SUITS

Building Small-Medium (S-M) LAs' to introduce Innovative Transport Schemes

Presentation

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SUITS Capacity Building Programme
Outline of the course

Welcome session

Chapter 1: Introduction

Chapter 2: Innovative Transport Schemes (InnoTS)

Chapter 3: Value for S-M cities (Challenges, Benefits and Beneficiaries)

Chapter 4: Successful Case studies of SUITS cities or Best practices

Chapter 5: Innovative financing , procurement, partnership

Chapter 6: Business Model Canvases

Chapter 7: Process and implementation aspects

Chapter 8: Available tools and guidelines

This material is result of WP5 of SUITS project

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Terminology

The following terms will be extensively used throughout the course:

- **SUITS:** “Supporting Urban Integrated Transport Systems: Transferrable tools for Authorities”
- **CBP:** “SUITS Capacity Building Programme”
- **SUMP:** “Sustainable Urban Mobility Plan”
- **LAs:** “Local Authorities”
- **S-M cities:** “Small-medium size cities, i.e. cities with population ranging between 50,000 and 250,000 residents in their urban centre.
- **BMC:** “Business Model Canvas”
- **MaaS:** “Mobility as a Service”
- **InnoTS**: “Innovative Transport Schemes, i.e. car-sharing, car-pooling, bike-sharing, MaaS”

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Chapter 1: Introduction

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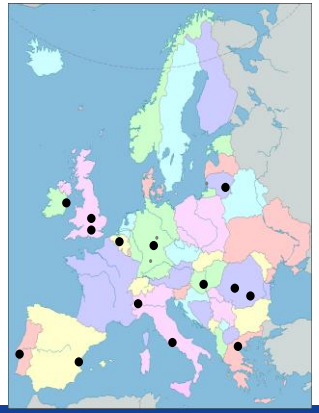
SUITS
Supporting Urban Integrated Transport Systems: Transferable tools for authorities

- **Funded under:** H2020-EU.3.4. - SOCIETAL CHALLENGES - Smart, Green And Integrated Transport
- **Topic:** MG-5.4-2015 - Strengthening the knowledge and capacities of local authorities
- **Funding scheme:** RIA - Research and Innovation action
- **Coordinator:** Coventry University
- **Total cost:** appox. EUR 4M
- **Duration:** 4 years (From **Dec 1st 2016** to **Nov 30th 2020**)
- **22 Partners** (see map)
- **Project Website:** http://www.suits-project.eu/

Coordinator

- UK: Coventry University Participants
- UK: Arcadis, Transport for West Midlands
- Italy: Politecnico di Torino, RSM, Eurokleis, Citta di Torino
- Ireland: Interactions
- Greece: Lever, Sboing, Makios, Municipality of Kalamaria
- Spain: ITENE, INNDea
- Romania: Integral Consulting, Municipality of Alba Julia
- Portugal: VTM
- Hungary: Logdrill
- Germany: Wuppertal Institute, Technische Universistat Ilmenau
- Lithuania: Smart Continent
- Belgium: SIGNOSIS



22 Partners

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Main objectives of SUITS Capacity Building

Overall aim: To increase the capacity of S-M local authorities to develop and implement sustainable, inclusive, integrated and accessible transport strategies, policies, technologies, practices, procedures, tools, measures and intelligent transport systems that recognize the end-to-end travel experiences of all users and freight

Support Small Medium Local Authorites in developing SUMPs by:

- Transforming them into learning organizations;
- make transport departments resilient and responsive to new challenges and changes;

Without capacity building and the transformation of transport departments into learning organisations, training materials will not provide the step change needed to provide innovative transport measures.

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Expected outcomes of SUITS project

Transformation of transport planning departments in Small Medium cities into change agents. Through development of:

- A validated capacity building programme for transport departments,
- Resource-light learning assets (modules, e-learning material, webinars and workshops), based on stated needs
- Decision support tools to assist in:
  - procurement,
  - innovative financing,
  - engagement of new business partners,
  - handling of open, real time and legacy data.
- Better Integration/use of freight and passenger data

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Course Framework: SUITS Project
Modules

- Module 1: "Building S-M LAs' capacity to implement emerging transport technologies" (ITS, Electric mobility, CAVs etc.)
- Module 2: "Building S-M LAs' capacity to introduce innovative transport schemes" *(MaaS, Uber, Business Models etc.)*
- Module 3: "Building S-M LAs' capacity to implement urban transport safety & security measures for all/vulnerable users*"(passenger and freight vehicles etc.)*
- Module 4: "Building S-M LAs' capacity to implement urban freight transport measures"(SULPs, Crowdshipping, cargo bikes etc.)
- Module 5: "Data collection and analysis tools for integrated measures".
- Module 6: "Innovative Financing, procurement and business models".

Modules 1,3, 4: Delivered as classroom courses
Module 2: delivered as classroom course and webinar / e-learning
Modules 5, 6: delivered as e-learning courses / webinars

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Digital badges

Following the completion of the workshop exercises, you are entitled to **SUITS digital badge!**

It will be sent directly to your email account through the https://mydigitalbadges.net/ platform. There is information encrypted in the picture related to the course.

- save this picture (badge) as png file.
- create an account on Mozilla's backpack https://backpack.openbadges.org/backpack/welcome
- upload the badge

This is the place where you can store all badges you receive from SUITS but also from other webinars, e-learnings etc.

The platform, developed by our partner SBOING, can be used by multiple organizations (local authorities, companies, institutions, etc.) to design, issue, award, display and manage their own digital badges.

Module's purpose

Overall module's aim: To increase the capacity of S-M cities, to implement and monitor the Innovative Transport Schemes (InnoTS) measures throughout policymaking, budgeting, designing and facing the current challenges when implementing these measures.

In particular aims at:

- **Increasing the understanding** about the value of InnoTS in our cities, the effects/cost of lack of urban mobility regulations, the operators and the economy of the city and about the concept and methodology for developing InnoTS measures while being able to recognise or find out the needs of urban freight transport users

- **Building specific skills** regarding how success of the measures can be ensured
  - By convincing stakeholders and by overcoming financial, legal, administrative and technical barriers

Specifically, the course is designed to:

- **Strengthen cooperation** between LA's staff
- **Advance local priorities** on InnoTS
- **Offer** concrete practical **tools** and **guidance** to better implement these Schemes

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Introduce yourself…

Choose the mobility mode you use to move in your everyday life

What are your expectations from this workshop?

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Chapter 2: Innovative Transport Schemes (InnoTS)

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Short description of Innovative Transport Schemes

Car-sharing

Car-sharing is a form of transport by which several persons in turn make use of one or more collective cars.

This can be arranged both by the parties mutually and by a car-sharing provider [1].

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Short description of Innovative Transport Schemes

Ride-sharing (carpooling – vanpooling)

Ride-sharing is the concept of "offer a ride" on vehicle where seats are available.

It covers various options, the most common is when the owner of a vehicle has a predetermined journey and offers a seat to passengers going in the same direction in exchange for sharing the costs of the journey [2].

In this way, the additional mileage is minimised. Carpooling generally uses participants' own automobiles [3].

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Short description of Innovative Transport Schemes

Bike-sharing

Bike-sharing schemes can be defined as 'short-term urban bicycle rental schemes that enable bicycles to be picked up at and returned to any self-service bicycle station, which makes bicycle-sharing ideal for point-to-point trips.

The basic premise of the bike-sharing concept is sustainable transportation and they differ from traditional, mostly leisure-oriented bicycle rental services in many ways. Bike-sharing schemes could be with station-based bike sharing (SBBS)or without docking stations (Free-floating bike sharing (FFBS) [4].

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Short description of Innovative Transport Schemes

Mobility as a Service (MaaS)

MaaS is defined as the integration of various forms of transport services into a single mobility service accessible on demand.

The key concept behind **MaaS** is to put the users, both travellers, and goods, at the core of transport services, offering them tailor-made mobility solutions based on their individual needs.

This means that, for the first time, easy access to the most appropriate transport mode or service will be included in a bundle of flexible travel service options for end users [5].

Chapter 3: Value for S-M cities (Challenges, Benefits and Beneficiaries)

Chapter 3: Value for S-M cities (Challenges, Benefits and Beneficiaries)

Benefits of InnoTS

Direct positive effects

- Less congestion (by embracing sharing services, such as car-sharing or carpooling) [1]
- Reduced fuel consumption & less environmental pollution by the reduction of the total number of circulating vehicles [2]
- Reduced costs for the user deriving from the lack of private car ownership costs (insurance, service costs, etc.) [3]

Chapter 3: Value for S-M cities (Challenges, Benefits and Beneficiaries)

Benefits of InnoTS

These benefits can be all translated into economic growth since:

- LAs can benefit from the set up and exploitation of sharing services (e.g. municipal shared bikes fleet)
- Reduced need for infrastructure repair, since the total number of vehicles can be reduced, as a result of the increased take-up of car-pooling services or other InnoTS [1]
- Becoming “tourists” friendly city.

Global approach is required in order to achieve aforementioned benefits

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Chapter 3: Value for S-M cities (Challenges, Benefits and Beneficiaries)

- In order to achieve these benefits, while avoiding negative results and reactions, global approach, public discussion and stakeholders collaboration are required.
- Global approach refers also to
  - combination of these schemes with other mobility/transport measures or other technologies in order to achieve optimised performance and provide tailored service.

