport systems through better integration of modes, more efficient services, and possible public-private partnerships; and incorporating new technologies, such as real-time mobility platforms, dynamic pricing for shared mobility, and on-demand multimodal services; with the goal of shifting travellers away from low-occupancy passenger vehicle use,
  - investing in active travel infrastructure, for passenger mobility as well as for freight (cargo bikes)
  - leveraging digital tools to support shared mobility options, including for combined use of transport modes for passengers and freight.

In freight transport, efficiency improvements can be achieved by using advanced information systems to link transport and logistics subsystems, and to support the shared use of vehicle and warehouse space. The reduction of the total stock of assets will also help to accelerate freight's transition to sustainable technologies. Research should focus on critically assessing successful examples of modal shift initiatives and understanding resistance to shift from private vehicle use. For freight, practical innovations associated with the vision of the "physical internet" require substantial research and development. Policies that promote compact urban development and integrate new mobility solutions (e.g., shared autonomous vehicles and shared micromobility) also play a pivotal role in shaping and evaluating solutions for a more sustainable and inclusive urban mobility landscape. Finally, urban design policies can help to optimize the use of scarce urban space needs for shared passenger and freight mobility.

- **Electrification and energy efficiency:** Achieving decarbonisation in urban mobility requires an embrace of electrification technologies and energy efficiency across transport modes, as well as a strategic approach to their implementation. Critical research areas include improving battery technologies to enhance energy density and reduce costs, advancing fuel-cell technology for light-duty and heavy-duty vehicles, and increasing the reliability and efficiency of charging infrastructure to reduce charging times, but these developments must be effectively integrated into urban mobility systems to maximise their impact. Ensuring that technological advancements translate into tangible benefits for urban mobility requires expanding electrification in public transport, enhancing infrastructure planning for dense urban areas, and developing low-emission mobility solutions that are accessible, affordable, and scalable. The trend toward larger and heavier vehicles, particularly private cars, also deserves attention, as this shift may offset some of the gains from electrification, highlighting the need to balance technological progress with broader system efficiency. In freight, the heterogeneity of companies, services, and processes adds to the complexity of the transition to sustainable energy carriers. For businesses, short-term affordability and the ability to maintain service levels is key in the transition to electrification. Research on improving energy efficiency for internal combustion engine (ICE) cars and trucks remains relevant during the transition period, alongside innovations in low-emission fuels for heavy-duty trucks and buses.
- **Policy and investment:**
  Effective decarbonisation of urban mobility requires policies and investments that facilitate the large-scale transition to low-carbon mobility. The technological innovations necessary for the energy transition are fraught with cost increases and uncertainty for all actors. Public actors can play the role of innovation agent to accelerate adoption but are limited in their means and mandate. Reallocating urban space to sustainable modes, such as public transport, active travel, and shared mobility, must be a central focus to reduce reliance on private vehicles. Similarly, freight demand management is needed to allow for more sustainable solutions of sufficient scale (e.g., consolidated and off-peak delivery) to become viable. Pricing mechanisms, including carbon taxes and congestion charges, can further incentivise shifts toward lower-emission travel choices. Public-private partnerships can play a crucial role in accelerating infrastructure investments, particularly for lower emission mobility solutions such as transshipment hubs/mobility hubs for freight and passengers, electricity charging networks, pedestrian-friendly and delivery-friendly urban design, and digital mobility platforms.

- **Individual and business purchase and use of low-carbon and zero-carbon services and technologies:** Research priorities in this area include evaluating how effective the policies and strategies are at accelerating the adoption of lower-carbon services and technologies by both individuals and businesses, including vehicle downsizing. This research investigates the factors that influence attitudes and behaviours, such as perceived barriers, incentives, and social norms related to the purchase and use of these services and technologies. Policies and messaging strategies should be designed and analysed with respect to different demographic and socio-economic groups, businesses, and elected officials. Targeted communication, investments, and policy design can be informed by better understanding the preferences of individuals and vehicle fleet managers in their adoption of battery, plug-in, and hydrogen electric vehicles, particularly regarding access to public charging for those living in apartment buildings. This research includes the delivery and movement of goods. Additionally, behaviours and attitudes of individuals play a key role in shaping their utilisation of public transport and shared mobility services. It is critical to note that behavioural incentives alone may not be sufficient for a meaningful shift in behaviour. Therefore, a combination of pull strategies (improving service quality and affordability) and push policies (pricing mechanisms, regulations, and restrictions on high-emission travel modes in urban areas) should be evaluated to find effective ways to drive the transition toward low-carbon urban mobility. Attention should also be paid to understanding and addressing public backlash against policies that are perceived as 'anti-car' (e.g., yellow vests in France, Low Traffic Neighbourhoods in England), in terms of articulating the concerns, reframing the debate, and exploring new policy options that address major concerns.

