

PATHWAYS FOR ACCELERATING TRANSITIONS TOWARDS SUSTAINABLE MOBILITY IN EUROPEAN CITIES

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Meeting the European Green Deal's (EGD) target of climate-neutrality by 2050 will require a 90% reduction in emissions from the transport sector, as formulated in the European Commission's Communication on the EGD in December 2019 (EC, 2019a). "Accelerating the shift to sustainable and smart mobility" is identified as one of eight thematic priorities in the Communication and places an emphasis on:

- shifts from road transport to rail and inland waterways;
- automated and connected multimodal mobility;
- phasing out fossil-fuel subsidies and extension of the EU Emissions Trading Scheme to aviation and maritime transport;
- increased production and deployment of alternative transport fuels, specifically zero- and low-emission vehicles;
- transport becoming "drastically" less polluting "especially in cities", including more stringent air pollutant emissions standards and CO₂ emission standards for vehicles.

It is notable that the *urban* context is not given much emphasis in the Commission's priorities for future mobility: beyond emphasising the need to reduce air pollution in cities, the Communication does not mention walking, cycling, public transport or new mobility services that are central to daily mobility in urban areas. The formulation of new sectoral policy instruments linked to the EGD is still in its infancy, but the omission is nevertheless surprising, considering that tackling urban emissions is critical for meeting the 90% reduction target for transport. Road transport accounts for approximately 72% of total greenhouse gas (GHG) emissions in the EU (EC, 2019b), with urban areas contributing 40% of total road transport CO₂ emissions (EC, 2020). Overall, urban areas are estimated to account for 23% of CO₂ emissions from transport in the EU (EEA, 2019).

The Directorate-General for Mobility and Transport (DG MOVE) is currently developing an "EU Strategy for Sustainable and Smart Mobility" that will set out how the 2050 target can be met. The roadmap published for consultation on this strategy *does* mention the urban

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dimension. It includes an objective of “revamping the European agenda for sustainable urban and regional mobility, including cycling, intermodal transport and transport-on-demand” (DG MOVE 2020: 3) and states that the strategy will “set a pathway for the sector to master the twin green and digital transitions” (DG MOVE, 2020: 1). This chapter will discuss how the EU can support local authorities to develop “transition pathways” towards sustainable urban mobility and the 2050 target.

We start by briefly discussing the evolution of EU policy instruments with an influence on urban mobility in Europe. While different instruments have had their successes, in the following section we argue that, to date, urban mobility transitions have been uneven and too slow to achieve the 2050 target for transport decarbonisation. We propose the concept of “transition pathways” developed within the Horizon 2020 CIVITAS SUMP-PLUS project as an approach to supporting European municipalities in accelerating transitions to sustainable urban mobility.¹ To conclude, we offer policy recommendations relevant to the European Commission and the EU Strategy on Sustainable and Smart Mobility.

I. EU instruments influencing urban mobility: successes and challenges

In order to provide policy recommendations for how the EU could support urban mobility transitions, we begin by outlining the past evolution of EU policy instruments to give an understanding of possible ways forward.

Historically, EU transport policies have not focussed on urban issues. This is due to two factors. First, the EU does not have a “fully institutionalised” urban mobility policy. As urban mobility is not mentioned by the EU treaties, the EU does not have specific legal power in this field (Halpern, 2014; Rommerts, 2012). Second, as highlighted by Cavoli (2015) and Timms (2011), the Commission's action in the field of urban mobility – and urban policies in general – is restricted by subsidiarity issues. The “principle of subsidiarity”, as stipulated in the Treaty on European Union, aims to ensure that “powers are exercised as close to the citizen as possible”.² This has often led to the explicit or implicit expectation that EU institutions should refrain from initiating policies and regulations related to urban issues (Atkinson, 2010; Jordan, 2000). Despite these constraints, since the 1990s the EU has been giving increasing importance to urban issues, including mobility (Atkinson, 2010).