Example: *when implementing car-/bike- sharing systems, it is recommended to be combined with other "smart" mobility measures (for example electric vehicles can be used for car-sharing [4]) or Car Independent Lifestyle measures (for example bike-sharing concept promotes also biking, see reference 5)*

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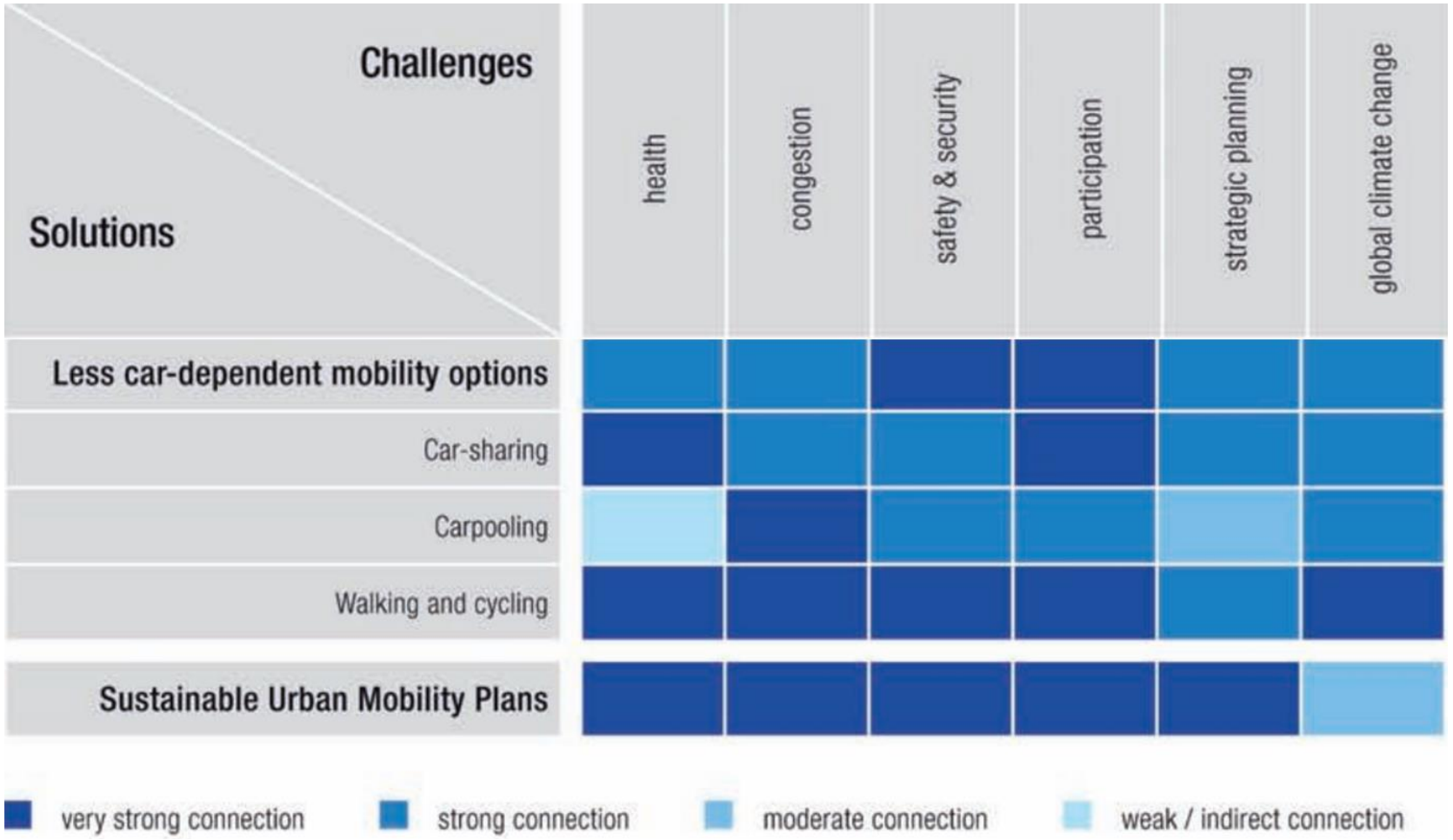
Chapter 3: Value for S-M cities (Challenges, Benefits and Beneficiaries)

Correlation of InnoTS with city strategic objectives [20]



Chapter 3: Value for S-M cities (Challenges, Benefits and Beneficiaries)

EXERCISE A

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Building S-M LAs' capacity to introduce Innovative Transport Schemes

Municipality Logo

EXERCISE A: Analyzing benefits and views of stakeholders on Innovative Transport Schemes

Description of exercise

A. Use sticky notes to fill in the two open Boxes. The first field refers to the benefits of a selected InnoTS. The second field refers to the actors/stakeholders/social groups that will be affected (positively or negatively) by the measure.

B. On the left column of T-Chart transfer the actors/stakeholders which would present the most negative reactions to the proposed measure. On the right column, transfer the sticky notes so they can be used as convincing arguments to the stakeholders written on the left corner.

(To perform the exercise focusing on specific city, a city map, mobility data and relevant information are distributed to support brainstorming).

Building S-M LAs' capacity to introduce Innovative Transport Schemes

Municipality Logo

EXERCISE A-part 1

TEAM NAME:

Please fill in the following box with the benefits that you believe the Innovative Transport Schemes that you selected can bring to your city.

MEASURE TITLE:

BENEFITS FOR YOUR CITY:

Please fill in the following box with the actors/stakeholders/social groups that you believe will be negatively or positively affected by the Innovative Transport Schemes that you selected.

STAKEHOLDERS:

Building S-M LAs' capacity to introduce Innovative Transport Schemes

Municipality Logo

EXERCISE A- part 2

TEAM NAME:

Please fill in the T-chart below, according to the arguments that may be expressed by actors in favour/against the implementation of the InnoTS provided to your group.

ACTORS	ARGUMENT

Chapter 3: Value for S-M cities (Challenges, Benefits and Beneficiaries)

Added value: (a) compliance with strategies/regulations (EU, national, local)

Value is added also by the fact that UFT measures is relevant to local, national and EU strategies.

- In a **local** level, InnoTS could contribute to strategies for the economic grow of commercial city centres, the local tourism, and the air pollution strategies, while they are part of SUMP.
- In **national and EU level**, these measures contribute to meeting its environmental, health and climate policy goals (e.g. Green Paper [9], swd(2016)244 European Strategy on Low-Emission mobility [10], Strategic plan 2016-2020 Move March 2016 [11] etc.)
- **The alignment of InnoTS to these policies as part of SUMP [12] could make S-M cities eligible to receive financial support from EU funds**.
- Further support about alignment of this kind of measures with EU policies is provided by EPPOM “Managing mobility for a better future” tools and CIVITAS cities network [13].

List of EU strategies/regulations

Corresponding Document	Topic	Type of content	Relevance to SUITS	Rating explanation
1.GREEN PAPER [9]	• URBAN FREIGHT TRANSPORT • **NEW AND EMERGING TRANSPORT SCHEMES** • CAR INDEPENDENT LIFESTYLES • NEW AND EMERGING TECHNOLOGIES	Green Paper	3	The content is not relevant exclusively for small and medium sized cities but can by adopted by any city regardless of size
2. SWD (2016)244 European Strategy on Low-Emission mobility [10]	• URBAN FREIGHT TRANSPORT • **NEW AND EMERGING TRANSPORT SCHEMES** • CAR INDEPENDENT LIFESTYLES • NEW AND EMERGING TECHNOLOGIES	Staff working document	3	The content is not relevant exclusively for small and medium sized cities but can by adopted by any city regardless of size
3.Strategic plan 2016-2020 Move March 2016 [11]	• SAFETY AND SECURITY • **NEW AND EMERGING TRANSPORT SCHEMES** • MOBILITY MANAGEMENT • CAR INDEPENDENT LIFESTYLES • NEW AND EMERGING TECHNOLOGIES	Strategic Plan	3	The content is not relevant exclusively for small and medium sized cities but can by adopted by any city regardless of size

Chapter 3: Value for S-M cities (Challenges, Benefits and Beneficiaries)

Added value: (b) the collaboration of all actors (I)

- Added value is highly considered by the creation of deeper and constant interactions and collaboration of all actors involved.
- Communication, collaboration and coordination are essential procedures to arrive to an agreement and wide support.
- The provision of necessary infrastructure for bike-, ride- and car-sharing in the neighbourhoods of important public transport hubs as one important role for public authorities and other stakeholders (Regional and local authorities, mobility agency and public transport companies, IT developers, investors [6]) in order to support the development of integrated mobility services [7; 8]
- Especially for the S-M cities, maximising synergies should be one of the priorities due to the limited available resources (scarcity of technical staff working with LA, limited funding available).

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Chapter 3: Value for S-M cities (Challenges, Benefits and Beneficiaries)

How to build collaboration/ identify the stakeholders and actors needs

- Targeted interviews to representatives of stakeholders groups in order to inform them about:
  - ✓ municipality plans and objectives
  - ✓ the potential benefit for them if supporting the project implementation
  - ✓ the value of their contribution to the project
- Running survey with questionnaires to stakeholders groups, asking for their perception of problems and solutions, for expressing their needs and restrictions that may hinder their contribution
- Public consultation and open meetings to be invited all stakeholders in every implementation stage
- Frequent inspections in the most busy spots of the road network where issues may be arise
- Tailored approaches to different stakeholders/actors (i.e. customers through questionnaire, shop owners through short interviews, freight operators through short interviews- conversations)

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Chapter 3: Value for S-M cities (Challenges, Benefits and Beneficiaries)

Social Impact Assessment

Transport measures impact all aspects of societies and human lives and more specifically dense urban centres.

Transport needs to be inclusive, accessible and make a make a positive contribution to quality of life.

Towards sustainable development, impacts assessment methods are needed regarding short and long-term social, health and wellbeing factors.

‘’Social Impact Assessment is the process of analysing, monitoring and managing the social consequences of development.’’ (Vanclay, 2003)

Issues: Factors, Samples, Social Groups, Data Collection Bias, etc.

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Chapter 3: Value for S-M cities (Challenges, Benefits and Beneficiaries)

Impact Assessment Dimensions

- **Environmental impact** is defined as "any changes to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects".
- **Economic impacts** are defined in terms of the “effects on the level of economic activity in a given area" (Weisbrod & Weisbrod, 1997).
- **Social impacts have been defined as the effects which characterize and influence the community's social and economic wellbeing (Canter et al.1985).**

Additionally in methodologies such as **WebTAG a 4th dimension** is integrated separately and includes Health Impacts.

WebTAG is an online tool of the UK Department for Transport's web-based multimodal guidance on appraising transport projects and proposals.

