

FINANCING SOCIAL AND TECHNOLOGICAL INNOVATION IN CEE SUSTAINABLE MOBILITY

A GISM policy paper





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GISM 2019 PROGRAMME

The GLOBSEC Initiative for Sustainable Mobility (GISM) 2019 research builds upon the discourse and outcomes from a pair of high-level stakeholder workshops organized and developed under GLOBSEC strategic fora: Tatra Summit 2018 GISM focus Group and GLOBSEC 2019 Bridging the West-East clean mobility gap round table. These sessions were comprised of industry leaders, regional national government representatives, the European Commission, the European Investment Bank, and experts from various regional organizations. Findings from the latter session were included on the V4+ June 2019 summit agenda and V4+ informal coordination group leading up to the June 2019 ENVI Council meeting, helping generate momentum for the clean transport fund proposal submitted by the Bulgarian Ministry of Environment. This received the backing of seven Member States (MSs), including all Visegrad (V4) countries, demonstrating that clean air and transport are indeed gaining legitimacy in the CEE political process.

The initiative is well placed for policy relevance and impact as new leadership enters office across all three European institutions in the latter half of 2019. Decisive MEP gains for the Green Party and a rotating Council presidency moving to Finland, a country that recently committed to one of the world's most ambitious carbon neutral timelines, has already reinvigorated Europe's appetite for climate leadership on the global stage that starts with a 2050 climate neutrality objective under its Paris Agreement commitment.

LIST OF ABBREVIATIONS

AFV	Alternative Fuel Vehicle	IQR	Independent Quality Review
CCS	Carbon Capture and Storage	JASPERS	Joint Assistance to Support Projects in European Regions
CEE	Central and Eastern Europe	MA	Managing authority
CEF	Connecting Europe Facility	MEP	Member of European Parliament
CF	Cohesion Fund	MF	Modernisation Fund
COP 24	United Nations Council of Parties	MFF	Multi-annual Financial Framework
CUT	Clean Urban Transport	MS	Member State
EBA	European Battery Alliance	NECP	National Energy and Climate Plan
ECA	European Court of Auditors	NER300	predecessor to IF
EE	Energy Efficiency	NPB	National Promotional Bank
EEEF	European Energy Efficiency Fund	OLAF	European Anti-Fraud Office
EIAH	European Investment Advisory Hub	OP	Operational Plan
EIB	European Investment Bank	PA	Partnership Agreement
EIPP	European Investment Project Portal	PCI	Project of Common Interest
ELENA	European Local Energy Assistance	PPP	Public-Private Partnership
EP	European Parliament	RDI	Research Development and Innovation
EPEC	European PPP Expertise Centre	V4	Visegrad 4 countries
ERDF	European Regional Development Fund	V4+	V4 plus Romania and Bulgaria
ESIF Fund	European Structural and Investment Fund	SET-Plan	Strategic Energy Technology Plan
ETS	Emissions Trading Scheme	SRSS	Structural Reform Support Service
EU	European Union	TA	Technical Assistance
GISM	GLOBSEC Initiative for Sustainable Mobility	TEN-T	Trans-European Network - Transport
ICE	Internal Combustion Vehicle	UIA	Urban Innovation Action
ICT	Information and Communication Technology	URBIS	Urban Investment Advisory Support
IF	Innovation Fund		
InvestEU	replacing European Fund for Strategic Investment (EFSI)		

EXECUTIVE SUMMARY

BUILDING AND BLENDING PROJECT PIPELINES

The rise of electrification in transport presents opportunities to narrow the West-East innovation gap. Currently far more innovative projects are awarded to established Western European entities than Central and Eastern Europe (CEE).¹ If this trend is to change in the next decade, CEE governments must promote EU fund complementarity for innovation and sector coupling, especially smaller, higher risk and pilot projects for startups and small and medium enterprises (SMEs). The established industrial landscape in CEE is fertile ground for modeling technology service provider partnerships to test and grow low carbon technologies. The Innovation Fund (IF) should help to upscale simplified soft loans and risk sharing to facilitate an increase in private sector equity and debt products tailored to unique project needs, e.g. a one-stop shop.

In harnessing synergies between transport, energy and telecommunications infrastructure, Connecting Europe Facility (CEF) can be particularly effective for contributing to autonomous AFVs, energy storage and smart grids. The European Investment Bank (EIB) Transport Lending Policy prioritizes rail projects but should also help develop green transport corridors across Europe and its periphery; CEF funds billions of euros in road projects and greening them is a fraction of the cost. When developing operational plans (OPs), managing authorities (MAs) and the European Commission (Commission) need to agree to expand European Structural and Investment Fund (ESIF) eligibility for road infrastructure projects to include alternative fuel vehicles (AFVs).

The Modernisation Fund (MF) should be designed as an efficient instrument for other areas of transition and modernisation, including the possibility of a clean transport funding with defined criteria and objectives.² In order to capitalize on this fund to achieve more rapid modernization and ecological transition, beneficiaries should volunteer to transfer Article 10c derogation allowances to the MF.

Development of project bankability and pipelines faces a chicken and egg challenge that will simply require more dedicated administrative resources and oversight. As a starting point, more transparent,

efficient and accountable governance is needed, especially in the realm of public procurement. CEE countries can develop stronger project pipelines with more concerted, tailored and targeted use of EU advisory services and national capacity building.

Practical next steps for:

PUBLIC AUTHORITIES

- ▶ Train and retain administrative, financial and technical expertise and strive to improve working conditions to avoid staff turnover;
- ▶ Ensure a stable and predictable regulatory environment with simplified procurement procedures including the state aid framework;
- ▶ Streamline national permitting procedures with single contact point or one stop shop for Trans-European Network – Transport (TEN-T) and innovation;
- ▶ Establishment of contact registers, improved data collection and a networking of review bodies to improve ex-post verifications of compliance;
- ▶ Increased utilization of European Energy Efficiency Fund (EEEF) Clean Urban Transport (CUT) priority area.

