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- City Changers Conference, Jihlava 18.05.2022
- Innovation and SUMP outputs of the Dynaxibility4CE project
- Rupprecht Consult Wolfgang Backhaus, Daniel Franco, Marlene Damerau

DYNAXIBILITY4CE



Project in a nutshell

- Interreg CE 4th call capitalisation of combined project outputs
- Focus on low-carbon mobility and air quality priority
- 11 partners from 7 countries two PPs outside CE area: RC (DE) & Polis (BE)
- Start: 01.03.2020 28.02.2022 (31.05.2022.)
- Budget: 1.320.446,00 EURO
- **ERDF:** 1.072.229,19 EURO



DYNAXIBILITY4CE



Involved projects & Initiatives

Interreg Central Europe









Other Interreg



Horizon 2020

























Other







SUMP Guidelines Topic Guides & Tools

And many more ...



DYNAXIBILITY4CE



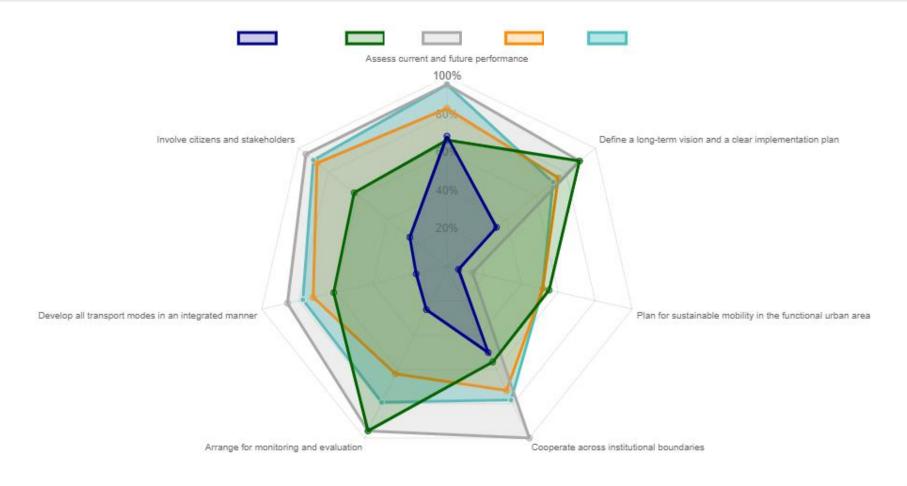
Objectives & Outputs

- To develop further, update and/or contextualise several Sustainable Urban Mobility Plan (SUMP) topic guides for planning for new mobility trends (strategies); incl.: Cooperative, Connected and Automated Mobility (CCAM), Urban Vehicle Access Regulations (UVAR) and Mobility as a Service (MaaS) for sustainable mobility and improved air quality in functional urban areas.
- To provide **trainings and tools** to increase Dynaxibility in partner cities and regions to identify knowledge gaps and matching capacity building needs to develop **action plans** for planning and developing new mobility services in PPs FUAs.
- To support SUMP task force uptake in CE area countries and improvement and further development of existing CE SUMP Competence Centre including new elements of mobility trends (CCAM, MaaS, UVAR) and related low carbon mobility planning methods and policies.



ANALYSIS OF SUMP SELF-ASSESSMENT ANSWERS FROM CZECH CITIES





0%-33%: More efforts are needed!

34%-66%: You're on the right path!

67%-100%: Congratulations!



PLANNING FOR CONNECTED, COOPERATIVE AND AUTOMATED MOBILITY (CCAM) IN SUMP



Topic Guide: CCAM planning in SUMP

Progress and key achievements:

Topic Guide: CCAM in SUMP → Aug/Sept 2022

Review of Practitioner Briefing and literature research

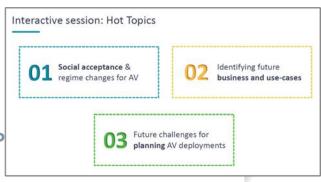
CCAM in SUMP workshop (April 2021): in cooperation with PAV and ART-Forum projects.

□ Identification of knowledge gaps, key challenges and references, feedback from local authorities AV-Winter Academy (POLIS Conference 2021, Gothenburg): in cooperation with PAV, ART-Forum, Ride2Autonomy projects

Webinar on Demand-Responsive Transport in cooperation with Smacker project







HOW TO GUIDE EFFECTIVE PLANNING OF INNOVATIVE MOBILITY SOLUTIONS







The concept of "automation-readiness" is defined as:

The <u>capability</u> of making structured and informed decisions about the deployment of CAVs in a mixed road environment.

www.h2020-coexist.eu/resources/

Developing capacities and resources to guide informed decision-making

Needs to be tailored to current needs and conditions from FUA



CCAM IN SUMP WORKSHOP



Dynaxibility4CE

Robust **impact** assessment (incl. socioeconomic, environmental, etc.)