Impacts		Summary of key impacts	Assessment			
			Quantitative	Qualitative	Monetary £(NPV)	Distributional 7-pt scale/ vulnerable grp
Social	Commuting and Other users		Value of journey time changes(£) / Net journey time changes (£): 0 to 2min; 2 to 5min; > 5min			
	Reliability impact on Commuting and Other users					
	Physical activity					
	Journey quality					
	Accidents					
	Security					
	Access to services					
	Affordability					
	Severance					
	Option and non-use values					

Overview of factors to be considered by type, source and level of human needs based on SUITS WP7

Source	Theme	Sub theme	Impact
Provider based	Presence of infrastructure	Structurally	Visual quality
			Historical /cultural resources
			Severance/social cohesion
		Temporarily (during construction)	Noise nuisance
			Barriers and diversions
			Uncertainty of construction
			Forced relocation
	Presence of parked cars		Visual quality
			Use of space
	Presence of transport facilities, services and activities (accessibility) (inc. cost and temporal dimension)	Transport facilities	Availability and physical access
			Level of service provided
			Transportation choice /option values
			Cultural diversity
		Land use/delivery/opportunity	Access to spatially distributed services and activities
User based	Traffic (movement of vehicles)	Safety	Accidents
			Averting behavior
			Safety perceptions
		Environment	Public safety (dangerous cargo)
			Noise levels, nuisance
			Soil, air and water quality
	Travel (movement of people)		Intrinsic value, journey quality
			Physical fitness (active travel)
			Security

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Chapter 4: Successful Case studies or Best practices of SUITS cities

Chapter 4: Successful Case studies or Best practices of SUITS cities

- This chapter demonstrates two case studies- as best practices- of InnoTS implementation
  - ✓ Case Study 1: Helsinki's Mobility as a Service (MaaS)
  - ✓ Case Study 2: Turin's Bike Sharing System (SUITS city)
- One of the main issues analysed is the barriers and the drivers that every city had to deal with when implementing them

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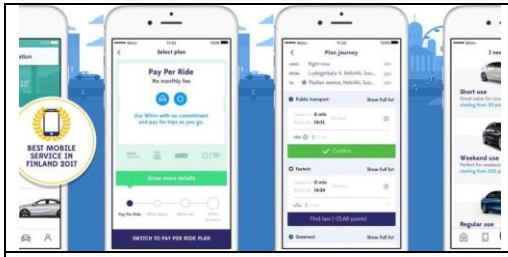
CASE STUDIES FACTSHEETS
Mobility as a Service



Innovative Transport Schemes
Mobility as a Service

LOCATION
Helsinki, Finland

INITIAL PROBLEM AND TARGET GOAL

The need to develop and promote an integrated transport system that allows transferability and flexibility for the passenger created WhimApp, the first complete MaaS application.

SCALABILITY/REPLICABILITY

MaaS is transferable to cities and networks that offer diverse mobility solutions and provide relative open mobility data.

WHY THIS IS A BEST PRACTICE IN THIS FIELD?

This application has been a breakthrough since it is the first Mobility as a Service application which is currently fully operating in four cities and under development in several more cities at both European and International level. Due to the preliminary stage of development in MaaS overall comparisons are not able to be conducted currently.

MEASURE DESCRIPTION

A MaaS service has been developed and applied in a few European cities as well as Singapore and while the city of Helsinki is the first European city to incorporate a system of MaaS into its transport system in an effort to enhance urban mobility for its citizens, Birmingham and Antwerp are now following its example. With a regional population of 1.4 million, Helsinki has become a global testing site and due to the accommodation of the MaaS Global which started the Whim app in late 2016 in order to provide such transport services. The Whim application has currently more than 60.000 active users, more than 5.000 of which pay for a subscription on a monthly basis, while its users tend to book more than 1.8 million trips. While the number of users and trips is increasing it still accounts for a small portion of the total trips and travellers in Helsinki's region since in 2017, 375 million trips were conducted through public transport.

(continue on next page)

IMPLEMENTATION REQUIREMENTS

In its current form, implementation does not require resource spending from the cities and the municipalities since the company provides the application at no further cost. Furthermore the implementation of such a service will create better infrastructure and provision of services at no extra cost. Therefore funding sources are derived from investments directly to the application's developer.

Moreover, regarding the time period needed for implementation, this is approximately 6 months once certain technical, legislative and other prerequisites are met.

The service is provided solely through the mobile application which requires further connection with IT systems of other transport operators that are to be included on it.

	MEASURE DESCRIPTION (continued) Finaly, while Whim offers MaaS transport solutions certain problems arise due to the lack of coordination with local transport agency which had not initially integrated Whim's tickets into its own public transport ticketing system. It promised to do so by the end of 2018 which is expected to improve the level of service provided through the app.	
INDICATORS TO MEASURE SUCCESS AND FINAL OUTCOME / IMPACT The scope of a MaaS service is to reduce car dependency but it is still unclear how would a subscription in Whim for example, affect people in terms of vehicles kilometres travelled. Expected benefits for the cities are the reduction on congestions which means less polluting emissions and thus improvement of air quality, public health and economy. At the same time less usage of car leads to lower needs in space for vehicle's operation such as parking which allows cities to investigate further opportunities in city planning. Social groups mostly benefited through WhimApp are citizens and more specifically travellers. Since Whim increases the usage of PT in Helsinki it consequently reduces usage of private vehicles which leads to less congestion, lower travel times, etc.	**BARRIERS AND DRIVERS** **Cooperation/coordination issues** **Barriers:** Strong needs for cooperation and coordination with both the local authorities, the transport operators and providers as well as the national government. **Drivers:** The immediate positive impacts which can act as a driver for authorities to push towards such services. **Process** **Barriers:** No process is needed from the part of the LAs since the company is responsible for the organization and implementation of the service. **Drivers:** The minimum amount of effort needed from cities. **Technical/Data Resources** **Barriers:** The need for technical prerequisites and integration of all available data from transport authorities and operators in order for them to be incorporated in the application and provide the highest level of service possible. **Drivers:** Cities with high level of IT systems already up and running are capable of immediate implementation and cities with lower levels can modernize their IT. **Staff** **Drivers:** No human resources allocation is needed from Local Authorities. **(continue on next page)**	**FURTHER INFORMATION** https://whimapp.com/ http://www.eltis.org/discover/news/how-helsinki-became-mobility-service-leader

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Indicators to measure success/implementation: PT usage and car usage rates are two considered as indicators that can be used while further in the future with more time under implementation of the service, wider impacts will be identifiable and measurable. More specifically public transport usage in Helsinki rose from 48% to 72% in three months of full implementation while car usage has almost halved within the city from 40% to approximately 20%.	**BARRIERS AND DRIVERS (continued)** **Political** **Barriers:** Local authorities decline their opportunity to provide MaaS and it is unknown whether local transport agencies will lose ridership while users choose alternative services. In addition to that, local transport authorities already providing a high level of service might weaken their brand name eventually. **Drivers:** LAs responsible for transportation in areas with lower levels of service can benefit from the overall improvement expected from such an application while at the same time no further cost is needed. This can lead to higher levels of citizen satisfaction towards local politicians. **Legal** **Barriers:** The need for transport operators to share their data openly which in many occasions will lead to strong reactions from them and the fact that legislators have to provide for a third party MaaS service the framework in order to operate without disruptions from already up and running public transit companies. **Societal** **Barriers:** Promotion of the measure is not identified as a barrier for the LAs since it is not their responsibility to do so but there is a need for an understanding of the public that this service is under the continuous control of the authorities and can be managed when and if needed. The latter is expected to heavily affect the public's acceptance. **Drivers:** People increasingly desire multimodal transport solutions that meet their needs in a sustainable and financially efficient manner regarding MaaS as a major future factor in their daily choices.	

CASE STUDIES FACTSHEETS
Bike sharing system

Innovative Transport Schemes
Bike Sharing System

LOCATION
Turin, Italy

INITIAL PROBLEM AND TARGET GOAL

The high congestion levels especially during peak hours and the limited share of active travel in the city's daily mobility required the integrated promotion of a bike sharing system to enhance the quality of life.

SCALABILITY/REPLICABILITY

Turin's bike-sharing system is an initiative that is replicable in other S-M cities and similar models can be followed in order to achieve environmental sustainability through innovative mobility solutions.

WHY THIS IS A BEST PRACTICE IN THIS FIELD?

The introduction and successful implementation of an integrated bike sharing system as a low-priced, low-carbon measure with numerous benefits for the city.

MEASURE DESCRIPTION

The municipality of Turin presented a public announcement allowing the diffusion of free floating bike sharing systems in December, 2017. The operators, answered to this call by proving pilot implementation and trials for a time period of 12 months. Furthermore, public discussions and debates among all involved and affected stakeholders took place in order to evaluate each group's respective feedback with a view on future improvement. Initially the city accomodated three free-floating bike sharing systems which covered the whole urban area. With the provision of an IT system and more specifically a smartphone application, people can rent a bike for a desired time period and cycle around the city's designated areas. Additionally, incentives were given to nudge proper use of parking space and in order to avoid public space obstruction. By October, 2018, two bike sharing operators are still active in Turin offering approximately 3.000 bikes and an average of 7.000 bike pickups per day.

IMPLEMENTATION REQUIREMENTS

The city does not fund such measure since it permits bike sharing operators to run their scheme and compensate the city for each bike they offer. Therefore, the municipality earns 20€ for each bike they accomodate in their city network. Morever, revenue derived from this measures will be conveyed into a fund that aims to ameliorate and build cycling infrastructure as well as to organise awareness campaing in order to promote cycling. This scheme is characterised by Public-Private Partnerships.

CASE STUDIES FACTSHEETS
Bike sharing system

INDICATORS TO MEASURE SUCCESS AND FINAL OUTCOME / IMPACT

The bike-sharing system in Turin has led to the creation of a low-carbon fund which aims to finance actions that will eventually result into a cultural change among citizens. Morever, the beneficiary social groups of a bike sharing system are the citizens and tourists.

Indicators to measure success/implementation:
The aforementioned bike-sharing system benefits the city mainly through environmental benefits such as the reduction of CO2 and other pollutant emissions as they are produce from motorised vehicles. Environmental enhancement is expected to improve even further in the future when the citizens will develop a cycling culture and the city will be able to accomodate properly their active travel needs.