EUROPEAN COMMISSION

- ▶ Maintain structured ex-ante preparation standards to reduce future legal uncertainty with MS authorities
- ▶ Compensate higher risk Cohesion countries with dedicated financial tools developed jointly with the European Investment Bank (EIB);
- ▶ Outsource general education advice to local university networks supplemented by open online courses in emerging multidisciplinary areas like digitalization of transport and alternative fuels;
- ▶ Expand polluter-pays and user-pays principles to improve economics of green projects,

¹ <https://www.e3g.org/library/investeu-efficiency-gap>

² Please see GISM Topical Report (April 2019) and forthcoming GLOBSEC 2019-GISM Outcome Report

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reduce the burden on the taxpayer and generate extra revenue;

- ▶ Ease EUROSTAT public debt accounting conditions for clean mobility and transport projects;
- ▶ Earmark funding for an EU Procurement Agency to provide oversight for equal treatment, non-discrimination and transparency;
- ▶ Increase visibility of Commission's Structural Reform Support Service (SRSS) for more effective institution building.

INTRODUCTION

CEE governmental support for the clean transport fund proposal signals a recognition that more decisive actions are needed to catalyze investment in regional clean mobility projects. EU funds remain indispensable to this effort but must be appropriated strategically and increasingly attract capital from financial markets. The key objective of this research is to explore how such a dedicated instrument can fit into the current portfolio of EU lending facilities and help to overcome some of the obstacles that have kept the CEE energy and mobility transition at bay over the past decade.

To begin with, however, it is important for governments to embrace the transition as an opportunity for the region to modernize and innovate, while contributing to Europe's global competitiveness in the future low carbon economy. Unquestionably these changes are disruptive, particularly in a region so dependent on coal for electricity and the automotive industry for jobs and exports – but this will happen gradually, not abruptly. In the meantime, support for investment in low carbon technology and affiliated industries can provide new opportunities for affected communities.

The key will be to foster innovative low carbon technology development on a path to commercialization and production. As it stands in the automotive industry, patents are German while CEE countries assemble cars and makes the components. However, CEE has a strong background and competency in electrical applications that can serve mobility and sector coupling solutions. In the world of engineering and industry most coal plant workers have degrees and experience with complex machine operation, which translates to the development of new low carbon industries.

One such industry receiving tremendous attention from the Commission is batteries. Under the European Battery Alliance (EBA) dedicated Action Plan, Cohesion Policy supported the launch of an interregional partnership on advanced battery materials that brings together relevant industries, research institutions and public authorities of close to 30 regions for development of joint innovation projects for batteries. Slovakia is emulating this model domestically with its own Slovak Battery Alliance with similar characteristics. Besides batteries there are several mobility and sector coupling ultra-low emission technologies and business models that can help the region achieve a fair transition with less public finance.

The public policy narrative should also emphasize the return on investments to society by quality of life metrics, from a healthier environment to more attractive future jobs. While tremendous tangible investments are required to upgrade clean transport infrastructure and regional connectivity, the density of urban areas allows for more creative concepts to not only reduce tail pipe emissions but ease congestion and noise pollution and better utilize urban space through inter-modal connectivity and sharing.

In the fast-evolving topic of financing several communications, reviews, studies and consultations have been published by EU entities with intimate knowledge of the processes. With additional insight from GISM round table dialogue and stakeholder interviews, this paper hopes to contribute to accelerating the CEE clean mobility transition in the context of the Multi-annual Financial Framework (MFF) negotiations and EU Emissions Trading Scheme (ETS) design. Among interviewees were representatives of EIB, the European Commission, national investment agencies, national authorities and project promoters.

This paper contains two sections, the first presents an overview of the EU funding and advisory landscape relevant to transport and mobility and highlights common regional investment obstacles. The second section explores more visionary approaches to regional urban mobility solutions considering selected external city models.

SECTION 1: CONNECTING CEE CLEAN MOBILITY FINANCING IN THE NEXT MFF

EU-EIB CLIMATE FUNDING ACTIVITIES AND OBJECTIVES

The EIB is currently reviewing its Energy Lending Policy and developing a Cleaner Transport Facility in cooperation with the Commission to ensure consistency with increasingly ambitious EU climate objectives. A new, stricter climate indicator was updated in EIB's latest operational plan in its value-added project evaluation method, stating that projects which are not part of an integrated mobility plan and unlikely to contribute to reducing congestion and environmental externalities will not be supported.³ The Bank's last Transport Lending Policy⁴ from 2011 prioritizes public transport, rail, inter-modal and maritime projects, which are accepted with lower returns, and penalizes road and aviation projects with higher rates for contributing to climate change. The new transport facility will support transport integration, energy related solutions and the rollout of associated infrastructure for the decarbonization of mobility.

The EIB is encouraging innovation funding to serve as the foundation for an ecosystem that enables effective commercialization, adoption and adaptation of new products and processes. The Bank supports a close link between upstream R&D and downstream manufacturing of new technology, especially where prohibitively high cost pilot plants cannot provide acceptable returns for private investors and, in the more mature phase, for scaling-up of production to establish economies of scale. Patenting activity, a key indicator of innovation, is highest in sub-regions that are ranked higher for institutional quality, R&D expenditure and a skilled workforce.

The EIB also takes a leading global position on green bonds, remaining the largest issuer worldwide.

EU sustainability taxonomy or 'green bonds' allow entities (companies, banks, government organisations) to borrow money from investors to finance green projects, assets or business activities. As part of the Commission Technical Expert Group on sustainable finance, it plans to assist in developing the taxonomy of environmentally sustainable activities towards the EU green bond standard. A unified EU classification providing clarity on which activities can be considered 'sustainable' will be gradually integrated into EU legislation for more legal certainty. The EIB also created SABs to support environmental and social sustainability objectives beyond climate.