The transition to a low-carbon urban mobility system requires not only technological advancements but also systemic policy changes and shifts in travel behaviour. This includes "avoid" strategies that focus on reducing travel demand, such as promoting compact urban development, increasing the proximity of essential services (as in the '15-minute city' concept), encouraging teleworking, and expanding access to digital services as alternatives to physical travel. Additionally, "stick" measures, such as congestion pricing, emissions regulations, and restrictions on high-emission vehicles, are crucial to discourage unsustainable travel behaviours and reinforce the shift towards low-carbon modes. As metropolitan areas and cities seek to decarbonise, research must continue to explore how policies, infrastructure investments, and behavioural strategies can work together to accelerate emission reductions. Ensuring that all communities, regardless of income or location, have equitable access to the benefits of cleaner and more efficient transport systems is essential. In this sense, the success of decarbonisation efforts will depend on coordinated action across sectors, ensuring that electrification, shared mobility, and pricing mechanisms contribute to an efficient, inclusive, and sustainable transport future. Expanding knowledge sharing, pilot programmes, and public engagement will be essential in turning research insights into practical solutions that support long-term climate goals associated with urban mobility.

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Topic area IV: health, safety, and security

Health, safety, and security are fundamental to ensuring the viability and inclusivity of urban mobility. Without healthy, safe, and secure mobility options, metropolitan areas and cities cannot function effectively, and societal well-being is compromised.

Urban transport systems must not only ensure accessibility but also address risks, such as pollution, traffic crashes, and personal security threats associated with urban mobility (European Commission, 2018; ITF, 2024). These challenges, if unaddressed, also contribute to disparities in healthcare access, degrade urban liveability by exacerbating environmental health risks, and create security concerns that limit mobility choices (UN-Habitat, 2013). Addressing these risks is essential for ensuring that urban mobility systems remain adaptable, safe, and equitable (SuM4All, 2017). Main research gaps include:

- **Access to health and other facilities:** This research gap has not received much attention, as historically the focus has been on mobility – not immobility. Poor access to health facilities reduces people's levels of engagement with healthcare professionals and can lead to more no-show rates at medical appointments. Long and difficult daily commutes (e.g., those requiring multiple transfers), contribute to higher sickness rates, while poor access to green space can adversely affect mental health. Reliable transport access to essential goods (e.g., healthy food) and services is crucial for a healthy lifestyle and warrants further exploration. Research is needed to evaluate how mobility barriers contribute to disparities in healthcare access, mental health, and well-being. Studies should explore strategies such as improving first- and last-mile connectivity to medical centres through demand-responsive mobility services, better public transport integration, and active mobility solutions. Additionally, digital healthcare innovations, including telemedicine and home delivery services, should be assessed for their effectiveness in reducing travel needs while ensuring equitable access. There is also a need to examine how the lack of access to green spaces impacts mental health and how urban transport planning can help mitigate these effects.
- **Physical and mental health, and liveability:** A more holistic approach is required to assess the relationship between urban mobility, public health, and liveability. The effects of air pollution, noise exposure, and inadequate green space on long-term health outcomes remain insufficiently studied in the context of mobility planning. Research should investigate how urban design interventions, such as the '15-minute city' concept, can be optimised to promote public health while providing efficient mobility. An integrated approach is needed to evaluate the impacts of the overall provision of urban mobility and the configuration of urban spaces, including the introduction of blue and green infrastructure. One practical example is the 'Healthy Streets' initiative developed in England, which scores features of the street environment in terms of their contribution to physical and mental health outcomes (Healthy Streets, n.d.). Additionally, new frameworks should be developed to quantify the health benefits of sustainable mobility interventions, such as pedestrian-friendly infrastructure and active travel networks. Understanding the health impact of transport system stressors, such as overcrowding, long commuting times, and exposure to pollutants, can guide policy changes that prioritise well-being in mobility planning.