Moreover, indicators that can present and describe the success of such a measure are:

- Cycling rates
- Emissions reduction

BARRIERS AND DRIVERS

Cooperation/coordination issues
Barriers: Due to the involvement of private operators, it can be challenging to interact and coordinate with all involved stakeholders.
Drivers: The operators have shown willingness to cooperate and coordinate with the local authorities building a good framework for the future.

Financial recourses issues
Drivers: The Bike-sharing operators finance and operate this measure, which further created funding sources for future infrastruture improvement.

Process
Barriers: Lack of national regulation for bike-sharing can delay implementation process.

Technical/Data Resources
Barriers: The existing legal framework is lacking to specify regulations regarding the management of data produced by bike-sharing systems.
Drivers: No resource allocation from local authorities is needed.

Staff
Drivers: A related department working under the municipality of Turin has been developed and has been working on bike-sharing mobility since 2010.

Political
Barriers: The measure is still under experimentation therefore it is not possible to take stock on the political view of bike-sharing.
(continue on next page)

FURTHER INFORMATION

http://www.comune.torino.it/trasporti/archivio-news/si-amplia-lofferta-per-chi-sceglie-la-bici-per-muo.html

https://drive.google.com/open?id=1bpNhFjszFsz4RuxIh0UQrIdSFvmqvafv

	BARRIERS AND DRIVERS (continued) **Drivers:** The environmental benefits derived from such a measure are a major driver for the current local government of the city. **Legal** **Barriers:** The lack of a complete and clear legislative framework for the implementation and operation of bike-sharing. **Societal** **Barriers:** The innapropriate behaviour of groups of users who do not respect the set rules, i.e. parking in private areas and pavements. Such behaviour can result into mobility obstruction of other citizens and more specifically vulnerable groups such as disabled people. **Drivers:** The citizens that use the bike-sharing system express service satisfaction since it provide low-cost mobility solutions with no additional problems.	

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Chapter 5: Innovative financing , procurement, partnership

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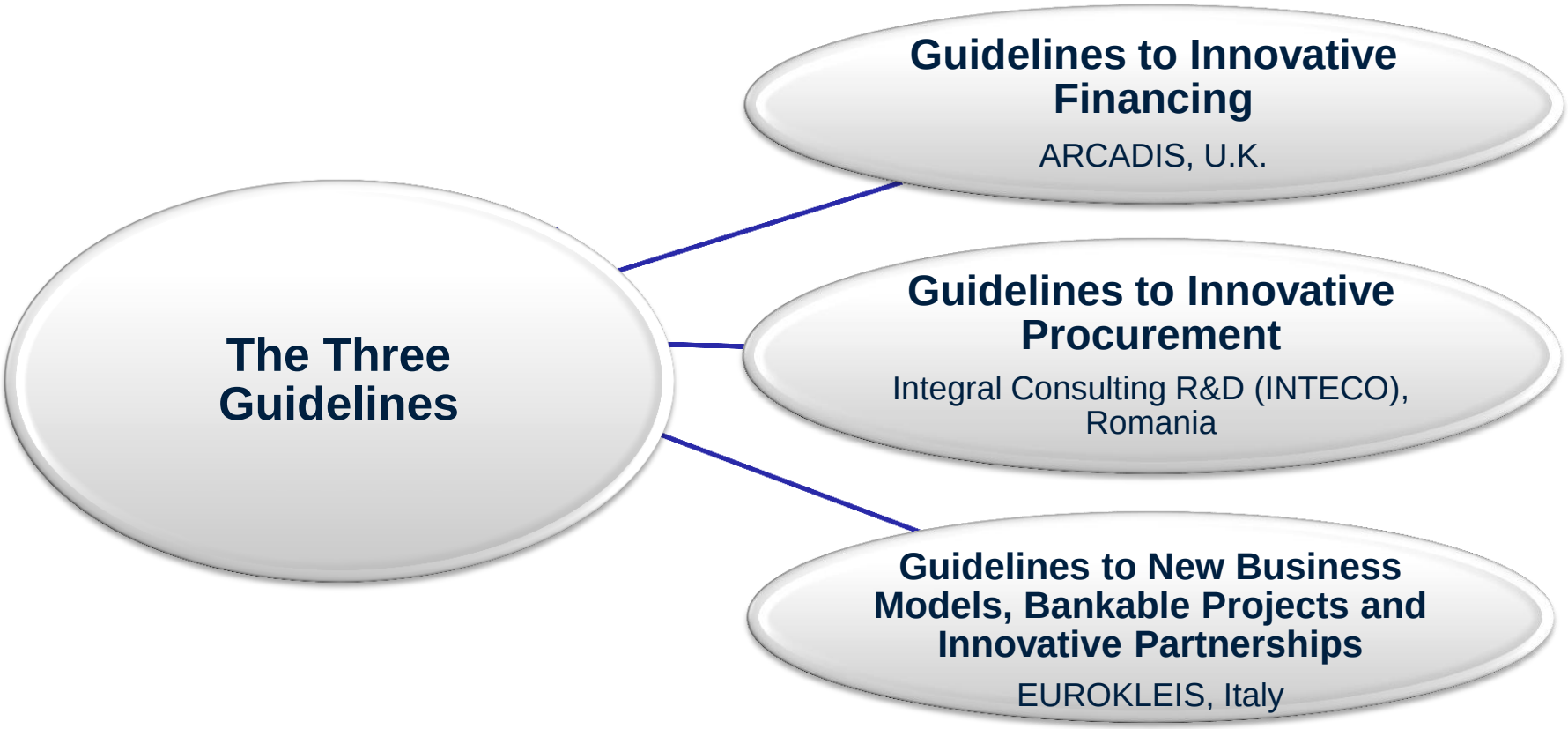
Chapter 5: Innovative financing, procurement, partnership

SUITS TOOLS supportive to LAs for Innovative financing, procurement and partnerships : Three Guidelines



Chapter 5: Innovative financing, procurement, partnership

Objective of the three Guidelines

Objective: Enhancing the capacities of local authorities and stakeholders through innovative procurement procedures, innovative financing methods, and new business models and partnerships, in support of sustainable mobility development.

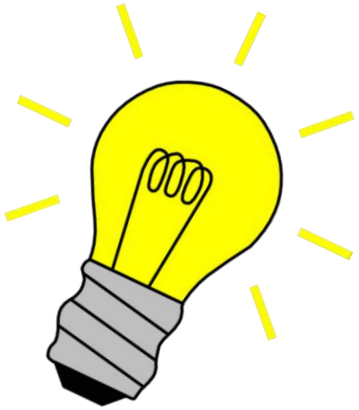
Chapter 5: Innovative financing, procurement, partnership

What can you expect to find in the Guidelines?

- Presentation of how different transport measures are currently procured and financed, as well as the business models and partnerships used.
- Overview of existing gaps in current knowledge and organisational capacity to implement sustainable transport measures.
- Presentation of new, innovative financing methods, procurement procedures, business models and partnerships which could be used to enhance the capacity of Local Authorities and stakeholders to implement sustainable transport measures.
- Case studies and examples of where and how these methods and procedures have been successfully applied.
- Steps to use these methods and procedures.

Chapter 5: Innovative financing, procurement, partnership

How to make the best use of the Guidelines

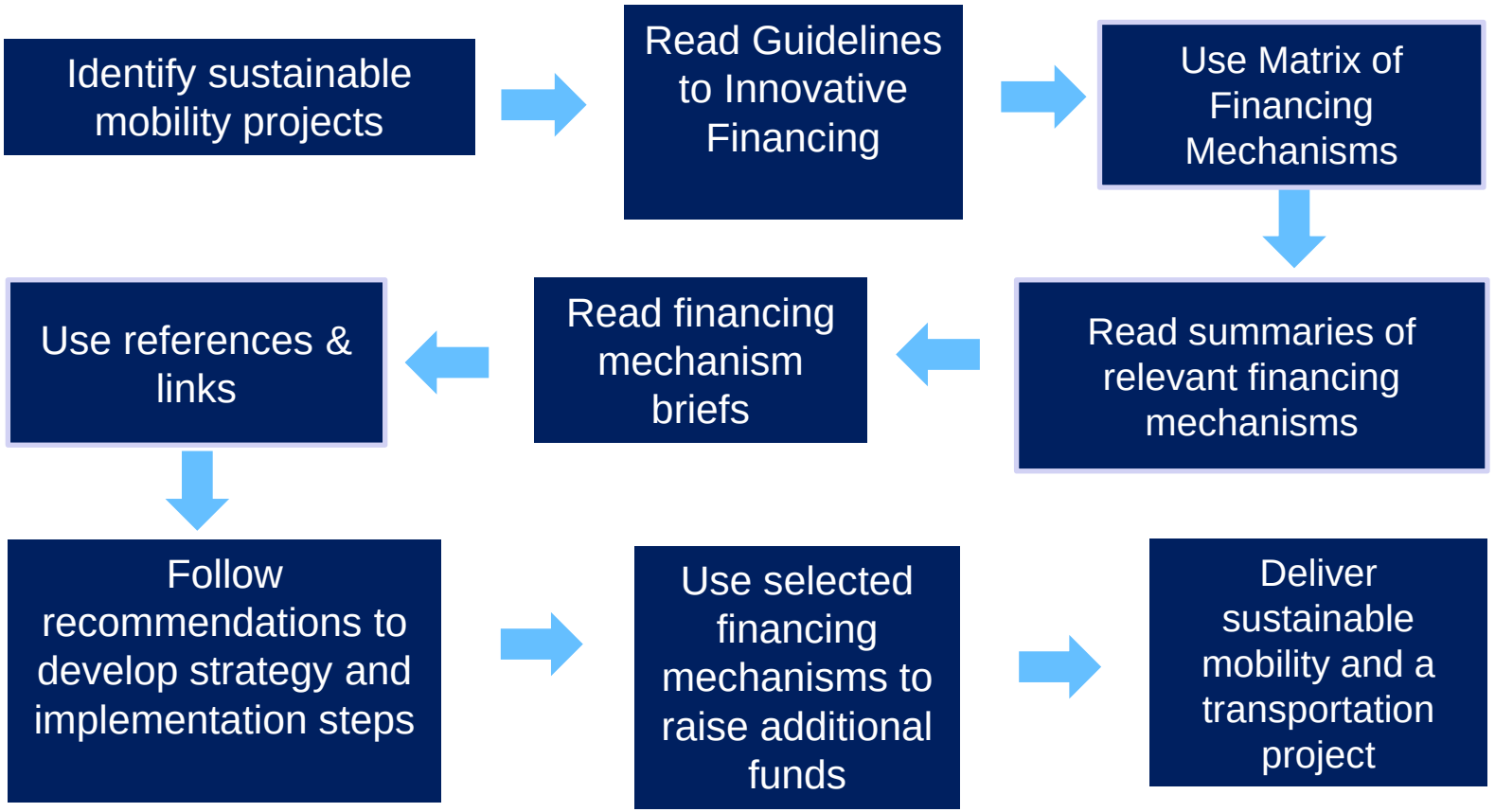


Tips for Implementation:

- The 3 Guidelines are complementary to one another and should be used together.
- Local Authorities should set up a team to take control of the implementation of the Guidelines within their organisation. The purpose of this team would be to:
    1. Read the Guidelines
    2. Decide on the types of sustainable mobility measures in which they want to implement within the local area
    3. Identify the innovative procedures and methods which are most suitable to each sustainable mobility measure identified, as well as to the local economic, political and social situation
    4. Use the selected procedures and measures
    5. Evaluate the success of the use of the innovative procedures and measures
- Communicate with the authors of the Guidelines. The authors will provide support to the Local Authorities/ other stakeholders to clarify the information in the Guidelines at their request.