RELEVANT EU FUNDING PROGRAMMES

CEF

Within its transport portfolio, CEF's specific objectives are to contribute to the development of PCIs relating to efficient and interconnected networks and infrastructure for smart, sustainable, inclusive, safe and secure mobility. It aims to accomplish the TEN-T strategic backbone (core network, estimated EUR 350 billion) by 2030 and the TEN-T comprehensive network by 2050 (estimated at EUR 700 billion). On top of this, the Commission's 2017 Europe on the Move Communication⁵ set out a goal providing an EU backbone charging infrastructure covering the core TEN-T network by 2025. It also proposed 60% of CEF expenditures contribute to climate objectives (compared to 25% for MFF).

Of the total EU CEF transport budget in the current period, the lion's share went to 'building cross-border infrastructure and bridging missing links' (EUR 18.3 billion), while 'deploying sustainable and efficient

³ https://www.eib.org/attachments/efs/economic_investment_report_2018_key_findings_en.pdf

⁴ Strategic automotive manufacturing investments are only supported in Cohesion countries https://www.eib.org/attachments/strategies/transport_lending_policy_en.pdf

⁵ <https://ec.europa.eu/transport/sites/transport/files/com20170283-europe-on-the-move.pdf>

transport' was less than EUR 500,000 million and 'interconnecting transport modes and enhancing interoperability' only EUR 2.5 billion. The majority of this went to funding projects in advanced stages of development.⁶

CEF co-financing and blending with EIB, national promotional banks or other development and public financial institutions and private lenders will be integral to meeting CEF's mid and long-term core objectives. To encourage greener road transport, the Commission proposed a CEF-InvestEU blending facility for alternative fuel projects designed to overcome legal and budgetary hurdles.⁷ Guidelines are under development to promote cross-sectoral projects, for example the possibility to apply the highest sector co-funding rate while remaining eligible for ancillary cost elements from other sectors. Furthermore, a synergy dimension will be added to the CEF award criteria and implemented through joint working programmes and financing involving relevant sectors towards the comprehensive 2050 network.

The key debate for CEF energy and transport network funding in the next MFF period is over the transitional role of gas in Europe's future clean economy. The majority of the 2014-2020 CEF energy grants went to gas infrastructure projects, including feasibility studies for Easting and BRUA corridors. Gas diversification is the cornerstone of regional energy policy, but vastly improved connectivity and Europe's commitment to 2050 climate neutrality will likely push the EIB away from supporting major gas

pipeline projects and open CEF funds for integrated energy and mobility solutions.

Structural, Cohesion and Regional Funds

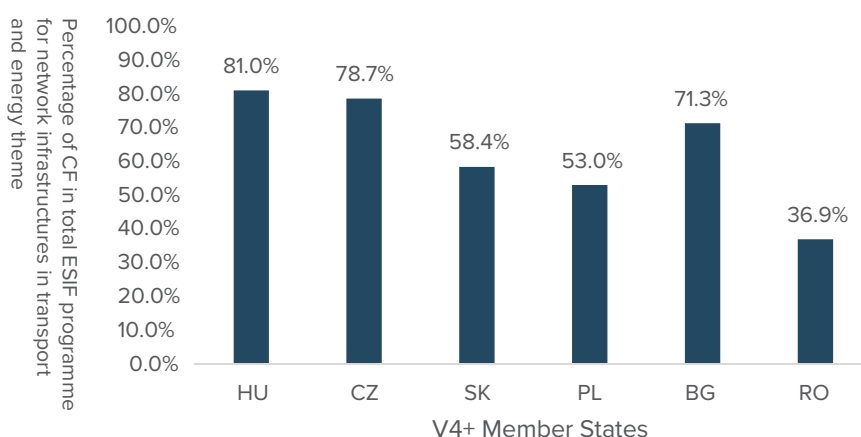
A new EIB policy investment mandate will require a greater percentage of the next EU budget to go towards climate action, reshaping the billions of ESIF euros flowing into the region. Climate action is mainstreamed into the ESIF through its regulatory framework and a common methodology for to the calculating climate change support across all ESIF funds. The methodology identifies specific categories of support that contribute to climate action giving them a zero, 40% or 100% weighting.

ESIF contributes to national budgets in accordance with long term strategic investment Partnership Agreements (Pas). Working with the Commission, MSs draft more detailed thematic Operational Plans (OPs) that ESIF funds are assigned to. While PAs should remain fixed over the programming period, OPs can be reviewed and revised. The 2019 European Semester process will focus on identifying and promoting national investment needs to guide programming decisions concerning CF through National Climate and Energy Plans (NECPs). This will emphasize the need for stable and enabling regulatory frameworks to facilitate long-term energy and climate related investments.

The Cohesion Fund (CF) and European Regional Development Fund (ERDF) are the most relevant instruments for regional transport and related clean mobility projects. In the 2014-2020 programming

Chart 1

CF share of ESIF energy and transport networks



Source: Open Data Portal for ESIF – European Commission⁸

⁶ https://ec.europa.eu/inea/sites/inea/files/cef_implementation_brochure_web_final.pdf

⁷ <https://ec.europa.eu/transport/sites/transport/files/legislation/com-2018-00-66-report-mid-term-evaluation-cef.pdf>

⁸ <https://cohesiondata.ec.europa.eu/countries>

period, a CF envelope (EUR 11.3 billion for transport) was executed under direct management within the CEF framework and 100% of was provisioned in the first half of the period.⁹ The success was credited to targeted technical assistance, lower administrative costs, clear funding priorities and a solid project pipeline stemming from the TEN-T programme.

The CF CEF envelope funds the majority of V4+ network infrastructures in transport with smaller contributions from ERDF and about 15% from national funds. Hungary spends the highest share of CF on network infrastructures in transport and energy and Romania the lowest (Chart 1). While CF is mostly funneled to national and cross-border networks, ERDF manages the Urban Innovation Action (UIA) platform which provides urban areas throughout Europe with resources to test new and unproven solutions addressing urban challenges. CF and ERDF also contribute to other themes that overlap with clean transport, including low carbon economy, environmental protection and resources efficiency, climate change adaptation and risk prevention, ICT and social inclusion.

