

SUSTAINABLE URBAN MOBILITY PLANS: TOWARDS A COMMON EUROPEAN TRANSPORT PLANNING FRAMEWORK

Pascale-L. Blyth, MSc

Aalto University, pascale.blyth@aalto.fi

Miloš N. Mladenović, PhD

Aalto University, milos.mladenovic@aalto.fi

Review paper

Abstract: This paper reviews what the Sustainable Urban Mobility Plan (SUMP) is, and how it arose. Furthermore, the paper reviews nation-level experiences with transport planning across Europe, and identifies future directions for improvement of the SUMP framework. The lessons learned are applicable to transition countries in the South East Europe.

Keywords: *transport planning, urban transport, SUMP, transition country*

PLANOVI ODRŽIVE URBANE MOBILNOSTI: KA ZAJEDNIČKOM EVROPSKOM OKVIRU ZA PLANIRANJE SAOBRAĆAJA

Pascale-L. Blyth

Alto Univerzitet, pascale.blyth@aalto.fi

Miloš N. Mladenović

Alto Univerzitet, milos.mladenovic@aalto.fi

Pregledni rad

Rezime: *Ovaj pregledni rad prikazuje koncept Plana Održive Urbane Mobilnosti (POUM), i njegov nastanak. Osim toga, rad prikazuje pregled iskustava u planiranju saobraćaja na nacionalnom nivou u zemljama Evrope, i identifikuje dalje pravce za unapređenje POUM okvira. Iskustva su primenljiva na zemlje u tranziciji u jugoistočnoj Evropi.*

Ključne reči: *planiranje saobraćaja, urbani transport, POUM, zemlja u tranziciji*

1. INTRODUCTION

Urban transport gives rise to a large amount of negative externalities. Concerns about the real costs of transport resulted in the EU developing tools and processes for effective transport planning and policy. However, in 2007, an EU Green Paper [1] found that due to the complexity of human transport as a social activity, there was no single solution to the problem. It proposed to support the local authorities in developing sustainable urban mobility by developing a mobility culture and the exchange of good practice.

Its successor, the 2011 White Paper “Roadmap to a Single European Transport Area”, proposed that cities over 100,000 inhabitants should be required to have a plan as a prerequisite for funding. Thus, the European Sustainable Urban Mobility Plan (SUMP) framework was born.

This paper reviews what the SUMP is, and how it arose. Furthermore, the paper reviews experiences in different countries, and identifies future directions for improvement of SUMP framework. Finally, the lessons learned are applicable to transition countries in the South East Europe, aspiring towards the membership in the EU.

2. SUSTAINABLE URBAN MOBILITY PLAN

2.1. Definition and chronology

SUMPs are a recently-created European-level policy tool; and the guidelines for their definition and implementation were published as recently as 2014. SUMP [2] is defined as “a strategic plan designed to satisfy the mobility needs of people and businesses in cities and their surroundings for a better quality of life.”

Thus, SUMP “builds on existing planning practices and takes due consideration of integration, participation, and evaluation principles” [3]. SUMP aims to represent a new approach to planning mobility that departs from the traditional transport planning, focusing on people instead of traffic.

SUMP does so by aiming at the long term planning, and going beyond administrative boundaries to serve geographical areas. Among other SUMP elements, there is a greater focus on public involvement, better cooperation between providing agencies, as well as greater accountability and measurability [4]. The chronology of SUMP development at European level is outlined in **Error! Reference source not found.**

Before the advent of SUMP as a planning framework, a number of early projects assessing transport plans found that there were a number of barriers to effective transport planning. The European Conference of Ministers of Transport (ECMT) [10] carried out a survey of cities’ abilities to implement transport plans. Some barriers identified included “poor policy integration and coordination, counterproductive institutional roles, unsupportive regulatory frameworks, weaknesses in financing and pricing, poor data quality and quantity, limited public support and lack of political resolve”. The ECMT responded with a list of recommendations to national governments.