Chapter 5: Innovative financing, procurement, partnership

Guidelines to Innovative Financing [1]

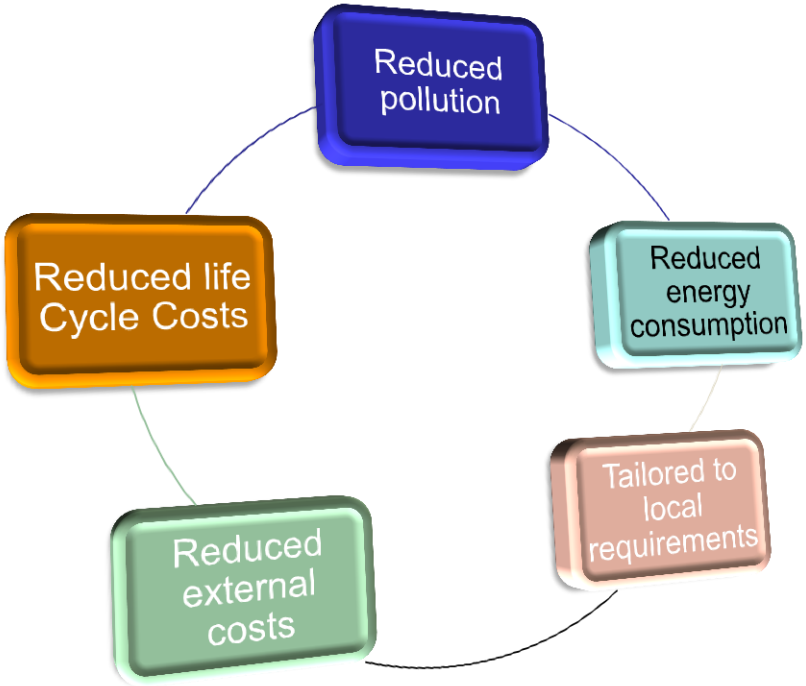


Guidelines to Innovative Procurement [2]

EU Public Procurement Reform

Underlying principle: *"Public procurement must become levers through which the Contracting Authorites can obtain the biggest long-term advantages for the society, generating business opportunities, economic growth, jobs, enhanced sustainable mobility, higher life quality."*

Contract Award Criteria



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Chapter 5: Innovative financing, procurement, partnership

Guidelines to New Business Models, Bankable Projects and Innovative Partnerships

The key objectives:

- Provide the knowledge of innovative business models in urban mobility services including sharing mobility, integrated mobility and MaaS.
- Address the main partnership schemes in the field and introduce the new ones.
- Enhance the capacity of creating fundable projects providing the guidance for feasibility analysis.
- Identify:
  - evolving commercially viable business strategies,
  - new forms of partnership and
  - important aspects to prepare bankable documents

- Improve the administrative and organizational capacity of the urban mobility authorities of S-M cities.

Chapter 5: Innovative financing, procurement, partnership

Guidelines to New Business Models, Bankable Projects and Innovative Partnerships: Recommendations

New forms of partnership

- Creation of solid institutional mechanism addressing specific sector policies.
- Integrated approach of financial, technical and business planning.
- Development of efficient project management regarding the business idea and contractual forms.
- Successful implementation depends on recognition of partner's objectives.
- iPPPs require careful consideration of control and management systems through project agreements.

Innovative business models

- The business model innovation foresees the top-down approach. The top management should support and provide the resources for new business opportunity
- Constant monitoring of market tendencies
- Constant monitoring technological innovation
- Consulting the business model analogies and learning from best practices
- Searching for new investment opportunities for project development

Bankable project

- Provide the research on different investment programs and financial opportunities
- Allocate the human resources to develop the bankable documents
- Ensure that all the necessary feasibility studies are included in the document

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Chapter 5: Innovative financing, procurement, partnership

Innovative financing mechanisms

- Congestion Charge
- **Municipal Green Bonds**
- **Crowdsourcing**
- Stamp Duty Land Tax (SDLT)
- Lottery Funding
- **Voluntary Capture**
- HGV Charging Schemes
- Work Place Parking Levy (WPL)
- Community Infrastructure Levy (CIL)
- **Advertising, Sponsorship and Naming Rights**
- **Collaborating with other cities, research consortia and private companies**
- Citizen Cooperatives
- Emission Trading
- Planning Obligations / Developer Contributions
- Tax Increment Financing
- Sales Tax
- Toll Roads
- **Selling Expertise and Technical Know-how**

Several innovative financing mechanisms can be applied directly to InnoTS (check **bold**). All detailed description are available in the Guidelines [1]

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Chapter 5: Innovative financing, procurement, partnership

Key points of financing mechanisms more relevant to InnoTS [1]

Voluntary Capture	
Description	Voluntary capture is a deal or partnership between developers or property owners and a local authority, where the developers or property owners offer a voluntary contribution towards the costs of a public infrastructure project.
Methods	An irregular income source which encourages community participation in the development of urban space, creating a sense of ownership and increasing social capital.
Benefits	Voluntary capture can often create substantial additional revenue and creates incentives for local authorities and transport agencies to make sure the benefits of the project will be realised in practice.

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Chapter 5: Innovative financing, procurement, partnership

Key points of financing mechanisms more relevant to InnoTS [1]

Municipal Green Bonds	
Description	It is a financing mechanism that allows institutional investments for projects mainly with environmental benefits such climate change mitigation and resilience but it also attractive to other types of projects that promote sustainability, meaning that social and governance related beneficial projects are also eligible for funding through it
Methods	Aims into attracting investors to invest in sustainable mobility projects and even the residents and members of communities to participate in such processes
Benefits	Can lead to additional benefits for the local communities but Municipal Green Bonds as a mechanism, require standardization and more information from the part of local authorities and national governments in order to achieve promotion and fully exploit its capabilities

Chapter 5: Innovative financing, procurement, partnership

Key points of financing mechanisms more relevant to InnoTS [1]

Selling Expertise and Technical know-how	
Description	Cities, local authorities or public administrations, can exploit their ability to sell their expertise and technical know-how for profit
Methods	Includes selling a form of collaborative knowledge and sharing it for economic profit or in some cases for free
Benefits	Increase attractiveness and name recognition or to disseminate good practices in areas of interest
Comments	Can be applied across all sectors of interest

Chapter 5: Innovative financing, procurement, partnership

Key points of financing mechanisms more relevant to InnoTS [1]

Collaborating with other cities, Research Consortia and Private Companies	
Description	This requires the formulation of a partnership between local authorities, universities, companies and NGO's which makes use of each partner's expertise
Methods	Cities provide specific data while on the same time they offer demo and pilot sites while they also provide support to other partners.
Benefits	These projects offer to cities benefits from investments into its infrastructure and capacity building programs along with the benefits derived from pilot projects while on the same time additional funding may be available
Comments	Efforts require political will in order to eliminate constraints and willingness to participate and create a learning network which will eventually enhance innovation and applied research throughout the city

Chapter 5: Innovative financing, procurement, partnership

Key points of financing mechanisms more relevant to InnoTS [1]

Advertising, Sponsorship and Naming Rights	
Description	Local authorities can create additional revenues through receiving payments for advertising on public assets, sponsorships and selling or leasing naming rights from various businesses and organisations which must be in line with the guidelines for acceptable content and local policy and legislation
Methods	
Benefits	Successful mechanism and while the revenues are small compared to the total budget costs of each projects, still remain significant
Comments	The amounts received through such mechanisms are dependent on the local market and the total amount of exposure in terms of time

Chapter 5: Innovative financing, procurement, partnership

Key points of financing mechanisms more relevant to InnoTS [1]

Crowdsourcing/ funding	
Description	Alternative finance model that uses micro-financing in order to fund projects with high social impact. Nowadays LAs are making greater use of such platforms in order to support and co-fund developmental projects.
Methods	Usually initiated by locals (who develop ideas and promote them through internet-based platforms where financial transparency is ensured).
Benefits	Such a mechanism is used mainly for small-scale projects with relatively immediate positive social impacts and is considered a tool for further public engagement while on the same time promotes innovation through non debt-based projects.
Comments	Requires further research and actions such as legal adjustments in order to be designed and operated appropriately, whereas future exploitation of its capabilities is needed.

Chapter 5: Innovative financing, procurement, partnership

Innovative procurement steps

1. Select, employ, train, educate procurement management team
2. Learn about legal framework, of the legislative changes, and specific regulations for various situations and procedures;
3. Develop an annual and multi-annual procurement plan;
4. Develop an evaluation plan and performance indicators;
5. Enhance the exchange of knowledge between public authority and suppliers;
6. Organise centralised public procurement procedures across local / regional / cross-border public authorities having the same requirements;
7. Promote public – private partnerships and the collaboration with the industry;

Innovative procurement steps

8. Promote public – private partnerships and the collaboration with the industry;

9. Use public financing for research and innovation in a strategic way in order to improve challenge impacts of public procurement;

10. Use the new ‘Innovation Action’ and ‘Pre-Commercial Procurement’ instruments to encourage cities and the innovation community to collaborate.