The use of public-private partnership (PPP) as a complementary tool for ESIF procurement projects is encouraged to help improve long term quality of expenditures and optimize use of funds. However, blended projects benefiting from EU funding requires special treatment in relation to public debt and deficit classification, whether through loans, grants or guarantees on a central, regional or local basis. Any blended project with government contributions or guarantees resulting in more than 50% of the investment cost must be reported on the government balance sheet.

EU ETS: Modernisation and Innovation Funds

The EIB is responsible for auctioning MF allowances, managing its revenues, and contributing to the selection process of eligible projects. Its investment committee includes representatives from the ten beneficiary member states, the Commission, the EIB and three representatives from other MSs. In the 2017 European Parliament and Council joint proposal for ETS reform, electrification of road transport was included under the MF's energy efficiency improvement aims.¹⁰ For now, 70% of the fund will be allocated to priority projects for investments in RES, EE, energy storage, interconnections and

just transition in carbon dependent regions that, if qualified, can be financed up to 100%.

In the current funding period, MSs have used the Article 10c derogation to allocate almost all free allowances to fossil fuel generating plants rather than turn them over to the MF. This is being revisited in the current design phase to encourage ETS allowances to be redirected to the MF and, so far, Czechia and Poland have announced that they will comply.¹¹ The EP has proposed a dedicated Just Transition Fund that would fall under the competency of the MF, targeting the retraining and compensation of workers in fossil fuel-based industries and regions.

During the course of IF consultation, experts continue to struggle defining innovation and how it should be financed over time.¹² There is broad agreement that both existing and emerging technologies can be considered as potentially innovative, especially when innovative business models ensure a given technology can break through. Of course, the earlier stage a technology the more it is perceived to be innovative, inherently risky, and therefore likely to require public funding.

The IF will prioritize cross-industry cooperation and horizontally applicable integrated solutions to replace or complement existing products. Symbiotic projects have tremendous potential for energy and transport sector coupling, such as green hydrogen and grid boosters, through which cooperation across sectors can cross-fertilize industries with key low carbon technologies and ultimately harmonize European infrastructure. These kinds of projects fall under 'collaborative consortia' with 'cross-sectoral technologies' and merit extra points in consideration of Stage 1 scoring for IF applications.

EU SET-Plan

SET-Plan is a core element for research, development and innovation (RDI) in the energy sector, setting measures to streamline activities across national public funding initiatives and targeting priority sectors like bioenergy, CCS, electricity grids, fuel cells and hydrogen. Governments steer these innovation trends in the long-term by creating supportive policy environments and safeguarding drivers of innovation. As a reference, between 2007-2010 the private sector made 70% of total RDI investments in SET-Plan priorities with MSs and the Commission accounting for 20% and 10% respectively. SET-Plan

9 https://ec.europa.eu/commission/sites/beta-political/files/budget-may2018-cef-regulation_en.pdf

10 <http://data.consilium.europa.eu/doc/document/ST-6841-2017-INIT/en/pdf>

11 https://www.bloomberg.com/news/articles/2019-06-06/poland-may-halt-free-co2-permits-for-utilities-to-boost-budget?utm_campaign=Carbon%20Brief%20Daily%20Briefing&utm_medium=email&utm_source=Revue%20newsletter

12 https://ec.europa.eu/clima/sites/clima/files/events/docs/0115/20170612_report_en.pdf

technologies are eligible to receive support through EU financial instruments such as Horizon2020 and the IF.

Horizon Europe

Horizon Europe is the primary financial instrument for RDI in the energy, transport and digital sectors, and serves as a natural compliment to large scale CEF network projects in the deployment of innovative technologies with high market readiness. Among innovative sub-sectors are green technology and areas addressing societal challenges such as resource efficiency and climate change. InnovFin operates under the Horizon Europe, offering advisory services in addition to its core activity of loan products.

EIB AND COMMISSION ADVISORY SERVICES

The Commission is advancing a consolidated package of project development assistance merged under the InvestEU Advisory Hub in the next budgetary period. The EIB does not anticipate new advisory programmes to be established in the next year, notwithstanding the InnovFin Advisory service already approved for NER300 and possible expansion of Advisory Support programmes in Romania, Bulgaria and Poland. Ongoing MFF-related discussions in the Council will determine the overall level of resources available for the Commission to allocate to technical assistance.

DG MOVE recently began wider activities to promote blending facilities for mobility and transport projects which will be further strengthened and promoted inside the InvestEU Advisory Hub. Recognizing the important needs of CEE countries in this area, Cohesion Policy programmes are expected to set out ambitious initiatives aiming to trigger a change to carbon-free and more sustainable modes of transport and innovative solutions for mobility inside urban areas.

Under the InvestEU Advisory Hub, Joint Assistance to Support Projects in European Regions (JASPERS) will continue to focus on voluntary assistance to EU-funded projects under European Cohesion Policy. It does not replace consultancy services but plays a supportive role to the authorities in designing and preparing projects. As the Commission promotes a single set of rules there will be greater scope for cross-fertilization of expertise and preparing of

comprehensive assistance for combined loan and grant elements, especially innovative financing schemes under URBIS. DG REGIO is working closely with other policy DGs and the EIB to prepare a complete offer at the EU-level for project development assistance benefiting InvestEU, CEF and also Cohesion Policy funding. This includes a number of tools to support administrative capacity building more generally such as a strategic training programme (including on procurement, state aid and anti-fraud-corruption), peer-to-peer exchanges and other actions supporting professionalization of the management of the Funds.

Following a critical European Court of Auditors (ECA) review (see next section), JASPERS intensified its work on wider evaluations of their impact on technical capacities of their counterparts and is working with national authorities in putting forward national plans for strengthening technical capacities. In 2018, 60% of participants considered JASPERS assistance in capacity-building as highly satisfactory or satisfactory.