Table 1: Chronology of SUMP

Document	Key points
Green Paper "Towards a new culture for Urban Mobility" (2007) [5]	The European Council has set a target to reduce EU greenhouse gas emissions with 20% compared to 1990 levels by 2020 (European Council Conclusions, 8/9 March 2007) (future scope of SUMP).
Communication "A Sustainable Future for Transport" COM (2009) 279 [6]	Sets out trends and policies for the first half of 21 st century; and proposes a move "towards an integrated, technology-led and user-friendly system".
Communication "Action Plan on Urban Mobility" COM (2009) 490 [7]	The first comprehensive support package in the field of urban mobility, proposing twenty measures to encourage and help local, regional and national authorities in achieving their goals for sustainable urban mobility; and encouraging the adoption of Sustainable Urban Mobility Plans. The review of the implementation of the Action Plan used as basis for developing the 2013 Urban Mobility Package.
Transport White Paper COM (2011) 144 [8]	Proposed that there might be a mandatory requirement for plans for cities over 100,000 inhabitants with funding conditional on the submission and auditing of such plans [9].
Communication "Urban Mobility Package" COM (2013) 913 [2]	Emerged from consultation between stakeholders and planning experts across the EU. Sets out the aims of SUMP.
"Guidelines. Developing and Implementing a Sustainable Urban Mobility Plan" European Platform on Sustainable Urban Mobility Plans, 2014 [3]	Draws from a review of best planning practices in Member States conducted as part of the ELTISplus project to give guidance on creating Sustainable Urban Mobility Plans step-by-step.

The PROSPECTS [11] project focused on urban land use and transport plans, focusing on decision-making, methodology and policy. This project categorizer barriers to transport planning in 60 cities as institutional, financial, attitudinal and technological [9]. In addition, the Atkins study [12] and DISTILLATE [13] projects focused on the UK. The Atkins study found that serious obstacles remained despite the fact that local authorities in charge of transport planning had increased collaborative working, using long-term funding more effectively, and focused on wider policy goals. For example, these obstacles included managerial and political barriers to working across boundaries, lack of integration between transport and land use planning, and conflict between transport plans and other plans. The DISTILLATE project looked at barriers from Local Authorities' perspective. Findings on significant barriers included funding, modelling, monitoring and evaluation. IMPACT project, in Sweden, found that the absence of guidance and legislation, institutional failure, interaction failures, acceptance failure were significant.

In the light of the results of those projects, a number of measures were taken to address the situation. The PILOT project was a European Commission project that focused on the development of tools and guidelines for developing transport plans.

Another European Commission project, GUIDEMAPS, focused on project management and stakeholder involvement. These projects produced guidelines on the provision of funding, training, national contact points, exchange of experience and the establishment of suitable national legal frameworks. In addition, the outcome was a handbook for good project management and stakeholder engagement.

A number of web sites also provide guidelines and advice, including KonSULT, ELTIS portal, the European Platform on Mobility Management, CIVITAS (City-Vitality-Sustainability) projects such as TELLUS [14], CATALIST and CARAVEL [15]. For example, the ELTISplus project aims to further the adoption of SUMP by local and regional authorities in Europe by preparing guidelines on the development and implementation of SUMP, promotional materials, and training. In addition, CARAVEL project focuses on stakeholder involvement and Public Private Partnerships. Smaller projects such as EU ADVANCE [16], [17] aim to improve the quality of SUMP and policies in 8 municipalities without a SUMP. Outputs include an audit scheme of mobility planning at municipal level to help plan improvement, local action plans and training workshops. The argument is that this will lead to more and better SUMP, energy savings and promote local action [16]. ADVANCE project [17] found that cities with a longer track record in transport planning would look at more advanced measures, while starting cities would focus too much on road infrastructure development. Lack of data on actual mobility was also a big issue for starting cities.

2.2. SUMP Aims

Considering the improvements to the SUMP framework so far, the current state of the SUMP process [18] includes:

- A focus on 'functioning cities' rather than municipal administrative regions.
- A focus on the future development of the urban area, transport and mobility infrastructure and services in the long-term as well as the short-term delivery plan for implementation.
- A careful assessment of the present and future performance of the urban transport system.
- A balanced development of all relevant transport modes; encourages a shift towards more sustainable modes; and puts forward an integrated set of technical, infrastructure, policy-based, and soft measures to improve performance and cost-effectiveness.

- A horizontal and vertical integration by means of a high level of cooperation, coordination and consultation between the different levels of government and relevant authorities; as well as appropriate structures and procedures.
- Transparency and participation.
- Monitoring, review, and reporting of the implementation.
- Mechanisms at Local Planning Authorities for ensuring the quality and validating the compliance of the SUMP with the requirements of the SUMP concept.