11. Understand and raise awareness to the importance of innovative procurement and prepare their application;

12. Develop a long-term procurement strategy.

Detailed description available in the Guidelines [2]

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Innovative Public Private Partnerships

IPPP is a new form of partnership where the main actors are:

- public and private organisations
- civil society organisations (CSOs),
- non-governmental organisation (NGO)
- communities

These new forms of collaboration enable to identify the opportunities for the design and implementation of the long-term strategies for partnership.

Each actor of the iPPPs has its important role in the alliance

Detailed description available in the Guidelines [3]

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Chapter 5: Innovative financing, procurement, partnership

Innovative Public Private Partnerships – Probable roles allocation

- **State organisations for** the drawing up, financing and implementation of policies and programmes
- **Public organisations for** supervising, creating incentives and regulatory frameworks, developing new opportunities and governance mechanisms to enable the sustainable long-lasting collaboration with the private sector and other forms of organization,
- **Private sector for** bringing the investment and expertise in the alliance having its business for-profit orientation.
- **NGOs, CSOs or communities for** bringing their expertise and vision of transport and mobility sector.
- **R&D for** developing new product or service (or improve an old one), and other actors who are economically interested in the development of such innovations

Establishing an iPPP requires strengthening the capacities of all the actors involved.

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Chapter 5: Innovative financing, procurement, partnership

Innovative Public Private Partnerships - Benefits of iPPP for mobility local authorities

Detailed description available in the Guidelines [3]

- Addressing market needs and tendencies.
- Transferring localized institutional knowledge to the public and private organisations.
- Creation a collective awareness of the innovative solutions created by the alliance.
- Elaboration of the social standards and clarification schemes.
- Enhancement of the possibility of the project to obtain the investments by involving the mobility communities in the consortium.
- If the project addresses green or climate finance, mobility communities' participation may bring innovation and an ethical approach to investments.
- The CSOs or NGOs may gain the social relevance and influence and builds capacity for policy monitoring.

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Innovative Public Private Partnerships [3]

Example of CSO involvement in the transport projects:
The CSO was involved in the improvement of the public transport in Germany in Rhine-Main-Area. The Rhein-Main-Verkehrsverbund (RMV) transport association established a passenger advisory board that were represented by individuals and CSO. The advisory board organise meetings four times a year, and has already initiated concrete improvements [5]

Example of the R&D institutions involvement in the transport projects
Frankfurt RheinMain, major transport authorities and operators, including partners from industry and consultancy, and supported by the Hessen State Government. Namely, ZIV institute was founded at the Darmstadt University of Technology. [6]

Chapter 5: Innovative financing, procurement, partnership

EXERCISE B

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Building S-M LAs' capacity to introduce Innovative Transport Schemes

Municipality Logo

EXERCISE B: Matching funding mechanisms and partnership schemes with the InnoTS implementation components

Description of exercise

A. One flipchart with two lists. At the first list, participants write down components they think are required in order to introduce a specific Innovative Transport Scheme, that is allocated to the group. The second list contains funding mechanisms – partnership schemes of the design/implementation process of the InnoTS.

Scheme components:
a) infrastructure/facilities/equipment (i.e. research consortia, voluntary capture, b)software (i.e. research consortia, selling expertise), c) operation (crowd sourcing, advertising), d) maintenance (crowd sourcing, collaborating)

Building S-M LAs' capacity to introduce Innovative Transport Schemes

Municipality Logo

EXERCISE B

TEAM NAME:

Please fill in the T-chart below, while corresponding scheme components with funding mechanism and partnership scheme

SCHEME COMPONENTS	FUNDING MECHANISM & PARTNERSHIP SCHEME

Chapter 5: Innovative financing, procurement, partnership

Overview of financial aspects for *Car sharing*	
Costs	• Car fleet leasing. • Vehicle insurance and maintenance. • Software development. • Operational costs. • Marketing costs.
Types of investment	• Public funding: federal, state, and local funds. • Private funding: grants from private foundations, private gifts and donations, and private sector investment. • Sponsorship and advertising. • Crowdfunding. • PPP. • EU funding.

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Chapter 5: Innovative financing, procurement, partnership

Overview of financial aspects for *Ride-sharing*	
Costs	• Development of software and its maintenance. • Operational costs; • Marketing activities.
Types of investment	• Public funding: federal, state, and local funds. • Private funding: grants from private foundations, private gifts and donations, and private sector investment. • Crowdfunding. • Sponsorship and advertising.

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Chapter 5: Innovative financing, procurement, partnership

Overview of financial aspects for *Bike sharing*	
Costs	• Purchase of the equipment (bicycles and stations, if station-based). • Replacement parts and station siting. • Development of the software. • Ongoing operating and advertisement. • Costs for equipment insurance and personnel costs.
Types of investment	• Public funding: federal, state, and local funds. • Private funding: grants from private foundations, private gifts and donations, and private sector investment. • PPP. • Sponsorship and advertising. • Crowdfunding. • EU funding.

Chapter 5: Innovative financing, procurement, partnership

Overview of financial aspects for *MaaS (multimodal journey)*	
Costs	• Development and maintenance of static data feed of transit data and maintenance of regional feeds by regional transit authorities. • Marketing and sales cost such as events and trips in order to get agreement on data collection with multiple organizations • System cost using Cloud services. • Analytic tools for BIG DATA. • Marketing, Design, IT Systems and software development
Types of investment	• Public funding: federal, state, and local funds. • Private funding: grants from private foundations, private gifts and donations, and private sector investment. • Sponsorship and advertising. • PPP. • EU funding

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Chapter 6: Business Model Canvases

Chapter 6: Business Model Canvases

https://www.youtube.com/watch?v=RPdV0CLFmQw

Chapter 6: Business Model Canvases

EXERCISE C

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Building S-M LAs' capacity to introduce Innovative Transport Schemes

Municipality Logo

EXERCISE C: Business Model Canvas

Description of exercise

One business model canvas, which participants should fill in according to the scheme that they have been allocated with.

Building S-M LAs' capacity to introduce Innovative Transport Schemes

Municipality Logo

EXERCISE C

TEAM NAME: […]

Measure type:

Business Model Canvas

Key Partners	Key Activities	Value Proposition	Customer Relationships	Customer Segments
	Key Resources		Channels	
Cost Structure			**Revenue Streams**	

Key Partners

Who are your key partners?
Who are your key suppliers?
Which key resources are we acquiring from our key partners?
Which key activities do our key partners perform?

Key Activities

Which key activities do our value propositions require?
Our distribution channels?
Customer relationships?
Revenue streams?

Key Resources

What key resources do our value propositions require?
Our distribution channels?
Customer relationships?
Revenue streams?

Value Proposition

What value do we deliver to our customers?
Which of our cusotomer's problems are we helping to solve?
What bundles of products and services are we offering to each customer segment?
Which customer needs are we satisfying?

Customer Relationships

Which type of relationship does each of our customer segments expect us to establish and maintain with them?
Which ones have we established?
How are they integrated with the rest of our business model?

Channels

Through which channels do our customers want to be reached?
How are we reaching them now?
How are our channels integrated?
Which ones work best?
Which ones are most cost efficient?
How are they integrating with the customer routines?

Customer Segments

For whom are we creating value?
Who are our most important customers?

Cost Structure

What are the most important costs inherent in our business model?
Which key resources are the most expensive?
Which key actvitiies are the most expensive?

Revenue Streams

For what value are our customer really willing to pay?
For what do they currently pay?
How are they currently paying?
How much would they prefer to pay?
How much does each revenue stream contributing to overall revenues?

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Chapter 7: Process and implementation aspects

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1. Actions to be considered as guidelines for implementation

Implementation aspects for Ride-sharing [1]	
City size	• Not specific needs
Guidelines for implementation	• Selection of the most suitable funding opportunities. • Selection of the best contractors including the software developers. • Ensure to provide a good advertisement campaign to promote the services.

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Chapter 7: Process and implementation aspects

Implementation aspects for Car-sharing [1]	
City size	• Preferably from 100.000 habitants
Guidelines for implementation	• Select suitable financing mechanism • Local authorities should provide the car-sharing companies with the parking permission that enables car sharing members to leave the vehicles anywhere within the city. • Choose suitable software developer that will provide an app to realize the car-sharing services. • Choose how to gain the revenue. Is it a subscription or pay-as-you-go model? • Organise a marketing strategy to raise the awareness about the project

Chapter 7: Process and implementation aspects

Implementation aspects for Bike-sharing [1]	
City size	• Starting from 100.000 habitants
Guidelines for implementation	• Selection of the most suitable funding tool. Local authorities may provide grants for the project realisation. • Local authorities provide the regulation program including establishing bicycle safety, fleet deployment, permitted areas for bicycle parking, and additional measures to efficient and effective deployment of bikesharing project in the city. • Local authorities should provide the infrastructure such as cycling paths. • Provide a policy dialogue between public and private sectors. • Choose an IT developer for bike-sharing software production andmaintenance. • In order to raise awareness about the services it is important to organise an effective marketing campaign.

Chapter 7: Process and implementation aspects

Implementation aspects for MaaS [1]	
City size	• No specific number of habitats, BUT requirement for the existence at least of an urban public transport (i.e. bus) and an additional public transport network or service (i.e. bike network, car- sharing etc.)
Guidelines for implementation	• Create a network of necessary stakeholders to provide a multi-modal transportation solution such as: transportation operators, local authorities, IT developers, traffic managers etc. • Multi-modal transportation planning should integrate institutions, networks, stations, user information, and fare payment systems. • Local authorities should consider the transportation improvement options, including improvements to various modes, and mobility management strategies. • Local authorities should consider the impacts such as long-term and nonmonetary that Multi-Modal journey mode may provide. • Special attention should be given to the quality of mobility options available to people who are physically or economically disadvantaged.