- **Personal security:** Personal security is a significant factor influencing mobility choices and well-being, particularly for vulnerable populations such as women, older people, and marginalised communities. Fear of crime and harassment discourages individuals from traveling at night, leading to self-imposed isolation and reduced access to opportunities. Specific concerns include the possibility of theft and physical attack while walking, waiting at bus or tram stops, or using multi-storey car parks. Studies should evaluate the effectiveness of measures such as enhanced street lighting, the presence of security personnel, and urban design improvements that increase visibility and passive surveillance. Additionally, the role of ride-hailing services and other on-demand mobility solutions in addressing security concerns, particularly for night-time travellers through door-to-door services, warrants further investigation. Finally, there is a need to explore how to balance increased security measures with privacy considerations in public transport surveillance and digital mobility monitoring systems.
- **Traffic safety:** Ensuring traffic safety in urban areas requires prioritising the protection of vulnerable road users, such as pedestrians, cyclists, and scooter riders. As urban areas witness increasing adoption of micromobility options and active travel, it is essential to adapt infrastructure and policy frameworks to support the safety of these users. The recent increase in the size and weight of private vehicles heightens risks for non-motorised travellers by making collisions more severe and reducing driver visibility. Research is needed to evaluate the effectiveness of measures such as lower speed limits, dedicated cycling and scooter lanes, traffic calming strategies, and stricter vehicle design regulations aimed at protecting vulnerable users. Additionally, autonomous vehicles and AI have the potential to introduce novel safety implications, particularly in how new technological solutions help detect, interact with, and prioritise non-motorised road users in complex urban settings. Studies should examine how these technologies can be integrated to enhance safety without introducing new risks, especially for vulnerable users. A comprehensive approach spanning infrastructure design, policy enforcement, vehicle regulations, and technology deployment, is needed to ensure that all transport modes are accommodated safely within urban environments.

Ensuring health, safety, and security in urban mobility systems requires a multifaceted research approach that integrates accessibility, environmental health, and personal security considerations. While individual risks, such as inadequate healthcare access, exposure to pollution, and security threats can discourage mobility and deepen inequalities, addressing these factors holistically can lead to healthier, safer, and more inclusive urban environments. Advancing research in this field will not only inform policymakers, transport planners, and urban designers but also drive meaningful changes in urban transport systems to foster cities that are resilient, equitable, and capable of adapting to future societal and technological shifts.

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Topic area V: accessibility, equity and inclusion

Accessibility, equity and inclusion are fundamental to social justice, requiring transport systems to be affordable and fair while addressing systemic mobility disparities.

It should be noted that in this topic, the focus is on the social dimension of accessibility, while the economic dimension is covered in Topic area I: economic productivity. Vulnerable users and disadvantaged communities, particularly low-income groups, people with disabilities, minorities, immigrants, ageing individuals, children and those living near polluting or high-traffic areas often face greater mobility barriers, higher transport costs, increased health impacts, and restricted access to essential opportunities such as employment, education, healthcare, and social participation (UN-Habitat, 2013; UNOPS, 2023). Ensuring safe, affordable, and accessible mobility for all is recognised as a global priority, as reflected in the United Nations Sustainable Development Goal (SDG) 11.2, which highlights the critical role of mobility in enabling full participation in economic, social, and cultural life (United Nations, n.d.). Beyond these economic, social, and cultural opportunities, mobility is also essential for full societal participation, allowing individuals to engage in public life, attend meetings, and take part in civic and political activities (UN-Habitat, 2013). Addressing these disparities requires a proactive research agenda focused on identifying and mitigating the structural barriers that prevent marginalised populations from fully benefiting from urban transport systems, while also recognising how local contexts shape both the construction of transport inequities and the applicability of potential solutions (Cidell, 2024). Key research areas include:

- **Mobility limitations of vulnerable users:** European societies are becoming increasingly digitalised, with essential public services, including mobility, shifting online and creating new accessibility barriers for older adults and individuals with disabilities. This digital transformation risks excluding vulnerable populations, particularly those with limited digital literacy or lack of access to technology, such as older adults, people with disabilities, immigrants and individuals with lower levels of education. At the same time, mobility challenges among older individuals and those with disabilities continue to grow due to physical limitations, safety concerns, and reduced transport options. Children face distinct mobility challenges, including restrictions on independent travel due to age and legal limitations. In auto-dependent environments, they are often heavily reliant on caregivers for transport, limiting their mobility and autonomy. Their safety is also a concern, as they are physically more vulnerable in traffic environments and often lack access to age-appropriate infrastructure, such as safe crossings, sidewalks, and cycling facilities. Research should focus on developing age-friendly and accessible mobility solutions that prioritise sustainability and are informed by a thorough understanding of the unique needs of older adults, individuals with disabilities, and children. Key factors such as availability, accessibility, affordability, and safety should be considered, as they play a crucial role in shaping travel preferences, mobility needs, and the overall ability of these groups to navigate transport systems effectively. Potential mobility solutions that require further investigation include demand-responsive transport, door-to-door mobility services, and infrastructure improvements that are specifically tailored to the preferences and needs of diverse populations.

- **Non-travellers and suppressed demand (trips that are desired but cannot be made):** Many individuals are unable to make necessary or desired trips due to financial constraints, inadequate transport services, physical and mental disabilities, and social barriers. Limited mobility reduces economic opportunities, increases healthcare costs, and restricts social participation, diminishing the quality of life for non-travellers. Research should explore how mobile applications, real-time data, and digital platforms can make public transport more accessible, user-friendly, and tailored to the needs of non-travellers. Additionally, shared mobility options, such as ride-sharing, carpooling, micromobility services, and subsidized public transport fares for economically disadvantaged individuals should be evaluated for their ability to close accessibility gaps and enhance social inclusion. Emerging technologies, including autonomous vehicles and demand-responsive mobility services, could also offer flexible, affordable solutions to meet latent travel demand, particularly for individuals with limited access to conventional transport options.

- **Addressing socioeconomic and spatial inequalities in urban mobility:** Urban development and transport infrastructure improvements must be designed to enhance accessibility without displacing vulnerable populations or increasing inequalities. Research should prioritise understanding and addressing the specific mobility challenges faced by low-income populations, who often experience the greatest barriers due to financial constraints, inadequate supply of mobility services, and limited access to essential opportunities. Solutions must consider neighbourhood-specific needs, such as pedestrian-friendly streets, improved public transport in underserved areas, and better active mobility infrastructure for first- and last-mile connections. Additionally, policies should ensure that public space enhancements, such as new mobility hubs, cycle lanes, or urban green spaces, do not lead to rising costs and the displacement of economically disadvantaged residents. Studies should examine how transport affordability impacts access to employment, education, and healthcare for economically disadvantaged groups. Digital and AI-driven innovations should also be explored to see their potential in improving accessibility and ensure that mobility options are inclusive and equitable, prioritising those who are socially and economically marginalised.

- **Addressing environmental impacts and consequences:** Transport systems have numerous environmental consequences, many of which impose costs on society. Among the most striking issues, with both environmental and social implications, are air, water and noise pollution, and carbon emissions. Many of these issues negatively affect public health and public awareness of these impacts has significantly evolved. Further research should explore how proximity to high-traffic or polluting transport infrastructure disproportionately affects the health and well-being of low-income populations. Various mitigation measures for reducing environmental impacts and other externalities must be further investigated to address their social acceptance, among disadvantaged population groups in particular.

Ensuring equitable and inclusive urban mobility in Europe is essential for driving economic opportunity, social participation, and community well-being. Addressing mobility disparities requires research-driven solutions that support ageing populations and people with reduced mobility, reduce suppressed travel demand, and remove structural barriers for disadvantaged communities. As European cities transition toward more digital and sustainable mobility solutions, it is crucial to ensure that these enhance accessibility, affordability, and safety for all. A focused research agenda filling the gaps listed in this section will help shape policies and investments that create inclusive urban mobility systems, allowing everyone to fully participate in economic and social life.