2.3. Components of SUMP

SUMP follows a standard process structure, broken down into 4 phases, 11 steps, and 32 specific activities [3]. Main phases and steps include:

- **Phase 1: Preparing well**
 - Step 1: Determining the potential for a successful SUMP
 - Step 2: Defining the development process and scope of the plan
 - Step 3: Analyzing the mobility situation and developing scenarios
- **Phase 2: Rational and Transparent Goal Setting**
 - Step 4: Developing a common vision
 - Step 5: Setting priorities and measurable targets
 - Step 6: Developing effective packages of measures
- **Phase 3: Elaborating the Plan**
 - Step 7: Agreeing on clear responsibilities and allocate budgets
 - Step 8: Building systems for monitoring and assessment into the plan
 - Step 9: Adopting the SUMP
- **Phase 4: Implementing the plan**
 - Step 10: Ensuring proper management and communication (when implementing the plan)
 - Step 11: Learning lessons



Figure 1: The SUMP process [3]

3. SUMP IN PRACTICE

To allow for comparisons across the EU, as well as to take into account the commuting area of the population, the OECD and EU define “cities” according to population size (more than 50,000 inhabitants) and density (more than 1500 inhabitants per square kilometer) [19]. There are currently 520 cities in Europe involved with ongoing mobility plans [20], many of which post information about their plans online. However, the importance of SUMP becomes even greater considering that there are over 600 urban areas with population over 100,000 inhabitants. Considering the question of scale, this section examines the status of SUMP in different European countries. The guidance available at national level, local level, and experiences are listed.

Countries are classified into three groups: those who are well ahead with SUMP plans, those who are in the process of implementing them, and those that are just starting. The first group is characterized by countries who are considered to have “a well-established transport planning framework”; possibly enabled by a legal definition and national guidance on SUMP. The second group is characterized by those countries that are moving towards sustainable mobility planning; and the third, those countries that have yet to adopt it. These groups are shown in Table 2 below. Cyprus and Luxemburg are not presented, due to a lack of information available online. Furthermore, information in some cases may be limited as a limited amount of material was found in English. Classification and national-level information is a starting point for pointing out future direction for SUMP framework development, and implications for transport planning in countries in transition.

Table 2: Countries by group

Group 1 (well-established)	Group 2 (on their way)	Group 3 (have yet to adopt)
Belgium	Austria	Bulgaria
France	Denmark	Croatia
Germany	Estonia	Czech Republic
Italy	Finland	Greece
Luxembourg	Hungary	Ireland
Malta	Poland	Latvia
Netherlands	Portugal	Lithuania
Norway	Slovenia	Romania
United Kingdom	Spain	Slovakia
	Sweden	

However, the picture is more complicated than this classification suggests. Having a legal framework, while in some cases furthers SUMP, is often not enough. Even countries in the first group face issues with strong pro-car and pro-infrastructure lobbies, lack of transport and land-use planning coordination, lack of knowledge and lack of funds to prepare plans [9].

3.1. Countries with a transport planning framework and national guidelines (Group 1)

In Belgium, transport planning is done using the 2009 Local Mobility Plan law (Mobieltvlaanderen). 90% of Belgian cities have such plans.

Similarly to Belgium, France has an inherited a transport planning framework from before SUMP. Namely, in France, at national level, cities over 100,000 inhabitants have been required since 1996 to have “Plans de Déplacements Urbains” or PDUs (literally Plans of Urban Mobilities), which are very similar to SUMP. Guidance for the plan is provided by the “Groupement des Autorités Responsables de Transport” (GART—the “Grouping of the Authorities responsible for Transport” in English). Since 2000, PDUs have been integrated with the regional integrated development plans (Schéma de cohérence territoriale - SCoT) and local urban development plans (Plan local d’urbanisme - PLU) [21]. There are over 160 cities in France with PDUs. But while car-use in major urban centres has been reduced, and public transport, walking and cycling has increased; barriers remain—stemming from complexity, governance, cooperation, and strong car lobbies.

At the other end of the spectrum, in Germany, there are no national legal requirements for plans. However, transport plans are common in larger cities, and Germany is considered to be a country with a strong transport planning framework. The German Road and Transportation Research Association (“die Forschungsgesellschaft für Straßen- und Verkehrswesen”—FGSV), a non-governmental association with a technical mandate, is pushing for laws in the field.