European Local Energy Assistance (ELENA) is a joint initiative by the EIB and the European Commission under the Horizon2020 programme that provides grants for technical assistance focused on the implementation of energy efficiency, distributed renewable energy and urban transport programmes. However, ELENA is far more engaged with building and EE project services with far more supported projects West of Vienna than to the East.¹³

In addition, European PPP Expertise Centre (EPEC) provides upstream transport sector PPP project support to public authorities and works with JASPERS on blending issues as required. It also serves as a conduit for feedback from its members to the European Commission on development of regulations for blended projects, stock-taking of blended projects and case studies.

GOVERNANCE AND PUBLIC PROCUREMENT HURDLES

This section will emphasize some of the key findings from recent ECA reports that highlight the challenges facing project development in the region.

As far as advisory services, the ECA was not satisfied with the definition of JASPERS' main objectives, roles and responsibilities and linked a weak IQR function to a high risk of impartiality.¹⁴ Of particular

¹³ Investments to support the use and integration of innovative solutions for alternative fuels in urban mobility and investments to introduce on a large scale new, more energy-efficient transport and mobility measures in urban areas. (<https://www.eib.org/en/products/advising/elena/index.htm>)

¹⁴ <https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=44532>

concern is its finding that JASPERS did not impact MS independent administrative capacity or overall absorption of EU funds.

While the 2017 ECA¹⁵ report is mostly satisfied with the European Commission’s protection of the Cohesion policy area of the EU budget, the year before it reported systemic weaknesses in MS monitoring of infrastructure projects: data gaps, weakness in project preparation by promoters (explained by poor ex ante assessment), deficiencies in implementation (administrative delays) and weakness caused by capacity constraints. It found that all key infrastructure projects identified in the three audited Member States (Lithuania, Slovakia and Bulgaria) had experienced delays.¹⁶

Case studies in Spain, Czechia, Greece and Romania reaffirm capacity constraints for MAs in project application evaluation attributable to inadequate resources available to attract qualified expertise and staff. Furthermore, understaffed MAs perpetuate risk aversion and lead to strict interpretations of the selection criteria that further limits project approval. A common refrain from stakeholders is that staff reductions in public administration has been detrimental to quality of projects and their bankability, and more acute in CEE than Western Europe. Many trained officials benefitting from JASPERS services leave the administrations for more visible positions in the consultancy market.

At the same time, aside from large scale infrastructure, case studies also point to serious capacity constraints amongst project promoters in delivering proposed interventions, particularly

lack of management capacity to deliver proposed investment and overestimated capacity to implement the project and incorrectly assessed budget.

Lastly, ECA refers to the litany of competency issues at the government level arising from: frequent changes in the regulatory framework on public procurement; limited coordination between relevant MS authorities; capacity constraints, exclusive attention to price to the detriment of quality; artificial splitting of project budgets to allow bypassing of open tenders; and corruption.

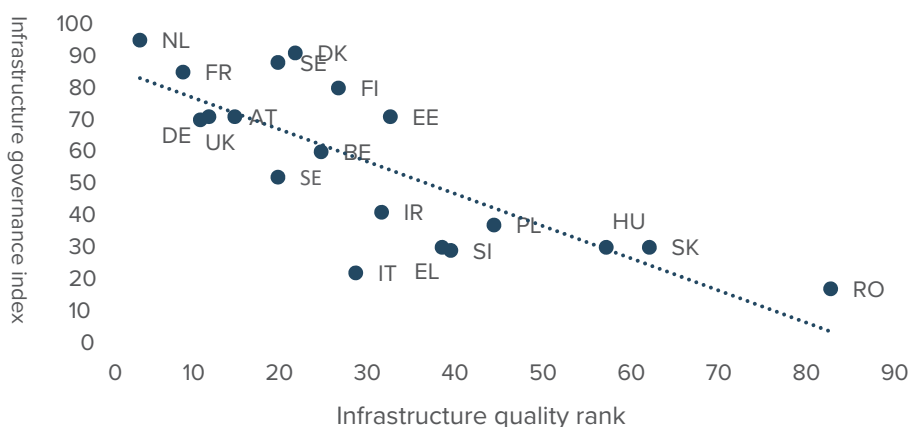
On this last item, European Anti-Fraud Office (OLAF) confirms the prominence of fraudulent public procurement with regard to irregularities affecting structural funds. It provides examples from Croatia, Czechia, Slovakia and Hungary, calling for a recovery of EUR 228 million from Hungary’s road transport public procurement.¹⁷ In relation to structural funds, OLAF also referenced institutional collusion between the winner of a tender and the consultant or beneficiary of the funding.

The following scatter plot (Chart 2) demonstrates the direct correlation between strong infrastructure governance and infrastructure quality and relatively lower ranking of CEE MSs.

Especially at the municipality level poor infrastructure quality is associated with external financing constraints and lack of technical capacity to select and implement complex projects. Shifting outlays from long-term strategic investment towards current expenditure reflects political short-termism spending pressures, and the sectors most negatively affected

Chart 2

Infrastructure quality and governance across EU MSs



Source: World Economic Forum, Global Competitiveness Indicators (2017)¹⁸

15 https://www.eca.europa.eu/Lists/ECADocuments/LR17_01/LR_ENERGY_AND_CLIMATE_EN.pdf

16 https://www.eca.europa.eu/Lists/ECADocuments/SR16_08/SR_RAIL_FREIGHT_EN.pdf

17 https://ec.europa.eu/anti-fraud/sites/antifraud/files/olaf_report_2016_en.pdf

18 https://www.eib.org/attachments/efs/economic_investment_report_2018_key_findings_en.pdf

by sluggish infrastructure investment are information and communication technology (ICT) and transport. A strong dependence on transfers and EU funds might also limit the willingness of those municipalities to invest in their infrastructure.