In the 1990s, urban mobility interventions were indirectly funded under the EU's Framework Programmes for Research and Technological Development and the URBAN regeneration programmes. In 2000, the establishment of a dedicated urban mobility unit within the Directorate-General for Energy and Transport marked a turning point. This indicated the Commission's willingness to formally recognise the importance of urban mobility issues (Rommerts, 2012). For the first time, the 2001 *White Paper on Transport* directly discussed the need to address mobility issues generated at the urban level (EC, 2001). The *White Paper 2011 Roadmap To a Single European Transport Area* marked another milestone for EU policy by officially recognising urban mobility as one of the key pillars of EU transport policy. Ambitious EU targets for urban mobility were announced, such as halving the use of “conventionally fuelled vehicles” in urban areas and

1. www.sump-plus.eu

2. Article 5(3) of the Treaty on European Union.

achieving “CO₂-free city logistics” by 2030 (EC, 2011: 9). However, in both the 2001 and 2011 white papers, the focus on urban mobility remains limited and they explicitly or implicitly stress that EU action in this area is limited by the principle of subsidiarity.

The issue of subsidiarity explains why the majority of the Commission’s action in the field of urban mobility has been through “soft” policy instruments, such as funding programmes, Communications and guidance documents targeted at urban areas. Over 60 EU transport, environment and climate laws have also been adopted since the 1990s, which have had an *indirect* impact on urban mobility (Cavoli, 2015). For example, the 2008 Ambient Air Quality Directive has contributed to accelerating the implementation of sustainable mobility policies at local level (Cavoli, 2020). For the most part, subsidiarity concerns have prevented the Commission from establishing binding policies targeting urban mobility directly.

Unequivocally, the EU’s strongest influence on urban mobility issues has stemmed from its research and development programmes. In 2001, the EU Commission established a dedicated funding programme called CIVITAS – Clean and Better Transport in Cities that has been co-funding innovative urban mobility policies and planning across EU cities. The launch of CIVITAS marked the beginning of direct Commission action dedicated to urban mobility and a shift from research-oriented projects to “demonstration” projects aiming to implement urban transport policies. Furthermore, since 2007 the EU’s Framework Programmes and the Horizon 2020 programme have had dedicated calls focusing on urban mobility innovation and policies. EU funding allocated to urban transport has increased substantially, from €11.2 billion from the European and Structural Investment Funds between 2007 and 2013 to €16.3 billion between 2014 and 2020 (European Court of Auditors, 2020).

There is evidence that funding instruments have contributed positively to urban mobility transitions. A large-scale ex post evaluation of EU financial instruments for sustainable urban mobility projects between 2002 and 2013 found that EU support was perceived as creating significant added value, with small and medium-sized cities reporting particularly high effectiveness of EU support (Tomassini et al., 2016).³ Research by Cavoli (2015) has shown that the CIVITAS funding programme has created “political space” for European cities to explore new sustainable mobility policies that might not have been pursued otherwise and has acted as an “accelerator” of sustainable mobility policies at the local level. Smeds (2018) found that urban mobility experiments undertaken as part of CIVITAS projects in Ljubljana and Bristol had kickstarted longer-term trajectories in which particular policy experiments were scaled up city-wide.

Communications such as the Commission’s 2007 Green Paper on urban mobility (EC, 2007), 2009 Action Plan on urban mobility (EC, 2009) and 2013 “Urban mobility package” have launched new types of “guidance” on mobility in European cities. The “Urban mobility package” stressed the need to “reinforce the support to European cities for tackling urban mobility challenges” (EC, 2013: 2) by introducing standards, and paved the way towards the introduction of the Sustainable Urban Mobility Plan (SUMP) guidelines (EC, 2014; Rupprecht Consult, 2019). These recom-

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3. This included projects funded by the Framework Programmes, Intelligent Energy for Europe, ERDF/INTERREG, Cohesion Fund, LIFE, TEN-T and loans funded by the European Investment Bank. 525 projects in 140 cities were evaluated using survey and case study research, primarily reporting on the perspectives of city beneficiaries.

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mend a planning process for local authorities to develop transport policy strategies in line with the principles of sustainable urban mobility, with a shift in focus from traffic engineering to “planning for people”. Recent research has indicated that there were a total of 1000 “active” SUMP across European municipalities in 2017 (ICLEI, 2018). However, the extent to which EU “guidance” documents have a tangible impact on urban mobility policies and trends is under-studied and difficult to assess in a rigorous way. The primary impact of EU Commission Communications tends to be on the internal politics of the European institutions, sending “strong political messages” that lead to changes in policy (Cavoli, 2015).