In Italy, there are two mechanisms for urban mobility planning both of which differ in their focus. The Piano Urbano del Traffico (Urban Traffic Plan – or PUT) is the older tool, and is applicable to smaller municipalities. PUT was introduced in 1986; becoming mandatory in 1992 for municipalities of over 30,000 inhabitants (permanent, seasonal, or commuting). The focus of PUT is the optimization of traffic flow on roads. However, PUT may comprise other ‘sectorial’ plans such as the Parking Urban Program, the Plan of Bicycle Lanes and the Urban Plan for Road Safety.

Agglomerations of over 100,000 inhabitants are required to submit a Piano Urbano della Mobilità (Urban Mobility Plan – or PUM) to receive national funding of 60 per cent of the total. A PUM has a longer, 10-year timeframe, and includes planning for public and private transport infrastructure. While PUMs are consistent with the SUMP concept, they follow municipal administrative boundaries, rather than the SUMP functional agglomeration, possibly making them prone to more administrative barriers. However, Italy names a range of causes for transport problems that stem from poor urban planning choices and culture [22]. These include an increase in the demand for private transport resulting from a separation of city centres where people work from the hinterland where people live; poor planning of goods transport; road congestion; and an inefficient allocation of public space.

Similarly, Malta, one of the smallest and most densely populated countries in the EU, is classified as having a good transport planning framework. While currently Malta has no official SUMP, and no guidelines on urban mobility planning, it has in place a number of pre-SUMP transport planning frameworks. Regulatory frameworks for urban transport planning are split between two authorities – the Malta Environment and Planning Authority (for land use planning) and Transport Malta (responsible for transport strategy on the island). A National Transport Strategy and Masterplan for Malta is in the works and should set the framework for sustainable mobility in the coming years, however there is a view that it is no holistic enough [23].

The Netherlands are also considered to have an advanced transport planning framework that is the result of legislation and practices that pre-date SUMP. The 1998 traffic and transport plan act (Planwet Verkeer en Vervoer) requires for national policies to be implemented first by provinces then municipalities in a tumble down system to local level. A system of subsidies to provinces and municipalities have served as an incentive for co-operation, resulting in annually or biannually reviewed mobility policies that are an integral part of a spatial and environmental policy plan.

However, there is research that indicates that improvements could include the inclusion of climate and energy goals, scenarios, cost benefit analysis, cost-consciousness, measurable goals, an integrated and interactive approach, and applying all steps of the policy cycle. However, municipalities are typically not on the same stage of the policy cycle, making documentation difficult.

Norway has no laws mandating either SUMP or local transport plans for cities. Instead, urban land use and transport planning in metropolitan areas is mandated by the Planning and Building Act (PBA). All road and railroad projects must conform to the PBA rules on sustainability and public participation. Financing of both infrastructure and public transport is done through tolling, considered national funds, and must demonstrate how it meets transport and environment challenges. In practice, cities have a wide range of tolling schemes. The 2012 White Paper on national climate policies means that public transport, cycling and walking will be required to accommodate all future growth in person transport in metropolitan areas; for which the 26 billion NOK (3.1 billion EUR) National Transport Plan 2014-2013 was approved in June 2013. New comprehensive urban mobility agreements regulating transport systems and land use in urban areas will be drafted; and jointly managed by county authorities and municipalities [24].

In the UK, the four component countries of England, Northern Ireland, Scotland and Wales have different SUMP legislations. In addition, the City of London is also different. SUMPs are the responsibility of Local Transport Authorities (LTAs), are mandatory. The legal basis for LTPs is the Transport Act 2000, amended from the Local Transport Act 2008. In London, each of its 33 Boroughs must produce a Local Implementation Plan (LIP) for transport. For London: LIPs under legislation of 1999 Greater London Act. There is guidance available from the Department for Transport. Consultation is with a range of stakeholders and at a number of stages of the planning process [25].

3.2. Countries “moving towards sustainable mobility planning” (Group 2)

In this group, countries are characterized by a lack of complete transport planning framework, but are considered to be moving in the direction of one. However, the problems there stem from a different combination of factors.

In Austria, there are five cities that report mobility plans – Vienna, Graz, Linz, Salzburg and Innsbruck [26]. A lot of mobility planning in cities focused on the human-centred approach. Case studies in Graz

include “SharedSpace” (a focus on the central plaza) and a Public Private Partnership project involving public transport to a private shopping center. Both cases are reported as successful examples of interdisciplinary cooperation, which seems to be the focus in Austria.