As for the Commission's own recent review, it notes the successful implementation of CEF and echoes problems arising from delayed permitting and capacity constraints limiting project preparation at the national level. It highlights five important obstacles emerging from stakeholder consultation: lack of available EU budget, followed by lack of available budget for the national funding from the beneficiaries, obstacles delivering complex (cross-border) infrastructure on time, obstacles relating to the granting of permits/regulation and lastly administrative burden.¹⁹ The Commission also noted that CEF project procurement is often carried out without the necessary skills, technical knowledge or full procedural understanding.

Governance over procurement is another area of particular concern for CEE MSs. According to the European Commission, public procurement represents 14% of EU GDP and 50% of ESIF.²⁰ According to the Single Market Scorecard (Chart 3), 13 MSs are rated unsatisfactory than average/satisfactory against nine indicators measuring performance in public procurement.²¹

Overall EU public procurement performance

EU-level feedback suggests that an inclusive assessment of procurement practices is limited by differences in practices between MSs and at national, regional and local levels. Subnational governments play a key role in infrastructure provision, accounting for about half of investment in EU, and yet tend to possess more limited resources.

EU PPP investment fell to EUR 6 billion in 2017 compared to EUR 30 billion in 2005 due in part to very cautious political attitudes during recovery from the EU financial crisis, but²² also because the substantive procedural requirements for notification, monitoring or reporting of state aid are not applied to EU and EIB funding. For example, MSs could play a key role in 'topping up' IF funding after selection, but promoters are weary of increased administrative complexity and breaching state-aid rules. Related EPEC services are reportedly underused by MSs. As a case in point, Poland's June 2019 clean air fund was proposed exclusively under the competency of the Ministry of Environment, precluding it from other ministries and their plan to involve commercial banks, which play a key role in mobilizing sufficient capital markets to help MSs move away from over dependence on limited European funding.²³

Chart 3



Please refer to European Commission Single Market Scorecard (2017) description of performance indicators and methodology

19 https://eur-lex.europa.eu/resource.html?uri=cellar:09ee17cb-10df-11e8-9253-01aa75ed71a1.0001.02/DOC_1&format=PDF

20 [http://www.europarl.europa.eu/RegData/etudes/STUD/2018/621789/IPOL_STU\(2018\)621789_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/621789/IPOL_STU(2018)621789_EN.pdf)

21 http://ec.europa.eu/internal_market/scoreboard/_docs/2017/public-procurement/2017-scoreboard-public-procurement_en.pdf

22 https://www.eib.org/attachments/efs/economic_investment_report_2018_key_findings_en.pdf

23 <https://www.euractiv.com/section/air-pollution/news/polands-multi-billion-euro-clean-air-quest-in-peril/>

SECTION 2: AN ALTERNATIVE APPROACH TO FINANCING CEE CLEAN URBAN MOBILITY

IS CAR-BASED MOBILITY THE ONLY WAY TO MOVE AROUND?

With two countries, namely Slovakia and Czechia, as the global car production leaders expressed in per capita terms, in a region deeply imbedded in conventional car part production and supply chain, one might imagine that this strong dependency would naturally force it to grasp the mobility challenge by observing global trends in the automotive industry. And one would be not far from the truth, as most of the regional expert discussions start and end with the premise that the changes in the sector will have a profound impact on the regional competitiveness and capacity to generate new jobs.

Of course, the rapid changes happening in the area of car innovations, charging infrastructure development and uptake of new business models, should make us think twice about what kind of roadmap governments, regions and industrial actors start sketching. Nevertheless, one should not forget, that in order to solve the problem, we first need to better define it, understand it, and start co-creating a solution which is more systemic and holistic. Such solutions might position the whole concept of cars rather at the very end of the headline. As in order to bridge the clean air divide between the West and the East, electric mobility might not be the only and best way to tackle the problem.

In fact, there are more elaborate ways which paradoxically exclude the use of cars, even if they are electric. This way the public authorities aim to free the citizens from cars overtaking the public space and focus on creating much more liveable public spaces. Furthermore, this leads us to a question: Are there better ways to invest the international and national financing instruments for creating less polluted and more liveable cities than supporting the transition

towards electric based car mobility? In regional and urban areas, shouldn't the policies rather support the transition towards more sustainable mobility independently from the modality? This is the question which we are trying to answer by providing specific regional and international benchmarks and best practices.

SUSTAINABLE URBAN DEVELOPMENT: PATHWAY TOWARDS LIVEABLE CITIES OR LEARNING FROM THE BEST

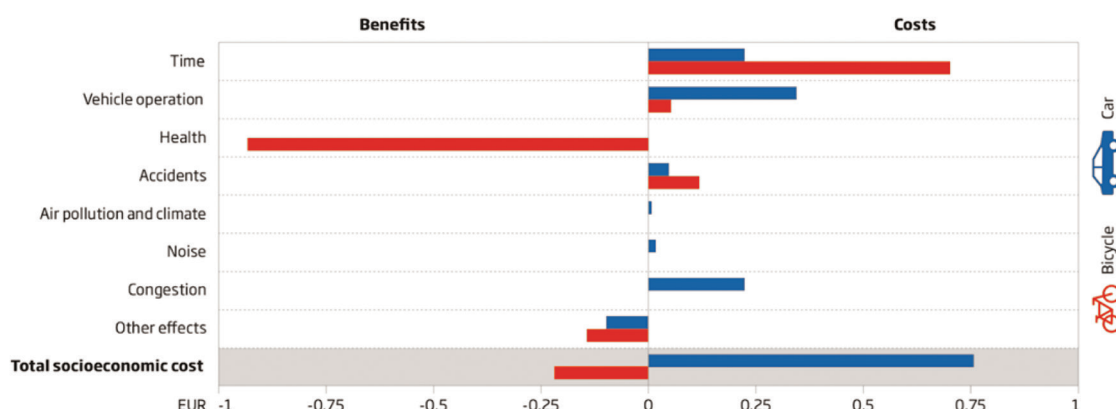
In all EU countries, car travel has increased over the past 20 years, but on the city level, some reduce the share of car travel by facilitating low-carbon mobility and discouraging car travel. Paradoxically, cities with higher per capita incomes tend to be less dependent on cars, while cities in the V4 region, namely in Poland and Slovakia, tend to rely on cars more. To a certain extent and with few exceptions, there could be a relationship resembling the shape of Kuznet's environmental curve.