Functional & operation requirements (ODD, PDI needs per service model)

Integration with PT (avoid unsustainable competition / car-dependency)

> **Implementation** scenarios & service models

Understand & effectively respond to societal needs

Strategic allocation of (transport) resources and policy priorities

User-centric planning process & solution design

Effective public participation in complex and uncertain field

No-regret (or limited-) policy measures

Physical & digital infrastructure

Challenges and knowledge gaps for CCAM planning

CCAM in freight & urban logistics

FUA perspective (incl. rural & sub/ peri-urban areas)

> Harmonisation / Standards

Cost/ benefit

> Data management governance & protection

Legal and regulatory framework

Functional & operation requirements (ODD, PDI needs per service model)

Harmonisation / Standards

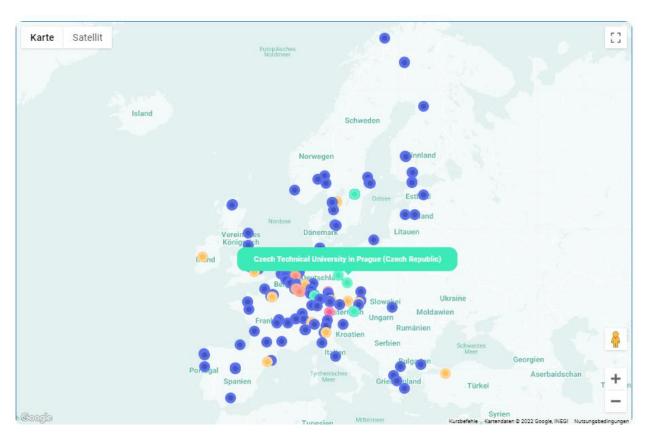
Multi-actor cooperation models

Integrated innovative mobility concept (C-ITS, MaaS, on-demand, sharing) Regulation as policy tool (alignment with SUMP goals)



CCAM - STATUS IN CZECHIA





Research and industry-driven

The local level is involved (Public Transport companies in C-ROADS project) but planning itself does not seem to be a priority (yet)

https://www.connectedautomate
ddriving.eu/



CE SUMP 2.0 TOPIC GUIDE: UVAR IN SUMP



2 Action plans for the involved FUAs on integrating UVAR into their SUMP: Parma and Krakow

Considering the UVAR Topic Guide is still relevant, it was decided to complement it with an ANNEX.

Annex content:

- Planning for Functional Urban Areas (FUA)
- Dynaxibility case-studies: Krakow (LEZ) and Parma
- Central Europe Best Practices
- Operational library of tools and





UVAR and SUMPs

Regulating vehicle access to cities as part of integrated mobility policies



UVARS - DEFINITION



UVARs can be broadly defined as 'measures to regulate motor vehicular access to urban infrastructure'.



Spatial interventions: access regulations based on area planning and design, and physical interventions in the public realm, e.g., school street, cycling street, traffic filter, removing parking or road space, cycling lanes



Pricing measures: financial charging for access to specific areas, e.g., congestion charge, pollution charge, parking charge, urban logistics charge



Pathways towards LTZ/LEZ/ZEZ: zones where all vehicles need to meet a set emission standard (LEZ/ZEZ) or zones that can only be entered with a granted permit (LTZ), e.g., regulation by emissions, regulation by vehicle type and/or dimensions, regulation by trip purpose, regulation by time



Future options: possible tools and emerging technologies that cut across all measures, e.g., geofencing, connected vehicles, dynamic traffic signalling





WHY CONSIDER FUNCTIONAL URBAN AREAS WHEN PLANNING UVARS?

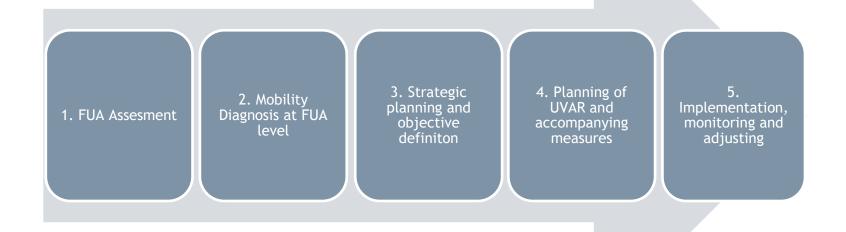


- Identify problems perceived by those relating to passenger and freight transport at FUA level, to resolve such problems and to promote environmental-based and cost-effective mobility at FUA level.
- Fragmented governance arrangements can hinder transport
 development and even adversely affect productivity in cities. Working
 at FUA level gives Public Authorities the ability to consider the
 administrative fragmentation within the urban or metropolitan level.
- Restricting the access of vehicles to one urban core can potentially impact (negatively) the accessibility of the whole FUA that interacts with it. Accessibility should be assesed and planned at FUA level.



