SMART-MR
Interreg Europe

European Union
European Regional
Development Fund

7th Workshop

Sharing Economy

Business models in mobility

Inventory

PP responsible: Porto Metropolitan Area

Workshop in Porto – (**09-10 October** 2018)
Sharing Economy

SMART-MR **Business models in mobility**

Background and objectives

SMART-MR aims to develop sustainable and resilient transport solutions in metropolitan areas. This is done by sharing experiences in different workshops and highlighting good examples of solutions that exist in participating organizations and regions. By also benefiting from the participants' individual skills at workshop opportunities, the possibilities for a valuable exchange increase.

One of the objectives of SMART-MR project is to find new sustainable forms of mobility particularly the ones that help to support behavioral shift.

This inventory aims to discuss the issue of the BUSSINESS MODELS IN MOBILITY that are of crucial importance for setting more sustainable mobility plans and services. Particularly, the business models in the sharing economy - also known as the "collaborative economy". Accordingly to the European Commission, the "collaborative economy" or sharing economy – "refers to business models where activities are facilitated by collaborative platforms that create an open marketplace for the temporary usage of goods or services often provided by private individuals." The collaborative economy, as further defined by the Commission, includes three categories of actors:

1) service providers who share assets, resources, time and/or skills (private individuals offering services on an occasional basis – 'peers'– or professional services providers);
2) users of these services; and
3) 'collaborative platforms'

Definitions of some the terms use in this inventory:

Sharing economy is an umbrella term with a range of meanings, often used to describe economic activity involving online transactions.[1] Originally growing out of the open-source community to refer to peer-to-peer based sharing of access to goods and services,[2] the term is now sometimes used in a broader sense

to describe any sales transactions that are done via online market places, even ones that are business to business (B2B), rather than peer-to-peer. (…)
Also known as **share economy**, **collaborative consumption**, **collaborative economy,** or **peer economy**, a common academic definition of the term refers to a hybrid market model (in between renting and gift giving) of peer-to-peer exchange[6]. Such transactions are often facilitated via community-based online services.[2][7] *Uberization* is also an alternative name for the phenomenon.[8]
(https://en.wikipedia.org/wiki/Sharing_economy)

Shared transport is a term for describing a demand-driven vehicle-sharing arrangement, in which travelers share a vehicle either simultaneously (e.g. ride-sharing) or over time (e.g. car sharing or bike sharing), and in the process share the cost of the journey, thereby creating a hybrid between private vehicle use and mass or public transport. (https://en.wikipedia.org/wiki/Shared_transport).

"Collaborative platforms are internet-based tools that enable transactions between people providing and using a service generally without there being a transfer of ownership of an asset." (in A European agenda for the collaborative economy Brussels, 2 June 2016: http://europa.eu/rapid/press-release_MEMO-16-2002_en.htm)

Crowdsourcing is a sourcing model in which individuals or organizations obtain goods and services, including ideas and finances, from a large, relatively open and often rapidly-evolving group of internet users; it divides work between participants to achieve a cumulative result. The word crowdsourcing itself is a portmanteau of crowd and outsourcing, and was coined in 2005.
(https://en.wikipedia.org/wiki/Crowdsourcing)

Inventory

A. **Open questions on sharing economy in the transport sector**: a set of 'open questions' intended for regions to share procedures, opinions and practices on:
    a. Shared transportation
    b. Collaborative platforms
    c. Crowdsourcing

B. **Regulations for shared economy:** some questions to see how each country looks at the new models in business economy

C. **Business model in sharing economy:** Self-evaluation of the local/regional transport business model in sharing economy.

D. **Good and bad practice presentation**: detailed presentation of the procedures adopted in your respective region/municipality.

E. **Current experiences**: short presentation of your knowledge on business models on sharing economy.

SMART-MR
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European Union
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City and regional contributions

Barcelona

A) Open questions on sharing economy in the transport sector

Shared Transport

1. Are there relevant policy documents or legislation that ensures or regulates shared transport in transport planning or management in general?

   At Catalan level (regional legislation), there is the law 21/2015 on the financing of the public transport system in Catalonia, configured by the set of services of land transport for passengers (road and rail, urban and interurban). Among its objectives, it includes to facilitate coordination, accessibility and intermodality between transport public services, bicycle and the operations/activities of sharing vehicles (used individually or for sharing trips –not for profit-). This aims at ensuring that shared transport contributes to the use of public transport, facilitating intermodality.
   At local level, the city council of Barcelona is working to develop and write a normative proposal during 2018 in order to regulate shared vehicle services. This regulation framework is the result of a study that diagnoses car-sharing in the city of Barcelona, which determines the existence of 15 companies (private, public and cooperative) of shared vehicles that operate in the city (with cars, motorbikes and bikes). These companies operate with different types of service: free movement, with or without fixed stations, or circular journeys. The regulation framework is needed to allow operators to operate their systems in a safe and stable way, and also to allow the City Council to define the uses and spaces allocated for them in the public space, thus minimising negative impacts.