In evaluating the Commission’s funding programmes relating to urban mobility for the 2014–2020 period, the European Court of Auditors (2020: 4) recently concluded that “six years after the Commission called for a step-change [in progress towards more sustainable urban mobility], there is no clear indication that cities are fundamentally changing their [policy] approaches”. We note that six years is a short time after which to assess the impact of an EU policy package at the local level, and that evaluating such impacts is notoriously complex (Russo & Rossi, 2009). We argue that this gradually expanding arsenal of policy instruments developed by the Commission is impressive considering the subsidiarity constraints within which it has operated. Towards the end of the chapter we will return to opportunities for refining existing EU instruments. Rather than stating that little progress has been made, or attributing this to EU policies, we observe that transitions towards sustainable urban mobility have been highly uneven across Europe, and we provide a brief stocktake in the next section.

II. The unevenness of urban mobility transitions across Europe

We define transitions as a process of incremental reconfiguration of urban mobility systems in line with the sustainable mobility paradigm (Geels, 2018; Banister, 2008).⁴ As the focus here is on the EGD’s 2050 climate-neutrality target, we examine transitions by looking at two proxy indicators: CO₂ emissions and levels of private car use.⁵

The transport sector has not seen the same gradual decline in GHG emissions noted in the EU’s energy, agriculture, industrial and service sectors: emissions only started to decrease in 2007 (EC, 2019d) and in 2017 were 28% higher than in 1990 (EEA, 2018). Road transport accounted for more than 82% of these GHG emissions in 2017 (EEA, 2018) and produces most of the emissions generated in urban areas. In the absence of a large-scale dataset for GHG emissions attributable to urban areas across the EU, we cannot draw definite conclusions regarding the decarbonisation trend for urban mobility. However, when considered alongside other evidence, the available data suggest that the emissions trend is not on track to achieve the 2050 net-zero target.

Private car use has decreased since the 2000s in large western European capital cities such as Vienna, Copenhagen, Paris, Berlin, London (Wittwer & Gerike, 2018), Oslo, Zurich, Stockholm, Geneva, Milan (Teoh et al., 2020) and in mid-sized cities such as Bristol, Cardiff, Bordeaux and Toulouse (Cavoli, 2015). However, in many cities the opposite

4. The reconfiguration perspective (Geels, 2018) reflects recent shifts away from the earlier conceptualisations of socio-technical transitions as more radical *regime shifts*, from one dominant socio-technological regime to another, e.g. from horse-drawn carriages to the automobile (Geels, 2012).

5. This does not mean that other indicators such as road safety or air pollution are not important, indeed in relation to decarbonisation and reduced car use these can be defined as co-benefits.

has occurred. Reviewing trends between 2007 and 2017 in 13 large European cities, the European Court of Auditors (2020) found that there had been a significant shift away from private car use only in two cities, while car use had actually increased in five cities (Madrid, Barcelona, Budapest, Copenhagen and Riga). Statistics at the national level show that car use grew across the EU-28 from 1995 to 2009, with only some countries exhibiting a “peak car” plateau from 2009, and continued growth in large parts of eastern Europe (Focas & Christidis, 2017). Analysis of survey responses from 336 European municipalities as part of the SUMP-PLUS project indicated that the self-reported degree of experience with sustainable urban mobility planning is highly dependent on city population size.⁶ 46% of municipalities with fewer than 50,000 inhabitants reported having no experience, and 73% reported not having a Sustainable Urban Mobility Plan in place, which is problematic considering that 8,000 European towns with 5,000 to 50,000 inhabitants account for approximately 21.6% of the EU population (Servillo et al., 2014: 8).

If we understand transitions as *incremental*, we could point to specific European cities and say that transitions have occurred. Even so, in many cases, the pace of urban mobility transitions has been too slow to put these cities on track to achieve the 2050 target. Bristol is an illustrative example: a typical mid-sized UK city in terms of governance, local autonomy and public transport supply, but which has a long history of sustainability policies and was awarded the competitive title of European Green Capital for 2016. While private car commuting decreased by 6.3% between 1991–2011 to 52.3%, CO₂ emissions from transport reduced by approximately 8% between 2005–2016.⁷ Extrapolating a continuation of this historical trend in year-on-year emission reductions into the future, Bristol would only achieve a reduction of approximately 27% by 2050 from a 2005 baseline.⁸

We can thus conclude that in some contexts, transitions towards the 2050 net-zero target need to be *accelerated*, while in other contexts transitions need to be *kickstarted*, including a reversal of current trends. To achieve the EGD target, we need new conceptual approaches and practical methodologies that European municipalities can draw on to plan for 2050 and build local capacity to achieve their ambitions.