Copenhagen and Amsterdam represent some of the finest examples of how to merge sustainable urban development and mobility. "By integrating different modes of transportation, urban planning can address climate and environmental issues such as private car use and congestion, for instance through increased public transport and facilitating greener alternatives, which saves both time and cost for people and society."²⁴ Both Copenhagen and Amsterdam are cities with more than 50% proportion of cycling on the daily commuting, compared to less than 2% in Bratislava.

²⁴ State of Green (2016): Sustainable Urban Transportation - Creating Green Liveable Cities, page 3

Chart 4

1 km by car moved to bicycle = 1 EUR in socio-economic benefit



A cost-benefit analysis of a 1 km cycle journey at a speed of 16 km/h in Copenhagen rush hour shows a socioeconomic benefit of 0.22 EUR per km. In comparison, the socio-economic loss of a 1 km car journey at a speed of 50 km/h corresponds to 0.70 EUR. The total saving in cost therefore corresponds to EUR 1 per travelled km. (Source: Copenhagen Bicycle Account 2014)

For instance, Copenhagen has a goal by 2025 that 75% of journeys will be executed on foot, by bike or by public transport. In order to support this goal, the Danish Road Directorate has administered a subsidy scheme of DKK 1 billion (approx. EUR 120 million) known as the “Cycling Fund”, which facilitates projects that improve the conditions for cyclists and make cycling a more favourable mobility option. These kinds of ambitions do not only relieve congestion, but reduce pollution and noise, and provide more green spaces, cleaner air and healthier lifestyles (Chart 2). In addition, they also accelerate economic opportunities for testing world class services and infrastructure and so promoting global export of both Dutch and Danish know-how.

Amsterdam has designated a “Mobility Plan for Amsterdam in 2030” with a focus on creating more space in the city centre by cancelling traditional parking spaces, further restricting car traffic and introducing 30 km/h zones. On the contrary, public transportation services and better cycling routes and cycling crossings should be further promoted. This way Amsterdam aims to remain as a safe, liveable city, and to keep its public spaces accessible and appealing. Or in other words, Amsterdam is moving from individual to collective forms of mobility, so cars are no longer to be owned.²⁵

Local and municipal governments in the V4 countries are facing rather a behavioural type of a challenge. The recent increase in car ownership, particularly in Poland and Slovakia, has been considerably faster than in the other EU countries. The parking problem has been tipping and cities are introducing new

parking policies which should encourage better use of public spaces and also get citizens back to public transportation means. First results in the city of Trencin (Slovakia) indicate that by introducing new parking policy, with annual fees for the residential parking, the city was able to decrease the occupancy for residential parking places in the city centre to about 50% of the total capacity. Besides, the city immediately reversed the annual fall in the use of public transportation from -3% to a slight increase of 1%. It seems that this type of policy will be further introduced in the region, allowing cities can deal with the pressing parking problem and moreover better utilize their public spaces and public means of transport.

FROM OWNERSHIP TOWARDS SHARING: IS THE REGION READY?

Cities like Amsterdam and Helsinki have a clear ambition. They want to prove to their citizens that there are better ways to move around the city more easily and flexibly than owning a car. This kind of flexible mobility system, which combines alternative modes of transport and from the user experience point of view doesn't compromise the needs to get somewhere fast, conveniently and cost-effectively, is becoming a future hope for cities to provide the door to door experience which outperforms the ownership of a car.

Amsterdam has been exploring opportunities to reduce the dependency on car ownership. Sharon

25 <https://www.amsterdam.nl/en/policy/polic>

Dijkma, Deputy Mayor for Traffic, Transport, Water and Air Quality, explained the city’s plans for the coming years. “We want more space and better air quality, therefore it is necessary to reduce the space for cars in the city in favour of cyclists, pedestrians and other modes of transport.” In order to achieve this, a variety of new concepts are being tested. For example, in many neighbourhoods “eBuurthubs” will be developed together with residents. These are places where different types of sustainable mobility will be clustered, allowing alternatives to private car ownership (such as e-bikes and shared cars) to become more accessible.” There was even an experiment conducted, in which 70 people handed in their car keys in exchange for a budget to be spent on alternative modes of transport. One of the most surprising conclusions was that none of the participants finished the EUR 500 budget. Furthermore, one-third of the participants decided to give up their car after the experiment. Such results illustrate that being less car-dependent is absolutely a feasible option.²⁶

Uber has revolutionized the way we commute by easily booking a ride. But the ambitions of Uber and similar ones are not just to provide car rides, but rather the overall mobility experience, independent from the modality. Moreover, one does not pay for individual parts of the ride, but rather cover it all at once, no matter if it is continued from train to a cab. The perfect synchronization of the real-time data, ride schedules and payment interfaces are essential, so the customer just focuses on where to get and not on how to get there. Helsinki has taken a similar