May [9] argues that Scandinavia has a better capacity for strategic planning, increased stakeholder involvement and increased synergy in the selection of policy instruments. Denmark reports a trend for planning for ‘liveable cities’ and ‘energy efficiency’, which promote alternatives to fossil fuel options for car travel [27]. But in practice, while Copenhagen is known for being a very cyclist-friendly city, the rest of Denmark has arguably little in the manner of accessible public transport – with arguments such as bad timetabling, being slow, uncomfortable and expensive driving people to use cars instead [28]. Furthermore, since the 1990s there has been a growth in energy-, urban- and environmental planning, and a long tradition of citizen involvement in the planning process; but similar failures too.

In Estonia, the law requires only a general urban development plan of a broader nature than a SUMP. Estonia has five bigger towns, including Tallinn, Tartu, Narva, Pärnu and Kohtla-Järve/Jõhvi of which only two have over 100,000 inhabitants. The National Transport Development Plan 2014-2020 [29] privileges economic efficiency and environmental soundness, and focusses on road maintenance and building; with some rail improvements, traffic safety, cycling policy and fuel substitution thrown in as an afterthought. SUMP-related workshops have identified legal issues about initiating and launching the SUMP process as the biggest gaps in sustainable urban mobility planning [30].

In Finland, since the 1990s, the Finnish approach to land use-transport integration is based on MALPE (the Finnish acronym for “land use – housing – transport – services – economic development”) [31]. MALPE has become an institutionalized framework that has increased cooperation between planning sectors and municipalities in return for more efficient government funding.

However planning practice problems remain between administrative cultures of local government sectors [31]. There is legislation and guidelines by the Finnish Ministry of Transport and Communications on compiling transport systems plans. So far, the only plan in Finland based on the legislation is that of the Helsinki Region; the aptly-named Helsinki Region Transport System Plan. As part of the MALPE, the Helsinki Regional Transport Authority (HSL) is a coalition of local authorities founded in 2009 and responsible for the preparation of the Helsinki Region Transport System Plan (HLJ) across currently seven municipalities, with plans to expand to 14.

In Hungary, a growing number of mobility plans are similar to SUMP framework, although there is no Hungarian standard for SUMPs, and a ministerial and legal background is still missing. Urban mobility planning in Hungary has mostly been based on traditional planning tools and an infrastructure-based approach; the rationale of which was access to subsidies. Several local municipalities have prepared sector-specific strategies, plans and studies for road network, bicycle infrastructure, public transport, urban freight, or pedestrian issues [32].

In Poland, despite there being a legal provision for sustainable mobility planning (the National Transport Policy for 2006-2025, the Public Collective/Mass Transport Act in December 2010, the 2013 Transport Development Strategy, and the National Urban Policy); and Warsaw having one of the highest shares of public transport use in Europe, between 2000 and 2010 the share of public transport in non-pedestrian trips dropped in large- and medium- sized cities. Over 100 of these cities were obliged to prepare Plans of Sustainable Public Transport (called Transport Plans). [33] Poland continues to face issues with financing for planning, combined with a rapid growth of motorization and the deterioration of public transport services.

In Portugal, SUMPs are not legally required. In 2011 the Institute for Transport and Mobility, put forward a transport and land use planning strategy; involving the development of SUMPs (PMT in Portuguese). PMTs/SUMPs are now mandatory for municipalities over 50,000 inhabitants or for district capitals, and voluntary in others. From 2010 to 2012, 10 municipal or inter-municipal PMTs were launched; seven of them are finished; but this ended with the advent of the financial crisis. Nine new applications starting in 2015 are in a final stage of approval [34].

In Spain, the responsibility for the preparation and implementation of SUMPs (known as Planes de Movilidad Urbana Sostenible, i.e., PMUS) befalls municipalities; but they are not mandatory, except in the region of Cataluña (Lei 9/2003). Transportation planning is also focused on regulating traffic flows, using Ordenanzas Municipales; which furthermore, are municipality-specific. Furthermore, sectorial plans in large cities result in various parts of the public transport infrastructure being planned separately, from trams to cycle paths. Many Spanish municipalities have implemented a SUMP, though, the exact number is not known [35].