III. Developing urban mobility transition pathways towards the 2050 target

The SUMP-PLUS project has developed a novel conceptual framework focused on “transition pathways” towards sustainable urban mobility, and guidance supporting cities in formulating pathways to 2050 in the practical form of strategic planning documents.⁹

“Pathway” is today a commonly used term with reference to decarbonisation. At global and EU scales, “emissions pathways” refer to various policy packages through which different reductions in net emissions can be achieved by a target year (IPCC, 2018; EC, 2018). These pathways may be developed through *forecasting* models, where analysis of potential emission reductions is undertaken against a baseline of current trends extrapolated into the future, such as growth in travel demand

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6. Analysis of raw survey data by Emilia Smeds and Peter Jones, originally collected as part of the CIVITAS SUMP-UP project. See SUMP-PLUS Deliverable D1.1 for further information. “Sustainable urban mobility planning” refers to planning that diverges from traditional car-oriented planning.
7. While domestic emissions declined by approximately 54% and total per capita emissions fell by 74% during the same period.
8. Authors’ back-of-the envelope calculation based on BEIS (2018) local authority CO₂ emissions estimates 2005–2016. Based on a compound annual growth rate of -0.7% between 2005 and 2016.
9. By Emilia Smeds and led by Professor Peter Jones, UCL Centre for Transport Studies. See SUMP-PLUS Deliverable D1.2 for a more comprehensive discussion.

(e.g. Bristow et al., 2008). Modelling tends to focus on the balance between the electrification of mobility and reductions in private car use (Capros et al., 2014). However, simulations by the European Climate Foundation found that action across the classic sustainable transport policy typology of *Avoid* (reducing the need to travel),¹⁰ *Shift* (away from private car use to more sustainable modes) and *Improve* (improved vehicle efficiency) will be necessary (CLIMACT, 2018).¹¹

An alternative approach is *backcasting*, a normative methodology that focuses on creating a vision of the desired future and tracing a pathway backwards from this future to the present, identifying the actions necessary to achieve the vision. Backcasting has been applied to analyse how detailed policy packages could achieve transport emissions reductions in the Netherlands and Sweden (Geurs & van Wee, 2000; Åkerman & Höjer, 2006) and at EU level (Hörtl et al., 2018). All the studies cited so far are very important in providing evidence on the extent and urgency of decarbonisation needed: *what mix of action needs to be taken and by when*. However, many of these efforts at developing decarbonisation pathways do not include the *institutional* dimension of policy change, or discuss the *who* in depth, including the roles, responsibilities and capacities of different societal actors (Wangel, 2011). Even in the case of backcasting studies that *have* featured institutional perspectives (Hickman et al., 2010; Tuominen et al., 2014) we argue that there is still likely to be an “implementation gap” between the policy packages identified as optimal and the action taken by participating policymakers (Banister & Hickman, 2013) because:

- To our knowledge, few studies discuss how persistent political, financial and institutional barriers to policy implementation will be overcome (i.e. how the framework conditions for policy must change). Decades of research points to the fact that uncondusive institutional frameworks, lack of local autonomy and multi-level politics, lack of organisational capacity, lack of funding, and poor public acceptability are the primary barriers to the implementation of sustainable mobility policies (Banister, 2008; ECMT, 2002; ICLEI, 2018).
- There is an asymmetry between these sophisticated, resource-intensive backcasting exercises and the policy context of many – particularly smaller – European municipalities, as discussed above. There is a need for simplified guidance supporting cities to develop transition pathways, which is what we outline below.
- We can define a pathway in a general sense as “the link between two end points representing a current state, on the one hand, and a future end state, on the other” (Givoni, 2013: 210) and the shift between states as a transition. The concept of transition pathways as developed in the SUMP-PLUS project, however, suggests that a *pathway should not be understood as a hypothetical scenario consisting only of emissions and policy packages, but as the full set of policies, resources, institutional and political changes that will allow a city to reach the 2050 target*. The SUMP-PLUS concept advocates:
 - A process that European municipalities can use to *develop transition pathways that encompass a long-term vision and strategic timeline for urban mobility in line with the 2050 net-zero target*.

10. See TUMI (2019).

11. The CTI 2050 Roadmap Tool explored the feasibility of the EU reaching net-zero emissions by 2050, with the techno-economic simulation model finding that all pathways required: transport demand to be stabilised to 2018 levels; a mode shift away from private car use by 10%; and improvements in vehicle efficiency as the third crucial element.