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Interrelatedness of topic areas

The five topic areas are deeply interconnected and cannot be addressed in isolation because:

1. Advancements in one area can complement or hinder progress in others;

2. Coordinated strategies can be more cost-effective and amplify systemic robustness; and

3. Shared challenges require cross-cutting solutions.

A clear illustration of these interconnections can be seen when considering the topic of climate resilience in urban infrastructure, which is relevant to both *Topic area II: resilience and adaptation* and *Topic area IV: health, safety, and security*. Climate-resilient infrastructure, such as flood defences, heat-resistant urban spaces, and improved railway drainage systems, as well as nature-based solutions, such as urban forests and permeable surfaces, not only mitigate climate-related shocks but also enhance public health, safety, urban liveability (European Commission, 2021; European Environment Agency, 2014; IPCC, 2022; Kabisch, et al., 2017). Similarly, public transport and mobility solutions intersects with *Topic area I: economic productivity*, *Topic area III: decarbonisation*, and *Topic area V: accessibility, equity and inclusion*. Investments in high-capacity public transport, enhanced multimodal integration through digital ticketing systems, and low-emission vehicle fleets can reduce emissions, alleviate congestion, promote non-car alternatives, and improve access to employment, education, and healthcare, thereby advancing social equity, environmental sustainability, and economic opportunities (UITP, 2022; World Bank, 2023). Recognising these interconnections is essential for creating mutually beneficial solutions. Holistic approaches that account for these relationships can help avoid unintended consequences, amplify systemic benefits, and address shared societal challenges more effectively.

Technological innovations further underpin the interrelatedness of these topic areas, acting as critical enablers across topics. Digital tools, automation, and data-driven solutions simultaneously support decarbonisation efforts, enhance economic productivity, improve safety and resilience, and promote equitable access to mobility services. For instance, technologies such as autonomous vehicles, AI-powered traffic management, smart ticketing platforms, and low-emission vehicle technologies contribute to reducing emissions, optimising transport efficiency, and expanding accessibility, directly linking *Topic area I: economic productivity, Topic area III: decarbonisation*, and *Topic area V: accessibility, equity and inclusion*. Moreover, the digitalisation of mobility services and infrastructure, ranging from predictive analytics for climate adaptation to demand-responsive transport solutions and advanced traffic safety systems, plays an essential role in strengthening *Topic area II: resilience and adaptation* as well as *Topic area IV: health, safety and security*, ensuring that advancements in each topic area reinforce progress in the others. This creates more integrated, sustainable, and inclusive urban mobility systems.

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What lies ahead

This report provides a high-level framework for urban mobility research that responds to Europe's societal goals. It provides the foundation for a structured and evolving assessment of the research space on urban mobility in the years ahead, linking it to societal goals, systemic pressures, and implementation levers.

It is not an exhaustive research agenda but rather establishes the initial direction and objectives of the EIT Urban Mobility Academic Research Board during its first year of operation. Detailed research priorities will likely emerge through ongoing collaboration, expert consultations, and data-driven analysis in subsequent phases of related work. Next steps in this work will be to refine and expand the research scope and provide a more detailed assessment of key challenges and opportunities in the urban mobility field for the European community. The board also plans to further broaden its membership, incorporating a more diverse set of experts to enhance the depth and breadth of the initiative.

As this effort progresses, the board will conduct deeper investigations into specific urban mobility challenges, helping to leverage research insights to inform funding priorities and policy directions. The next phase of this work will focus on identifying the most urgent research priorities, evaluating potential solutions, and supporting pilot projects that can drive meaningful improvements in urban mobility across Europe. By adopting a phased and iterative approach, the board aims to ensure that its recommendations remain responsive to emerging challenges and opportunities.

By positioning this document as a foundational step, EIT Urban Mobility and its Academic Research Board seek to foster an evidence-based, context-sensitive approach to urban mobility research. Future iterations will build upon this framework to develop actionable strategies that support sustainable, economically viable, inclusive, and resilient urban transport systems and mobility services across Europe.

Academic Research Board Members

Cecilia Briceño-Garmendia

Dr. Cecilia Briceño-Garmendia is the Global Lead for Transport Economics, Policy and Innovation at the World Bank. In this role, Dr. Briceño spearheads key agendas around the decarbonisation of transport systems, the digitalisation and adoption of transformative technologies in transport, and the modernisation of transport regulations and institutions.

As the lead for the World Bank's transport decarbonisation agenda, Dr. Briceño coordinates the development of the World Bank's flagship report. She also guides operational teams in rethinking how mobility and logistics are integrated into country- and region-specific strategies, ensuring that synergies between climate action and development are fully leveraged. .