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Chapter 7: Process and implementation aspects

2. Required data sets and data collection methods – correlation with KPIs

Type of data for implementation	For which kind of measure	Data collection tool [1]	Useful data also for evaluation
Real time traffic data	All	• Traffic Detector Systems • Sensors • Floating Car Data (FCD)	X
Number of population living within walking distance of public transport or shared mobility system	All	• Statistical data from government • ArcMap GIS	X
Area covered/served by public transport with regard to overall urban area	All	• Data collection from public transport operators	X
Number of parking slots	car- sharing, car- pooling, MaaS	• Passengers' transport data collection through parking surveys	X
Number of public bikes	Bike- sharing, MaaS	• Passengers' transport data collection through surveys	X

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Chapter 7: Process and implementation aspects

2. Required data sets and data collection methods – correlation with KPIs

Type of data for implementation	For which kind of measure	Data collection tool [1]	Is it also for evaluation
CO2 emissions saved by the substitution of conventional vehicles	All	• Data collection from environmental research	
Specific passengers' data (i.e. number of users of public bike service)	All	• Public transport operators' statistics	X
Number of public transport stops and public transport stations	All	• Public transport operators' statistics	X

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Detailed Description of Data Collection Methods	
Method	**Description**
The Urban Mobility Analysis Platform to Harvest Car Sharing Data (UMAP)	By analysing the data, they highlighted different aspects related to the system utilization, how people use these services, where they typically go, when, for how long the rental last, how users move in the city in different periods of the day, and what are the users' driving habits.
In-vehicle Navigation Systems based on GPS devices	GPS works by providing information on exact location. GPS tracking system, may be placed in a vehicle, on a cell phone, or on special GPS devices, which can either be a fixed or portable unit. It can also track the movement of a vehicle or person. So, for example, a GPS tracking system can be used by a company to monitor the route and progress of a delivery truck or to monitor high-valued assets in transit
Floating Car Data (FCD)	It collects real-time traffic data by locating some vehicles via mobile phones or GPS over the entire road network. The vehicle is equipped with mobile phone or GPS which acts as a sensor for the road network. Data generated by the equipped vehicles as a sample is used to assess the overall traffic condition. Some data such as car location, speed and direction of travel are sent anonymously to a central processing centre. After being collected and extracted, useful information (e.g. status of traffic, alternative routes) can be redistributed to the drivers on the road.
Bluetooth enabled devices	Consists of a Bluetooth device that scans for other Bluetooth-enabled device within its radio proximity, and then stores or forwards the data for future analysis and use. Bluetooth sensors can be used to collect OD data. These sensors use MAC address detection and matching to determine the travel origin and destination of individual drivers (or pedestrians). The combination of Bluetooth and Wi-Fi detections also improves the sample size of the data, which is an important factor in OD studies. Bluetooth sensors can provide estimates of travel speeds and time, providing the information needed to extract a reasonable approximation of traffic presence, density, and flows.
Wi-Fi detection	Wi-Fi technology allows the collection of traffic information and can visualize and analyse results to better manage traffic flows, basing the decision on the knowledge of traffic performance and their response to measures establishment.
Crowdsourcing data	Process through which an entity (individual or organization) requests specific resources from a group of people. These entities use the internet, social media applications and specially built platforms to elicit and receive the knowledge, goods or services they are looking for. This allows them to collect information or resources with a wide spectrum of sources.

Key Performance Indicators [3] [4] [5] [6]		
Key Performance Indicator	**Description**	**Source**
Access to mobility services	(1)Share of population with appropriate access to mobility services. (2) Percentage of population living within walking distance of public transport (stop or station) or shared mobility (car or bike) system.	The World Business Council for Sustainable Development
Mobility space usage	(1) Proportion of land use, taken by all city transport modes, including direct and indirect uses. (2) Square meters of direct and indirect mobility space usage per capita.	The World Business Council for Sustainable Development
Emissions of greenhouse gases	(1) Well-to-wheels GHG emissions by all city passenger and freight transport modes. (2) Tonne CO2 equivalent well-to-wheel emissions by urban transport per annum per capita.	The World Business Council for Sustainable Development
Opportunity for active mobility	(1) Options and infrastructure for active mobility, which refers to the use of the soft modes, namely walking and cycling. (2) The length of roads and streets with sidewalks and bike lanes and 30 km/h (20 mph) zones and pedestrian zones related to total length of city road network (excluding motorways).	The World Business Council for Sustainable Development
Annualised index of cycling trips		West Yorkshire, Local Transport Plan 2011-2026. England
Bike parking provision	Number of parking slots per inhabitant	European Mobility Plans
Offer of public bikes	Number of public bikes per inhabitant	European Mobility Plans
Public bike service users - Number of Inhabitants Ratio	Number of users of public bike service per inhabitant	European Mobility Plans
Pedestrian density in specific pedestrian areas	Number of Pedestrians per square kilometer in specific pedestrian areas	European Mobility Plans
Bike traffic volume	The volume of traffic generated by bikes	European Mobility Plans
Length of transport infrastructures	km of bike lanes, km of pedestrian streets, km of PT lines, etc.	European Mobility Plans
Number of PT stops (including public bikes)	The sum of public transport stops and public bicycle stations	European Mobility Plans
Accessibility to public bikes services	Number of bikes per inhabitant, Average distance to public bike station	European Mobility Plans

Chapter 7: Available tools and guidelines

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Available online tools supporting the implementation of measures

Tool name	Format	Source /Link	Usefulness for S-M cities and Importance in SUITS project	Rating of relevance [1 - 5]	Rating explanation
CIVITAS ECCENTRIC tool: MaaS Readiness Level Indicators for local authorities	PDF document (report)	CIVITAS network project http://civitas.eu/news/maas-readiness-level-indicators-local-authorities-launched	It is a self-assessment tool about readiness for MaaS in a city, which could also be applied in small cities and in suburbs.	5	The tool can be entirely applied in a small city. However, it is specifically dedicated for small and medium sized cities.
MOMO	PDF documents	Intelligent Energy Europe (IEE) project: https://ec.europa.eu/energy/intelligent/projects/en/projects/momo-car-sharing	Momo provides resources in the form of PDF document (factsheets), hints and contact details of good practice examples for car –sharing systems in smaller cities. It also provides detailed guidelines for municipalities and governments regarding the establishment and implementation of different car-sharing schemes. Car-Sharing is also possible in smaller cities.	5	The project is largely focused on small towns and the carpooling systems in them.

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Available online tools supporting the implementation of measures

Tool name	Format	Source /Link	Usefulness for S-M cities and Importance in SUITS project	Rating of relevance [1 - 5]	Rating explanation
CHUMS	Webinars/PDF document/Site Appraisal Tool (XLSM File)	EU Intelligent Energy Europe http://chums-carpooling.eu/	EU project about carpooling that contains Webinars/PDF documents & Site Appraisal Tool. Webinars: That present the advantages of "sharing" than "owning" cars PDF Documents: There are several publications derived from this project regarding different aspects of car-pooling and findings from the project's case studies. Site Appraisal Tool: This tool enables quick assessment of a candidate site's suitability for carpooling and indicates (in a very general manner), the likely impacts of introducing the CHUMS measures as well as identifying supporting measures which are most likely to maximize the impact of CHUMS. It can be used irrespective of the city's size.	4 – 5	The tool can be entirely applied in a small city. However, it is specifically dedicated for small and medium sized cities.
EMPOWER	PDF document/presentation, apps	EU Project https://empowertoolkit.eu/	Empower provides relevant background for all cities that want to stimulate a mode change to more active transport and public transport. This could be beginner and advanced cities.	3	The participating good practice cities are larger than S-M cities. But a number of the measures implemented in the good-practice-cities are also suitable for smaller cities if adapted accordingly.

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Tool name	Format	Source /Link	Usefulness for S-M cities and Importance in SUITS project	Rating of relevance [1 - 5]	Rating explanation
TravelSpirit tool: Openness Index for Mobility as a Service	PDF document (whitepaper)	Project of the TravelSpirit Foundation http://travelspirit.foundation/news/travelspirit-launches-a-new-tool-to-measure-the-openness-of-a-citys-transport-system/	A simple and practical tool to help those developing MaaS systems understand their current position and their potential for developing an open MaaS model. It can be used irrespective of the city's size.	3	The tool can be applied in S-M cities. The tool was applied to the Transport for West Midlands MaaS project as a demonstrative case-study.
CIVITAS CARAVEL	PDF document/presentations	CIVITAS network project http://civitas.eu/content/caravel	Rather great number of measures, some of them could be repeated in S-M cities. Burgos could be classified as S-M city, so its measures could be seen as a good example: collective mobility services, car pooling scheme for workers	2-3	Topics considered in this Module are mainly developed in the cities of the project that cannot be classified as S-M, but useful hints coming from Burgos (S-M city)
GROWSMARTER	PDF document (factsheets) and hints and contact details of good practice examples	EU Project http://www.grow-smarter.eu/solutions/	Grow Smarter provides relevant background for all cities that want to stimulate city uptake of 'smart solutions'. It provides 4 Smart City solutions regarding Sustainable Urban Mobility along with relevant case studies.	2-3	The participating good practice cities are larger than S-M cities. But a number of the measures implemented in the good-practice-cities are also suitable for smaller cities if adapted accordingly.