- A “*vision & validate*” *backcasting approach* (CREATE, 2018), in order to decisively disassociate pathways from the “predict & provide” approach to transport policy that has driven expansion of automobile infrastructure based on forecasted ever-increasing growth in travel demand.
- *Participatory backcasting from a broader vision of the desired future city*, which goes beyond GHG emission reduction targets and urban mobility alone, for example drawing inspiration from existing case studies of 2050 city visioning processes (Neuvonen & Arche, 2017) and “urban foresight” (Dixon et al., 2018; Fernández Güell & Lopez, 2016). Research on mobility transitions in Copenhagen, Vienna, Paris, London and Berlin from the 1960s onwards, where private car use has been successfully reduced, has shown that urban decision-makers were driven by much wider concerns around quality of life and urban regeneration rather than environmental impact alone (CREATE, 2018).
- *Quantitative backcasting* to identify the mix of core mobility policies – and key milestones for these – that can achieve emissions reductions in line with the 2050 net-zero target, while also meeting other objectives (e.g. Vision Zero for road safety, air quality, accessibility and affordability). Tools like the EU Urban Transport Roadmaps scenario-builder¹² and SCATTER¹³ can provide support for this.
- *Qualitative backcasting* to build a strategic timeline that sets out how the institutional, financial and political *framework conditions* for policy-making will need to change in order to achieve the vision (i.e. affecting what lies *outside the control* of policymakers) (GO-Science, 2017). Cities *already* face implementation challenges: timely implementation of a policy mix that can achieve the 2050 target is likely to include *more radical* policies that have not been possible to implement within existing conditions. Transitions will require increased organisational capacities, new sources of funding and financing, changes to national institutional frameworks and greater local autonomy in many cases. As well as improving public acceptance of sustainable mobility policies, local politics and mobility cultures will need to be challenged. To overhaul a city’s parking system by 2025, for example, a new financing mechanism may need to be tested that can borrow against future revenues, or negotiation may need to be conducted with higher level administrations on new parking standards. “Tracing backwards” from each pathway milestone, such changes must be initiated well in advance.
- *Recognition of the context-specificity of pathways*. Missing from the conversation on decarbonising urban mobility at the EU level is the fact that cities are likely to reach the 2050 target in very different ways. Although all cities will need to consider policies across *Avoid*, *Shift* and *Improve* approaches in order to achieve sufficient emission reductions, the mix will vary on the basis of local preferences and each city’s unique path dependencies. Pathways in a polycentric German region with existing car-dependence and a strong automotive industry might focus on *Improve*, while new approaches to *Avoid* or *Shift* may be used in a central or eastern European city with a high existing level of public transport use but increasing suburbanisation and car ownership. Not all cities can or necessarily need to be compact (Neumann, 2005). Sprawled settlements cannot easily transform themselves into a “15-minute city” (like Paris under Mayor Anne Hidalgo) or a city with seamlessly accessible pub-

12. See <http://urban-transport-road-maps.eu/>

13. See <https://scattercities.com/>

14. For another approach, see Schippl et al., 2016.

lic transport by 2030 or 2050. Since these will be the concrete ways in which Europe's urban mobility transitions will unfold, we need a stronger focus on empowering cities to develop their unique pathways to complement emissions pathways modelling at EU or national levels.¹⁴

IV. Policy recommendations: supporting urban mobility transitions

With realism and our assessment of existing EU policy instruments (at the beginning of this chapter) in mind, we offer policy recommendations oriented towards the European Commission. How could the Commission support “transition pathways” in European cities, in order to achieve the EGD's 2050 target?

1. Getting the policy emphasis right

As soon as the EGD was announced by the Commission, numerous actors representing European local authorities highlighted the central role of cities in delivering the EGD (Eurocities, 2020; CoR, 2020). The EGD Communication (EC, 2019a) is an EU growth strategy and as such the focus on technology, innovation and environmental efficiency, and the lack of a prominent territorial focus, is unsurprising. Sectoral policy strategies will need to articulate the implications of the EGD for urban areas (Eurocities, 2020; CoR, 2020). The roadmap for the forthcoming EU Sustainable and Smart Mobility Strategy directly references urban mobility, but in a rather minor way.