More broadly, Dr. Briceño advises World Bank teams and governments on strategic matters related to the prioritisation and planning of infrastructure investments. Her expertise includes improving spending efficiency, enhancing sustainable freight and trucking sector performance, advancing multimodal corridor development, and strengthening the climate resilience of transport networks.

Irina Jackiva

Dr. Irina Yatskiv (Jackiva) is Professor of Mathematical Methods and Modelling (Engineering Faculty), Chair of the Research and PhD Council, and Director of the MSc programme in Transport and Logistics at the Transport and Telecommunication Institute (TSI) in Riga, Latvia. Dr. Yatskiv is also a founder and leading researcher in the Laboratory of Applied Systems. She has extensive experience in coordinating projects of various kinds in the context of the Horizon 2020, FP, INTERREG and BSR programmes. She has also served as an ECTRI board member from 2017-2023; ECTRI Vice-President from 2019-2021, board member of the Latvian Association of Women in Transport, and Chair of the 15-minute City Expert Panel (Driving Urban Transitions Partnership) from February 2023 to July 2024, to name only a few examples. She has authored more than 150 publications, including nine books and textbooks as well as chapters in books such as *From Transit Systems to Models: Purpose of Modelling; Modelling Public Transport Passenger Flows in the Era of Intelligent Transport Systems* and *3D City Models and Urban Information: Current Issues and Perspectives*. She has been a guest editor of various volumes of *Lecture Notes in Networks and Systems* and *Lecture Notes in Intelligent Transportation and Infrastructure*, published by Springer; and Procedia Engineering, published by Elsevier.

Peter Jones

Dr. Peter Jones is Professor of Transport and Sustainable Development in the Centre for Transport Studies at University College London. Dr. Jones is a member of the UK Independent Transport Commission, the Department of Transport's Science Advisory Council, and the City of London Transport Strategy Board. In recent years he has served as Scientific Coordinator for two EU-funded three-year projects: 'CREATE' on changing trends in urban mobility, transport policy and future city challenges; and 'MORE', on optimum design and operation of road space on main urban roads. He has also played a lead role in 'SUMP-PLUS', a project focused on expanding transport planning processes to incorporate carbon transition pathways and embed cross-sector links. He advises the European Commission and a number of major cities and national governments around the world, and in January 2019 he received an Officer of the Order of the British Empire (OBE) for services related to national transport policy.

Tatiana Kováčiková

Dr. Tatiana Kováčiková has been Head of the Department of International Research Projects – ERAdiate+ at the University of Zilina, Slovakia, since July 2019. Dr. Kováčiková graduated with a degree in telecommunications from the University of Transport and Telecommunications in Slovakia and is now Professor in Applied Informatics. From October 2017 to June 2019, she was the ERA Chair Holder for Intelligent Transport Systems (ITS) at the University of Zilina. From 2013 to 2015, she held the position of Head of Science Operations at the COST Association in Brussels.

Dr. Kováčiková took part in ICT and ITS standardisation at European Telecommunications Standards Institute for more than 15 years and represented Slovakia in CEN/TC 278 on Intelligent Transport Systems. She is a member of the European Conference of Transport Research Institutes executive board. Her research interests include communication protocols; services and applications for connected, cooperative and automated mobility (CCAM); and sustainable and inclusive mobility. She has been involved in a large number of European research projects under EU framework programmes (FP7, H2020, Horizon Europe), Interreg Europe and Interreg DTP.

Barbara Lenz

Dr. Barbara Lenz is, among other things, a geographer, transport researcher and mobility expert. Since April 2021, Dr. Lenz has enjoyed a well-deserved retirement. Nevertheless, she still takes on consulting tasks for the German Aerospace Centre (DLR), where she served as Director of the Institute of Transport Research from 2007 to 2021, and she remains active in research and teaching at Humboldt University in Berlin. Dr. Lenz's doctorate was in economic geography and regional development and she wrote a post-doctoral thesis on globalisation and value chains. From 2003 to 2021, she worked as Professor of Transport Geography at Humboldt University in Berlin.

Dr. Lenz has also held and still holds several committee positions. Since 2019, she has had a seat on the Scientific Advisory Board of the Vienna Climate Council, the German Federal Government's Expert Commission on Energy Transition Monitoring, and the Climate Advisory Board of the Free and Hanseatic City of Hamburg. In addition, she is one of the members of the Scientific Advisory Board of the Federal Highway Research Institute (BASt), the Scientific Advisory Board of Verband Deutscher Verkehrsunternehmen (Association of German Transport Companies) and the Climate Protection Council of the State of Berlin.