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Chapter 8: Available tools and guidelines

CHUMS

- This tool establishes the current carpooling status, estimates the potential impact of introducing CHUMS and identifies the supporting measures which are most likely to maximise the impact of CHUMS
- The following tables refer to the example of Kalamaria municipality

Carpool standing / culture in your country

		tick if yes
1	Government policies encourage municipalities or employers to include carpooling in travel/mobility plans	☐
2	Government policies provide some form of financial support to companies which introduce carpooling	☐
3	Government policies provide some form of financial support to individuals who carpool (e.g. tax relief)	☐
4	A nationwide carpooling service provider is active in your country offering carpool journeys for commuter trips	☑
5	There is an awareness of environmental impacts of car driving and a desire to minimise this where possible	☑
6	People generally view car onwership as a measure of success and are reluctant to dilute this by carpooling	☐

Carpool status in your city/region

		tick if yes
1	Regional or citywide public (open) schemes are provided by the transport authority/municipality	☐
2	There is a Regional or citywide commercial service provider offering public carpooling	☐

		It is very common	At several sites	At a few sites only	N/A
3	Availability of dedicated (closed) carpool schemes to employment sites	○	○	○	○

		Established (>5 years)	Maturing (2-5 years)	Young (< 2 years)	N/A
3	Overall, what best describes the carpooling schemes in operation	○	○	◉	○

4	Carpooling has been tried in the past but no carpool schemes currently operate	☑
5	Carpooling has never been available	☐

Support for carpooling from municipality / transport authority

		tick if yes
1	Do specific carpooling actions appear in municipality mobility plans (SUMPs) and/or regional transport plans ?	☐
2	Does the municipality/transport authority employ dedicated staff tasked with developing carpooling ?	☐
3	Does the municipality/transport authority support carpooling through infrastructure measures ?	☐
4	Does the municipality/transport authority support carpooling through financial incentives ?	☐

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Chapter 8: Available tools and guidelines

EXERCISE D

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Building S-M LAs' capacity to introduce Innovative Transport Schemes

Municipality Logo

EXERCISE D: Mobility as a Service readiness level

Description of exercise

One spider diagram, which participants use in order to transfer the score results from the CIVITAS ECCENTRIC tool. 8 fields (open boxes) which participants use to fill in the descriptive results of the CIVITAS ECCENTRIC tool.

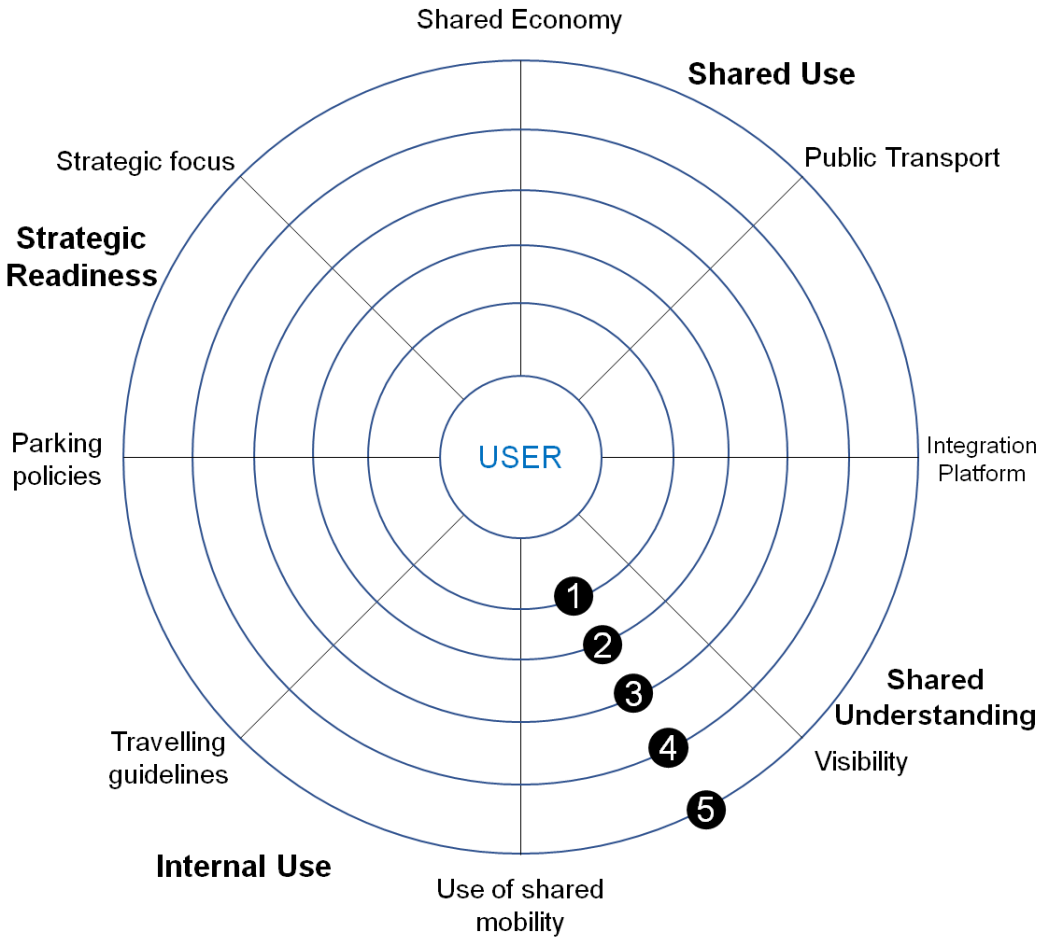
Building S-M LAs' capacity to introduce Innovative Transport Schemes

Municipality Logo

EXERCISE D

TEAM NAME: […]

Please use the spider diagram below, to transfer the results from the CIVITAS ECCENTRIC tool for your city.



Building S-M LAs' capacity to introduce Innovative Transport Schemes

Municipality Logo

EXERCISE D

TEAM NAME: […]

Please fill the following boxes with the results from the CIVITAS ECCENTRIC tool for your city.

Strategic Readiness

Strategic focus

Parking policy

Internal Use

Travelling guidelines

Use of shared mobility

Building S-M LAs' capacity to introduce Innovative Transport Schemes

Municipality Logo

EXERCISE D

TEAM NAME: […]

Please fill the following boxes with the results from the CIVITAS ECCENTRIC tool for your city.

Shared Use

Shared economy

Public transport

Shared Understanding

Integration platform

Visibility

Chapter 8: Available tools and guidelines

CIVITAS ECCENTRIC tool: MaaS Readiness Level Indicators for local authorities

- offers a new approach to understand how local authorities can speed up the process of MaaS in their local context.
- It works as a discussion tool and a check list to develop measures in the local authorities (part of the CIVITAS ECCENTRIC project).

The MaaS readiness level indicators give a cross-sectoral view on how prepared each local authority is for the change and what sort of decisions it has already made regarding transportation and how these support the implementation of the new transport services.

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Strategic focus

Level	Level indicators
1	The local authority has no measure taken to explicitly support MaaS development in the city.
2	The local authority is involved in measures to support the development of mobility services together with the service-providers and/or incentives are used for creating the Maas.
3	The local authority has a plan/strategy/policies to explicitly support the development of MaaS in the local context.
4	The local authority has local funding to support the change (project or continuous funding).
5	The local authority has a named person to be in charge of MaaS development. The local authority develops MaaS systematically.

Parking policy

Level	Level indicators
1	The local authority does not have a parking policy.
2	The local authority has a parking policy, but it does not explicitly support the shared use of vehicles and/or transport on demand
3	Politicians are ready to change parking policy on critical areas in the local authority or they are ready to take measures to reduce private motoring/ car ownership.
4	The local authority is active in supporting new business models by adapting parking standards for (new) residential developments (reducing the area of parking space, allocating parking spaces for shared cars/transport on demand and enabling new mobility services for residents).
5	The parking policy supports shared cars by offering priorities/cheaper parking/parking zones for shared vehicles and parking permits are easy to acquire.

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Level	Level indicators
1	Internal travelling guidelines for staff and politicians of the local authority do not prioritize sustainable mobility.
2	Internal travelling guidelines prioritize sustainable mobility, but are not monitored by the local authority.
3	Internal travelling guidelines prioritize sustainable mobility and travel patterns are monitored and reported annually by the local authority.
4	Internal travel instructions prioritize the sustainable mobility, travel patterns are monitored annually by the local authority and there is a clear plan to reduce the use of private cars on work travel and to promote the use of shared mobility.
5	Internal travelling instructions prioritize sustainable mobility, travel patterns are monitored annually, the use of private cars on work travel has declined during the past 3 yrs.

Travelling guidelines for the staff and politicians

Use of shared mobility within the local administration

Level	Level indicators
1	The local authority is not using shared mobility services itself.
2	The local authority offers shared cars/bikes etc. for the use of its staff and politicians, but it is limited to a small number of employees.
3	The local authority offers shared cars or bikes for the use of the majority of staff and politicians.
4	The local authority uses shared mobility services offered by several service providers.
5	The local authority uses shared mobility services offered by several service providers, not limited to working hours only

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Chapter 8: Available tools and guidelines

Level	Level indicators
1	There are no companies offering shared vehicles in the local authority.
2	There are pilots/campaigns/incentives taking place in the local authority regarding shared mobility options.
3	There are different kind of shared mobility opportunities offered by companies available for citizens.
4	There are more than five different kinds of MaaS operators providing combined mobility within the local authority covering the following modes: public transport, shared vehicles, shared bikes, ride sharing, rental cars, taxis, rental boats etc.
5	Regular service providers (grocery stores, theatres, estate developers and housing companies etc.) work together with MaaS operators and offer package deals to their customers.

Shared economy – availability and market penetration of shared and combined travel options

Public transport (PT)

Level	Level indicators
1	Customers can buy local PT tickets only via PT service providers' own channels, which differ from each other.
2	Customers can buy the tickets to PT through several sales channels offered by third parties.
3	The public transport authority (PTA) is actively connecting with other MaaS operators/transport providers in the area and they have plans to offer package deals to customers. (bicycle/car sharing, car-pooling, taxis etc.).
4	The PTA already offers multimodal package deals with other MaaS operators to customers.
5	Hotels, theatres, shopping malls etc. regular service providers offer several service packages combining PTA with their own services.

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Level	Level indicators
1	The local authority has not opened data gathered from public transportation operation.
2	PTA and the local authority have opened data/standardized information gathered so that third parties can use it to create new apps and services.
3	Third parties already use open data and provide mobile applications (with information about one mode of transport or more than one, real time information, information about other services, official public transport applications etc.)
4	The local authorities are promoting and facilitating a cooperation between different providers by any means (technical exchange platform, standardizations, etc.).
5	Third parties work together to sell their MaaS services by using the same apps as other private and/ or public MaaS operators. The app may be provided by the PTA or a private service operator.

Integration platform

Visibility – how obvious and easy to get are the shared mobility offers to the citizens

Level	Level indicators
1	Customers can find multimodal (min. 2 modes of transport) traveller information.
2	Customers have several channels from which they can find multimodal traveller information.
3	Customers get visuals or see campaigns on sustainable mobility options/MaaS services while travelling in the city.
4	Customers can change their means of transport easily in several places within the local authority (min 4 transport means in one place).
5	Customers have found MaaS services and their usage has increased within the last year

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