In this chapter, in agreement with the position of the International Association of Public Transport (UITP, 2020), we argue that this strategy should make daily urban mobility and accessibility a cornerstone and explicitly recognise the need for action across *Avoid*, *Shift* and *Improve* and focus on strengthening support for public transport and active mobility, in addition to low-emission vehicles. The strategy roadmap emphasises digitalisation, which can be harnessed to improve sustainable modes and reduce the need to travel (as the COVID-19 pandemic has proven). The EGD comprises the Commission's strategy for achieving the UN's Sustainable Development Goals (SDGs) (EC, 2019a). Target 2 under SDG 11 emphasises access to public transport, in particular from an intersectional equity perspective,¹⁵ but this is not addressed in the EGD. One of the deal's cornerstones is the concept of a “Just Transition”, meaning socio-economic disparity and divergent impacts of economic restructuring at the regional level across Europe should be taken into account. There is a need to concretise the idea of “just transitions” at the urban level, including for mobility specifically (Hughes & Hoffman, 2019; Schwanen, 2020; Sheller, 2018).

15. “By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, men, children, persons with disabilities and older persons”.

2. Significant strengthening of soft policy instruments

As discussed, binding EU policy instruments such as the Ambient Air Quality Directives have been effective in accelerating sustainable urban mobility transitions, even if not directly intended to do so. However, original research by Cavoli (2015) has shown that despite this, bind-

ing pieces of legislation tend to be unpopular amongst local and national policymakers, and are limited by subsidiarity concerns. The EU Strategy for Smart and Sustainable Mobility should focus on significantly strengthening existing “soft” policy instruments and introducing new ones, particularly new funding mechanisms. Although the strategy is very welcome, it will remain a non-binding Communication instrument akin to previous ones published by the Commission, meaning the specific new initiatives launched will be the crux.

3. A multi-level governance system supporting urban transition pathways

The governance system¹⁶ discussed for the EGD so far relies on the existing 2018 regulation on the governance of the Energy Union.¹⁷ This set out a 2030 Climate and Energy Framework with emission reduction targets. Member states were required to submit National Energy and Climate Plans covering 2021 to 2030, and national long-term strategies that set out how emissions reductions will be achieved up until 2050 in line with the Paris Agreement. The framework does not discuss how national targets and strategies should filter down to the local level. Mechanisms already exist through which European cities specify local targets and strategies, such as the Sustainable Energy and Climate Action Plans (SECAP) that signatories to the Covenant of Mayors are currently preparing in relation to 2030 targets. To support transition pathways for urban mobility, we recommend that:

- A coherent multi-level governance system for urban mobility is set out in the EU Strategy for Sustainable and Smart Mobility.
- The Commission publishes new guidance supporting European cities to develop Transition Pathway strategies for urban mobility that can achieve the 2050 net-zero target and which should align with the national plans mentioned above.¹⁸ All member states should be required to establish national frameworks for Sustainable Urban Mobility Planning, mandating local development of 2050 Transition Pathways. National SUMP frameworks already exist in some member states (ICLEI, 2018).
- The Commission frames the Sustainable Energy Action Plans (SECAP) and Sustainable Urban Mobility Plans (SUMP) as two aligning strategic planning documents through which European cities should plan to meet 2030 targets for transport emission reductions. The 2050 Transition Pathway, SUMP and SECAP should all align in a given city (for a topic guide on harmonisation of SECAPs and SUMPs, see Fresner et al., 2019). The latest Commission-endorsed SUMP guidance (Rupprecht Consult, 2019) should be updated to feature a stronger emphasis on climate change, transition pathways and the 2030 and 2050 targets.
- The Commission considers how it can best provide urgent support for practical policy *implementation* to European cities, particularly smaller municipalities outside western and northern Europe. In addition to developing longer-term pathways to 2050, to meet the EU’s 2030 emission reduction target, which is only just over nine years from the

All member states should be required to establish national frameworks for Sustainable Urban Mobility Planning, mandating local development of 2050 Transition Pathways.

16. See heading “governance system” at: https://ec.europa.eu/clima/policies/strategies/2030_en

17. Regulation on the governance of the energy union and climate action (EU)2018/1999.

18. Backcasting approaches for sustainable transport were actually developed from the early 2000s in EU-funded research projects (Miola, 2008) and the Commission could emphasise its support for this type of planning in formal policy guidance. Since the effectiveness of guidance documents as an EU policy instrument is unestablished (as discussed above), the Commission should also fund academic research that can rigorously evaluate the impact of any new guidance.