2. Have the region and/or the municipalities adopted a vision that includes shared use mobility and also defines mode-split goals?

   Similarly to other innovative activities or issues, the city of Barcelona tends to be the first one to introduce its vision, and later other municipalities start following the same process, including the issue in their vision when it becomes necessary for them. In the case of shared mobility, Barcelona City Council is beginning to introduce its own vision of shared mobility in its Urban Mobility Plan, in other Strategic Mobility Plans, and also in its regulation. The goals are to promote sustainable, efficient and safety mobility, to reduce the use of private cars and the cars and motorbikes fleet, and to support and promote modal interchange between public transport and sharing systems.

3. Is there a strategy to integrate shared-use transportation modes into mobility planning? For instance, that encourage the integration of public transport, bike sharing, ridesharing, car sharing, and moto sharing around bus stops.

   Yes, the Barcelona Metropolitan Mobility Plan (PMMU) has integrated the shared vehicles approach in different measures of the mobility plan, through different actions, related to bicycles as well as motorcycles and cars. Some examples of these measures are the creation of a public platform to

manage car-pooling and promoting sharing mobility with different actions (advertising campaigns, unification and regularisation of legislation for sharing companies in the different municipalities, expanding the bike sharing network, creating an electric bike sharing network, etc.)

4. What municipal/regional measures do you have in terms of land use planning to encourage shared transports?

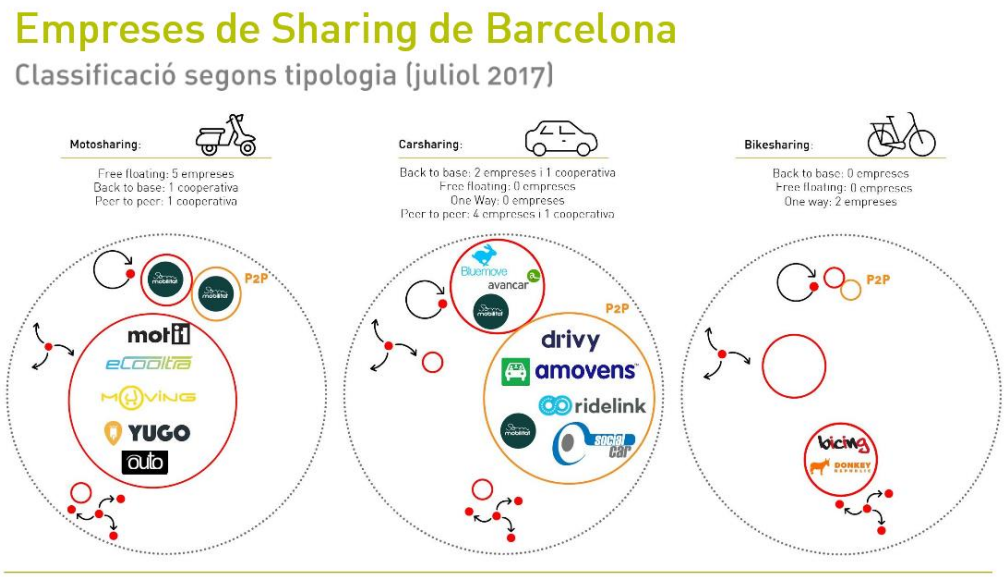
   Barcelona has regulated its offer in surface parking with different areas of payment, so the public space dedicated to parking vehicles is defined and managed. This policy does not have the same degree of development in all municipalities of the metropolitan area. Barcelona is preparing a normative proposal for sharing mobility that establishes that companies operating without stations (dockless free-floating) will have to pay a fee or rate per vehicle, as a quota for the use of public space. This normative proposal also defines a restricted area (Ciutat Vella district) where sharing vehicles will not be allowed to park, and proposes the creation of connections with public transport.

5. Which forms of the sharing economy in mobility do exist in your metropolitan region?

   In the metropolitan area of Barcelona different experiences of bikesharing, motosharing and carsharing exist.

   In the area of the city of Barcelona's there are different companies and services operating:
   - Bike sharing: two companies exist based on a one way service, one is a public service (Bicing) and the other one is a private service (Donkey Republic).
   - Moto sharing: there are five companies based on a free floating service, one company (cooperative) based on a back to base service, and another company (cooperative) based on a peer to peer service.
   - Car sharing: There are three companies (2 private and 1 cooperative) based on a back to base service, and five companies (4 private and 1 cooperative) based on a peer to peer service.