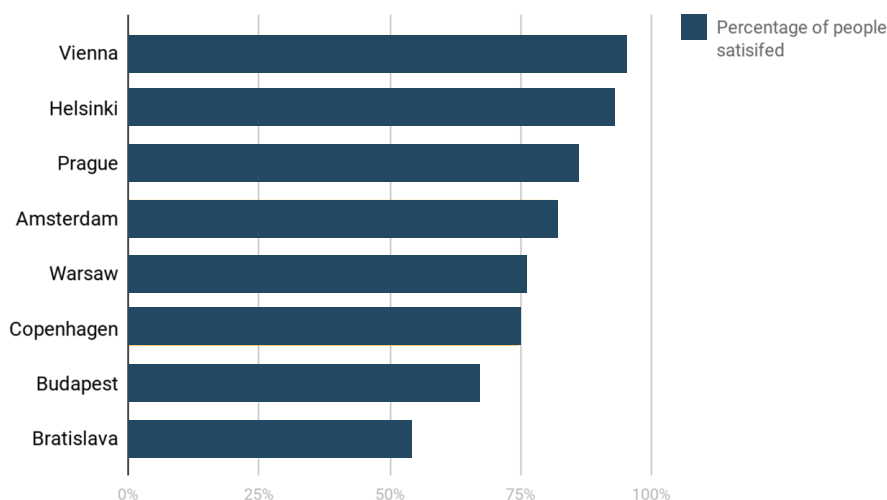
path with Whim, mobility as a service provider, which focuses on giving the best user experience by providing a list of all the feasible options for getting from point A to a point B. One can either pay for each trip individually, or with a subscription of EUR 499 per month, there is unlimited access to a car, taxi, public transport, or a city bike. This way Helsinki aims to make the car ownership unnecessary by 2025. But in order for such a system to function effectively and flawlessly, every of its part must perform extraordinarily, otherwise e.g. poor satisfaction with public transportation (Chart 3) could discourage the use of the overall service. Therefore user-centric involvement in improving the quality of each integrated service is very essential.

The private and public partnership can also further enhance sustainable choices by e.g. motivating employees to prefer less costly and potentially more sustainable options. Monthly mobility budgets can be a good incentive, as if the budget is not spent fully, the remaining part of it can be retained by the employee in the form of cash. This way employees choose public transportation or bike rather than a car and save the remaining part of the budget as an additional private income.

Budapest or Prague are regional benchmarks in terms of adopting new mobility policies, which for instance support e-carsharing and bike-sharing options, making it easier for people to switch modes and reduce energy use. To encourage people to share rides, walk or cycle, these modes should be also safe, fast and convenient.

Chart 5

Percentage of population satisfied with public transport in their city



Source: EUROSTAT, 2016

26 <https://amsterdamsmartcity.com/posts/will-the-cities-of-the-future-be-car-free>

The key success factors of a public bike-share scheme:²⁷

- ▶ A sufficient network size and density with stations at strategic locations;
- ▶ Simple design, handling and registration modalities;
- ▶ Good design of bicycles and stations;
- ▶ Good cycling infrastructure with high levels of road safety; and
- ▶ Links to the public transport system and other modalities, like car sharing.

Particularly in Budapest, with 600 thousand car trips per day for only 1.7 million inhabitants, the city need to better integrate cycling into its public transport system.²⁸ The Budapest Bicycle – named ‘BUBI’ by popular vote – was initiated in September 2014. It received a funding of EUR 3.5 million with the major portion coming from ERDF. Since then, the bicycle-sharing services have been extended and expanded, reaching 2.5 million individuals, mostly short trips by October 2018. Since the project began, the number of registered users has surpassed 65,000 and BUBI bikes have clocked up over 5 million kilometres. The users have been motivated to switch from private cars to traditional public transport combined with public bikes as a first and last mile solution, while for a 30-minute period the service is free-of-charge, as an extra incentive.

CONCLUSION

Alternative urban mobility solutions

Although regional dependency on the automotive industry is profound, there are other related policy areas outside of passenger vehicles that can help the region first overcome the clean mobility gap and second introduce innovative features into urban planning.

The following points capture the most relevant aspects of such policies:

- ▶ Focus on defining the problem without favouring a specific modality, especially considering limitations of municipality budgets, it is important to integrate all modalities, and thus sustainable urban planning can address climate and environmental issues;
- ▶ Restricting car use in urban areas revives public spaces, prevents congestions, and increases the liveability and healthiness of urban environments;
- ▶ Mobility as a service concept provides a user-centric experience in moving from a place A to a place B, once flawless and easy to use, it becomes a better alternative in comparison to car ownership and should be complimentary to mass transit transport modes;
- ▶ Public and private sectors need to co-create optimal solutions as the challenges can never be solved just by one of them;
- ▶ The quality of public transport is essential in solving the mobility challenges and improving the overall experience from integrated modalities, therefore a more user-centric approach needs to be adopted to improve the general perception;
- ▶ A good bike-sharing scheme is about integration with other modalities and cannot be perceived as an isolated system, thus requiring more than just well-designed bikes but accessible web app interfaces and good cycling infrastructure;
- ▶ The V4 and CEE region has already initiated good practices and regional cities like Vienna serve as top international benchmarks, therefore there are good predispositions for promoting sustainable mobility.

27 European Union (2016): The State of European Cities 2016 - Cities leading the way to a better future, page 134.

28 https://ec.europa.eu/regional_policy/en/projects/hungary/budapest-bikes-bubi-on-the-right-path-to-more-integrated-public-transport

Cohesion Policy investment pathway

It became clear from the Polish-hosted COP 24 Just Transition Silesia Declaration to the June 2019 EUCO Summit that an EU-level political agreement committing to 2050 carbon neutrality will be contingent on concrete financial outlays that help CEE countries manage the social costs of transition, especially in the transport sector from combustion to alternative fuel vehicles and energy carriers. The Commission's proposal for future EU Cohesion Policy programmes focuses on two areas of particular relevance to greening the automotive industry:

- ▶ “Smarter Europe”: MSs and regions invest more into their strongest competencies in line with smart specialization strategic priorities. Special focus of supported activities include innovation diffusion, adoption of new technologies, digitalization, innovation management and skills for the future. This will help enterprises within the automotive production value chains to become more competitive and participate in industry 4.0;
- ▶ “Greener, carbon free Europe”: Given that the automotive sector is usually energy intensive, this policy objective focuses on ensuring a fair transition by supporting SMEs to improve energy efficiency or adapt circular economy approaches.

In this manner, the EU Cohesion Policy can strengthen its support for just automotive industry transition processes towards a more sustainable competitive Europe on the path to 2050 carbon neutrality.





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