The Commission should consider extending the time frame of EU R&D co-funded projects from the typical three years to at least five years to allow urban areas to enjoy greater funding certainty.

time of writing, European cities need to be underway with *detailed* planning of policy packages and how they will be implemented in 2021. This is why the SUMP-PLUS project has sought to expand on the current SUMP guidelines by offering detailed guidance on implementation approaches, policy sequencing and packaging (these are called “Implementation Strategies” and are being co-created with European partner cities within the project).

4. Refining EU grant funding instruments

Without greater and better-designed financial support programmes from the EU, new guidance for European cities will not be effective.

While EU funding programmes have supported a diverse range of demonstration and pilot projects allowing cities to experiment with different policy approaches, the lack of continuity in EU funding to municipalities to enable upscaling remains a significant problem (Tomassini et al., 2016), as support from both the EU and national governments is often short-term and project-based (Ehnert et al., 2018; Godenhjelm et al., 2015). The Commission should consider extending the time frame of EU R&D co-funded projects from the typical three years to at least five years to allow urban areas to enjoy greater funding certainty. Many European cities are leading in terms of climate ambition and actively experimenting with sustainable mobility policies, but ultimately cities have limited capacity to “scale up” such experiments without greater local autonomy or financial support (Smeds & Acuto, 2018; Smeds, 2020).

Furthermore, a high degree of reliance on EU co-funded projects can result in piecemeal policy approaches, with a multitude of projects poorly integrated with policy strategies. In response to this problem, the European Court of Auditors (2020) has recommended that all EU funding to urban areas should be made conditional on the beneficiary having a Sustainable Urban Mobility Plan or equivalent policy strategy in place. We agree with this recommendation.

5. Establishing a stronger and more integrated institutional basis

Finally, to support these policy changes, the institutional basis of urban mobility within the European Commission needs to be strengthened. Since 2016, limited EU communication and guidance documents have been published, which could be explained by the fact that the dedicated “urban mobility” unit within DG MOVE was disbanded. Since then, urban mobility issues are indirectly addressed through the policies of various units within the DG, such as “Sustainable and Intelligent Transport”. We argue that re-establishing a dedicated urban mobility unit within the Commission is critical to ensuring that urban mobility is given adequate importance and consideration within EU transport policy. Furthermore, an integrated approach across the EU Urban Agenda and the Urban Mobility Partnership established under it is needed, along with efforts to articulate the local implications of the EGD including through the EU Strategy for Smart and Sustainable Mobility.

Concluding reflections

In this chapter, we have explained how EU policy on urban mobility has always been to some extent limited by the subsidiarity principle. Despite this, since the 2000s the Commission has developed an impressive and often effective arsenal of “soft” policy instruments, such as funding programmes and guidance for urban areas. However, as a result of complex drivers – particularly institutional barriers – transitions towards sustainable mobility have been highly uneven across European cities, and in most cases too slow to achieve the 2050 target of a 90% reduction in transport emissions. We have proposed a novel approach to supporting local authorities. Specifically, “transition pathways” to sustainable urban mobility could be developed using “backcasting”, incorporating attention to the changes in governance, financial resources and local politics required to meet the 2050 target, and the unique conditions and path dependencies of cities across Europe. Our recommendations have focused on the need for the Commission to give greater emphasis to urban mobility as a policy area, and the proposal that the Commission publish new guidance supporting urban areas in developing transition pathways in practice, complemented by supporting funding mechanisms.

We have offered recommendations that we feel are realistic in the context of existing EU policy and multi-level governance. Going beyond this, we offer some concluding reflections on the need to reinterpret the subsidiarity principle. In order to achieve the enormous challenge of a 90% reduction in transport emissions by 2050, increased support from regional, national and supranational institutions for local authorities across Europe is required. Art. 5(3) of the Treaty on European Union states that the EU should act “if the objective of the proposed action cannot be sufficiently achieved by the Member States either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level”. These conditions are clearly fulfilled in relation to the EGD. In the past, direct EU policies targeting urban areas have had to be framed in very specific ways, e.g. cohesion, research and innovation. We argue that the climate emergency and the transboundary, collective action nature of climate change as a policy problem justifies stronger EU action in itself, as cited in the “subsidiarity check” in the roadmap on the EU Strategy on Sustainable and Smart Mobility. This is not the time for the Commission to be overly cautious, but for European researchers, policymakers and politicians to join forces and establish new collaboration mechanisms.

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