Sweden has a low population density of 21 inhabitants per square kilometer with about 85% of the population living in urban areas, including about 1,4 million in Stockholm, the capital; and seven other with 100,000 inhabitants. According to The Swedish Public Transport Association, regional and local public transport sees 1.2 billion journeys per year; 24

per cent of the national total. However, public transport represents 34 per cent of all journeys made in cities; but only 12 per cent in rural areas. There are plans afoot since 2006 to double this by 2020. Public transport is well-integrated. A transport ticket is valid across trains and buses across 24 regional networks; and dedicated cycle paths can be found in most cities. A 2012 Infrastructure Bill promotes more sustainable transport planning. In 2004 the Transport Agency developed TRAST, "Traffic for Attractive Cities", to help municipalities plan for sustainable transport. Two guidance handbooks support municipalities in the planning process to include transport planning, and provide information about developing traffic strategies, plans and programs [36].

3.3. Countries which have yet to adopt sustainable mobility planning (Group 3)

Countries in this third group face a different set of issues, as they are yet to develop comprehensive urban transport plans.

In Bulgaria, the "Strategy for the Development of the Transport System of the Republic of Bulgaria until 2020" [37], written just after accession, shows a focus on building transport infrastructure, including highways, to come up to EU requirements. The SUMP guidelines are available in Bulgarian and seven cities report SUMPs, including Burgas, Pleven, Plovdiv, Ruse, Sofia, Stara Zagora, and Varna [26]. A different document outlines plans for 35 cities to all have SUMPs in place by 2015, but only the seven are listed in the database. The European Commission has not yet approved funding for national support mechanisms (the Operational Program 'Regional Development' 2014-2020) [38].

In Croatia, while strategic planning has focused mainly on infrastructure [39], there is no legal provision, guidelines or national funding for the preparation and implementation of SUMPs. However, there is a strategic document from the Ministry of Maritime Affairs, Transport and Infrastructure [40]. However there have been a number of studies done to draft up SUMPs in several cities, and the cities of Osijek, Rijeka, Split and Zagreb are listed as having or preparing plans [26] through a variety of EU projects. These projects include the Adria.MOVE IT (a project for the whole region) [41], CH4ALLENGE (about mobility in Zagreb) [42], and the Civitas2020 projects (the preparation of a SUMP for Koprivnica) [43]. Barriers are to public participation and the technical realization of SUMPs. Limitations include a lack of co-ordination between local, county and national levels; lack of integration of planning of urban mobility in local community; and a perceived lack of funding [44].

The Czech Republic has no SUMP national guidance or legislation. There is only a national transport policy and sectoral strategies. Transport planning comes under land-use planning, which is the responsibility of municipalities; while regions are responsible for emission reduction programmes. Public involvement is therefore limited to the land-use planning process. The Ministry of Transport organizes SUMP workshops and new transport policy includes SUMP as a topic. SUMP preparation can be financed through operational programmes and regional governments. The cities of Opava and Ostrava began making SUMPs in 2013 [45].

Greece used to plan for accessibility but since the 1970s there has been a focus in cities on cars and infrastructure; catering for the growing car ownership in Greece during that period [46]. Transport planning in urban areas is the responsibility of the municipal authorities. As part of the ENDURANCE project, a national network of SUMPs is being developed, with 15 cities of over 50,000 wanting to take part. However, there has been a focus on infrastructure building, resulting from constraints in funding and expertise on municipalities; while ministry agencies fund major infrastructure projects [47].

In Ireland, SUMPs are not widespread. However, some transport plans have some SUMP qualities—especially for instance community involvement (for example the Smarter Travel Programme); as mandated by the Irish Land Use Development Planning process. [48].

In Latvia, a SUMP-like plan was approved in 2010 for the cities of Riga and Pieriga (the Riga and Pieriga Mobility Plan (RPMP)). Its goal is to provide a framework to evaluate existing and future transport systems in the cities. It focusses on spatial, ecological, economic, social and institutional aspects [49].

In Lithuania, SUMPs only recently received legal definition at the national level, and national guidelines were only issued by the Ministry of Transport and Communications this year. While not mandatory, 16 cities (prioritized according to size) are expected to draw up Plans. SUMPs will build on established city planning processes and follow a city's 10-year master plan already in place [50].