Neil Pedersen

Neil Pedersen served as Executive Director of the National Academies' Transportation Research Board (TRB) in Washington D.C. until 2022. In that role he provided executive direction and leadership to TRB's technical activities, including the annual meeting of over 13,000 transportation professionals; more than 200 technical committees, conferences and publications; peer-reviewed policy consensus studies; and multimodal cooperative research programmes. Pedersen had been an active volunteer on the TRB for over 30 years and served in numerous TRB volunteer leadership roles for more than 15 years prior to joining the TRB staff in 2012 as Deputy Director of the Strategic Highway Research Program 2. Prior to joining the TRB, he spent 29 years at the Maryland Department of Transportation, where he served in his final eight years as State Highway Administrator and the Governor's Highway Safety Representative.

Dan Sperling

Dr. Dan Sperling is a Distinguished Blue Planet Prize-winning Professor of Civil Engineering and Environmental Science and Policy. He is also a founding Director of the Institute of Transportation Studies at the University of California, Davis, which is recognised as the leading university centre for sustainable transportation. Dr. Sperling held the transportation seat on the California Air Resources Board for 16 years and served as Chair of the Transportation Research Board (TRB) of the US National Academies from 2015-2016.

Dr. Sperling's many honours include induction into the US National Academy of Engineering in 2022; the 2024 Lifetime Research and Education Award from the Council of University Transportation Centres; the 2018 Roy Crum Award from the TRB, which is its highest research award; and the 2013 Blue Planet Prize from the Asahi Glass Foundation for being 'a pioneer in opening up new fields of study to create more efficient, low-carbon and environmentally beneficial transportation systems'. He has served twice as lead author for the IPCC (sharing 0.3% of the 2007 Nobel Peace Prize), and has authored or co-authored over 250 technical papers and 13 books and made over 1,000 public presentations.

Lóri Tavasszy

Dr. Lóránt (Lóri) Tavasszy is a Full Professor in Freight Transport and Logistics at the Delft University of Technology (TU Delft). Dr. Tavasszy studied Civil Engineering at Delft and completed his PhD research in 1996 on multimodal freight transport models for Europe. Between 1996 and 2016, he worked with the Dutch national research institute, TNO, as a researcher, manager and principal scientist and held part-time chairs at the University of Nijmegen and TU Delft. His research and teaching focus has been on freight transport system models and innovations. Dr. Tavasszy currently chairs the Scientific Committee of the World Conference for Transport Research Society and is active in national and international professional committees including ALICE, the European technology platform for logistics.

George Yannis

Dr. George Yannis is a Professor of Traffic and Safety Engineering with a particular focus on Data Science. Additionally, he is also the Director of the Department of Transportation Planning and Engineering in the School of Civil Engineering at the National Technical University of Athens. For more than 30 years, Dr. Yannis has contributed extensively to a vast number of research and engineering projects and studies. He has also taken part in several scientific committees of the European Commission and other international organisations. His publications include many papers in scientific journals that have been widely cited worldwide.

Academic Research Board Management

Giovanni Circella

Dr. Giovanni Circella is a BOF Tenure-track Professor of Mobility in the Department of Geography at Ghent University and Head of the Master School in Urban Mobility at the European Institute of Technology. Dr. Circella is also the Honda Distinguished Scholar for New Mobility Studies and Director of the 3 Revolutions Future Mobility Program at the University of California, Davis. His teaching and research interests include transportation planning, travel behaviour analysis, emerging mobility services, sustainable transportation, travel demand modelling, travel survey methods and policy analysis.

Daniela Rodrigues

Daniela Rodrigues holds the position of Academy Programme Manager at EIT Urban Mobility, with more than seven years of experience in programme development and management. Her work at EIT Urban Mobility is focused on overseeing the strategic and operational implementation of the Graduate Degree Programmes. She also has a background in international trade and policy, gained from positions at the World Customs Organisation and the European Parliament. Rodrigues holds an MSc in International Politics from City St. George's, University of London, and a Licentiate degree in International Relations from the University of Lisbon.

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