HOW TO PLAN FOR UVARS IN FUA: STEP BY STEP PROCESS





Stakeholder engagement strategy FUA



DYNAXIBILITY KRAKOW ACTIVITIES



- **FUA assessment:** diagnosis workshops, analysis of LEZ and UVAR guidance and solutions, analysis of existing policies and plans (local, province and national levels)
- **Stakeholder consultation:** a multistakeholder process that included different departments at the city and transport authority, FUA municipalities, NGOs, citizens, businesses, Police...
- UVAR definition: assessment of different UVAR scenarios lead to the decision to implement a LEZ area, to be approved by city council after a public consultation process to define the requirements and transitional stages.
- Definition of supporting mobility measures for residents in LEZ area, in FUA outside LEZ area and for entrepreneurs and local businesses (new bicycle infrastructure and sercices, enhanced Public Transport, bike sharing services...)
- □ **Design of information campaign** and public consultation of the LEZ proposal to finalize the project to implement LEZ in Krakow.



UVAR IN CZECHIA



- Only Prague & Brno have forms of UVARs
- National legislative framework:
- § 14 of Law no. 201/2012 Coll., on the protection of air purity and by a Government Decree 56/2013 Coll.,
- If desired, cities can set up access regulations
- Average age of cars is 15.3 years (EU: 11.8)





CZECH EXAMPLE: BRNO



BRNO



- Vehicle ban only in historic city centre
- Small area (less than one square kilometer)
- Most area is pedestrianised
- Access only for:
 - □ Residents
 - □ People with disabilities
 - □ Delivery (food during lunch hours)



Brno City Centre

□ Public transport (between 6-16:00 only with a permit)



TAKING COOPERATION FORWARD

3



FINAL OUTPUTS



UVAR Annex SUMP Topic Guide

To be published in August 2022, translated to several CE languages, available in the ELTIS repository, SUMP-central and Dynaxibility's website

- ☐ Air quality data collection guidelines

 To be published in August 2022, available on SUMP-Central and Dynaxibility's website
- Krakow and Parma's action plans
 To be published in August 2022, available through Dynaxibilty's website



PLANNING FOR MOBILITY AS A SERVICE (MAAS) IN SUMP



Integration of societal goals 4 Policies, incentives, etc. UbiGo Integration of the service offer 3 whim Bundling/subscription, contracts, etc. **HANNOVERmobil** Integration of booking & payment: smi)e einfach mobil Single trip - find, book and pay moovit Integration of information: Multimodal travel planner, price info No integration: Single, separate services sunfleet 📶



FOCUS 1 - Stakeholder engagement and demand analysis

- How to reach car users, it's a full-time job
- Work at micro-level: policies don't change behaviors as much as services do
- Design infrastructure for MaaS (mobility hubs)
- Make people choose (test days)
- Find allies (mobility managers), create trust





FOCUS 2 - Data availability, quality, standardization, sharing and management

- Create incentive for data sharing
- Transparent algorythms, open APIs
- Standardize the way you create and integrate data
- Ask only for data you need





FOCUS 3 - Incentive measures and schemes supporting take up of MaaS

- Stick and carrot, be creative!
- Monetary: public calls for development, lump sums
- Focus on operators, supporting development, offering business or legal guidance etc.
- Users: focus on user experience rather than sustainability
- Remember: "if you'll have to think, you'll get in the car"





FOCUS 4 - How to involve traditional and new service providers in the ecosystem

- Manage spatial planning to make MaaS work
- Demand Responsive Transport supporting PT offer
- Variety
- MaaS is about ecosystem, societal goals can be pursued by services



FUA GRAZ - STYRIAN CENTRAL REGION





MAAS IN FUA GRAZ - PREPARATORY STEPS

Framework conditions of technical implementation

MaaS target groups and mobility needs in FUA Graz

Possible components of a MaaS App

Analyses

Scenario development: mobility configurator (Modular principle instead of flat rates)

Stakeholder engagement, strategic alliance building: MaaS-Steering group for the Styrian Central Region

Objectives

Positive influence on individual mobility patterns in FUA

Shifting the share of private motorized transport to environmentally friendly mobility

Interregional cooperation and stakeholder involvement

Bundling of all mobility offers through further development of the existing app GrazMobil

Orientation of the MaaS offer according to the needs of the users and target group-oriented communication

Baseline: mobility situation, problem definition



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WELCOME to the SUMP-Central!

We are the central European competence centre for sustainable urban mobility planning (SUMP).

Our platform provides you with knowledge, resources and content to support the development of a SUMP for Central European countries.

Click on "countries" to discover country-specific information, news and the central European

CIVINETS that want to establish low carbon mobility schemes!



News

What is happening in the field?

Find out more

https://sump-central.eu/



CONCLUSION



- MaaS offers a good development perspective for PT, can have great relevance for also for Czech cities (maybe especially)
- Trend topics (MaaS, CCAM) or "difficult" topics (UVAR) can be integrated into planning if seen from the "pig picture" perspective of a SUMP
- We are open for good practices from Czechia on the mentioned topics



WEBINAR INVITATION...



"How to plan for CoEXistence: Cooperative Connected and Automated Mobility (CCAM) & Walking and Cycling - opportunity or risk?"

Date: May 30, 2022

Time: 14-17:00

Registration:

https://attendee.gotowebinar.com/register/8077627467756400652

After registering, you will receive a confirmation email containing information about joining the webinar.





- Rupprecht Consult
- Tank you for your attention!
 - Marlene Damerau, <u>m.damerau@rupprecht-consult.eu</u>