In Romania, there are 24 cities currently involved with mobility plans. The largest plan, started in 2014 and supported by the European Bank for reconstruction and Development, is for capital, Bucharest [51]. Changing mobility patterns over the past 25 years, rise of the car ownership, and population decline, there are growing regional imbalances [51] [52]. The responsibility for urban mobility planning falls under the Ministry of Regional Development and Public Administration's General Department for Territorial

Development, with a special aim of reducing regional imbalances. Urban Mobility Plans (UMP) have been mandatory for all cities and towns since 2013. An UMP is defined as 'the strategic territorial planning instrument which correlates the spatial development of settlements in the metropolitan area with the mobility and transport needs of people, goods and commodities'. Some of the problems in drawing up and implementing a Plan for Bucharest include the lack of a coherent mobility policy and co-operation between local authorities, especially in data sharing. Previous transport studies show a lack of specific implementation guidelines, tools and funding resources [52].

In Slovakia, understanding of SUMP and its impact is limited. At national level, guidance includes a SUMP development document of 2015 as well as the Ministry of Transport's 2015 National Transport Policy and its sector strategies (e.g. the 2013 National Cycling Strategy). EU Cohesion funds are being used to develop of SUMP documents and implement sustainable mobility measures based on them from the end of 2015. It is expected that SUMP will be implemented in regional capital cities, in cities over 50,000 inhabitants, and in small municipalities. Municipalities are responsible for developing land-use plans, which include transport plans, consequently limiting public participation to that process. The cities of Žilina and Košice started making SUMPs in 2013 [53].

4. FUTURE DIRECTIONS

Transport planning is a complex process, in keeping with the sheer scale of movement undertaken in modern economies. As a result, the SUMP process has met varying degrees of success across the European Union. The review of the experiences in each country show a number of interesting trends which inform on the future directions SUMP may take. Clearly future directions should endeavour to learn from the existing experiences.

May [9] finds that while some Member states were found broadly to have a well-established transport planning framework, and some were found to be moving towards one, a large number were found to have yet to adopt sustainable mobility planning [9], [54].

May [9] attributes this to "strong pro-car and infrastructure lobbies, lack of joint working between transport and land use, lack of relevant knowledge, lack of funds for the preparation of plans, inadequate coordination between tiers of government, the demands of intensive public and stakeholder involvement and political conservatism."

Interestingly, May [9] finds consistency between pieces of research on the reasons for barriers. He finds responsible conflicting institutional roles, both vertically and horizontally; hesitant political commitment to sustainability; poor integration between the policy sectors, particularly between transport and land use; inappropriate financing; limited option generation and undue emphasis on supply-side solutions; limited public support and lack of experience in stakeholder involvement; poor data and lack of evidence of the performance of specific solutions.

There is a lot of research into the barriers to effective planning (ECMT; PROSPECTS; the Atkins study; DISTILLATE, IMPACT), and on ways of overcoming the barriers (PILOT; GUIDEMAPS; DISTILLATE; PROSPECTS, KonSULT; CATALIST; CARAVEL)[55].

May [9] argues that further research is needed on barriers to effective planning. In particular, he proposes that research focus on:

- Understanding good practice in partnership working
- Improving the processes of benchmarking and target setting
- Testing the application of option generation methods for policies and packages
- Assessing the effectiveness of different approaches to financing
- Identifying good practice in stakeholder involvement at all stages in the policy process
- Understanding effective political decision-making and leadership
- Evaluating alternative approaches to policy documentation
- Evaluation of novel policy instruments and policy packages

As a high-level concept of a transport planning framework, SUMP is a useful point of self-reference for urban transport planning across Europe. However, probably the most important role that SUMP has is a point of reference for all the urban areas across the Europe.

As a common transport planning framework, SUMP is expected to help further development of transport and urban planning practice, especially for countries that are still developing their transport planning practice. Thus, countries in transition in South East Europe can largely benefit from policy learning from other European countries, especially at a city level.

In conclusion, SUMP provides a point of reference for all the further research endeavours across Europe. The further development needs remain in customizing the SUMP process and tools for different urban contexts. In particular, there are at least several areas for further development of the SUMP framework, including:

- A shift from mobility to accessibility measures and planning principles;
- A focus on continuing planning processes, removal of vertical levels and adding of horizontal levels, to urban planning, and planning of other infrastructure and services;
- A focus on packaging planning measures, legal integration, and implementation responsibilities;
- An integration of citizen participation throughout the transport planning process;
- The adaptation of planning principles considering the dominance information-communication technology, as well as emerging mobility technologies (self-driving vehicles, connected vehicles, etc.);
- An introduction into practice of activity-based modelling perspective, with the integration of at least land use and transport modelling;

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