   Some of these companies also offer their services in other municipalities like Hospitalet de Llobregat, located next to Barcelona.



6. What do you think are the main challenges related to the sharing economy? What are the strategies for improvement?

   The main challenges in the Barcelona Metropolitan Area are the regulation of sharing mobility with an integrated vision, coordinating sharing economy with actions against atmospheric pollution and setting taxes and incentives for vehicles, the optimal management of the surface and underground parking, the recovery of the public space of the city, the empowerment of electric vehicle, fostering the use of bicycles and its normalization, and the improvement of road safety.
   The main strategies for improving conditions of sharing economy include the integration of tariffs for public sharing services, harmonizing regulations in the metropolitan area, and facilitating intermodality with public transport as well as in the great poles of attraction of mobility.

Collaborative platforms

1. What collaborative platforms in field of mobility are currently operating in your metropolitan region?

Type	Platform Name	Web link	Small description	Geographic regions of operation	Supply-side participants
Ride sharing	**Blablacar**	www.blablacar.es	Shared car service that makes it possible for people who want to travel to the same place at the same time to organize themselves to travel together. It allows to share the specific	Spain and surroundings	Drivers and individuals (passengers)

			expenses of the trip (fuel and tolls).		
	Fes edit	www.fesedit.cat	Social network of UB and UPC universities to connect drivers and passengers who want to share a car trip to go or get back from the university or to any other point.	Great region of metropolitan area	Drivers and individuals (passengers)
Car sharing	**Avancar**	www.avancar.es	Car sharing company which offers cars per time on a back to base model service.	Europe	Drivers
	Drivy	www.drivy.es	Car sharing between individuals and owners which works as a marketplace where the offer of the owners matches the demand of the drivers. The goal is to provide a more efficient use of vehicles, which usually spend most of their time parked.	Europe	Individuals and owners
	Amovens	www.amovens.com	Car sharing service that offers different modalities: renting cars between individuals, sharing a trip, or annual renting for private users, freelancers and companies.	Spain	Individuals, drivers and owners.
Moto sharing	**Ecooltra**	www.ecooltra.com	Moto sharing service with a fleet of electric motorcycles and with presence in five cities: Barcelona, Madrid, Lisbon, Rome and Milan.	5 European cities	Drivers
	Som mobilitat	www.sommobilitat.coop	Moto sharing service with electric motorbikes fleet, which offers different services for individuals, companies or municipalities.	Catalonia	Drivers
Bike sharing	**Bicing**	www.bicing.cat/es/	Bike sharing public service where users pay an annual fee (47 euros) and receive a card. With this card they can use one of the 6000 bicycles in any of the 464 stations spread around the city and have up to 30 minutes to make their itinerary and leave the bike at another station, at no extra charge. After the first 30 minutes, different fees apply depending on the time exceeded.	Barcelona city area	Users
	Donkey republic	www.donkey.bike	Bike sharing company which offers bicycles per time on a one way model service. Get the application to rent a bike from many places, in many cities, unlock your rented bike, find your	Different European cities	Users

			bike at the pick-up point and unlock the electronic padlock with the application, pedal and return the bike rented to an available place of delivery, block it and finalize your rent with the application.		
Shared freight mobility	**Last-mile micro platform pilot project**	http://lameva.barcelona.cat/barcelonasostenible/ca/actuacions/lultima-milla-a-ciutat-vella-micro-plataforma-de-distribucio-de-mercaderies-en-tricicles	Barcelona City Council, within the framework of the Smile European project, has enabled a micro-platform for urban logistics located in Passeig Lluís Companys, which works as a mini-loading and unloading dock, where trucks and vans arrive and unload packages destined to Ciutat Vella District, and from this point the distribution of goods is carried out by electrical tricycles.	Ciutat Vella District of Barcelona	Urban logistic companies and buyers
Park sharing	**Parkfy**	www.parkfy.com	Private platform where users can rent their parking space, when they do not use it, while drivers can find a place to park at a price that suits their preferences and needs.	Madrid, Barcelona and Valencia	Parking owners and drivers

Crowdsourcing

1. The transport authorities in your region have contracted third-party commercial providers to have access to crowdsourced data? For instance traffic speed and vehicle-count information. If yes, please explain.

   No

2. In your region there are internet-based social networks to obtain public feedback regarding the conditions of the transportation system? And regarding the performance of the transport authorities?

   Yes. There are two main social networks where a citizen can get addressed, Twitter (@ambmobilitat), and Facebook (https://www.facebook.com/AMBmobilitat). Both channels are currently notifying all public transport incidences and disruptions. These spaces are commonly used by users for comments, complaints, suggestions, and questions about everything related to metropolitan buses and mobility digital services.
   Besides this, AMB has a mobile APP (AMB Mobilitat) where users can also express their opinions and give feedback about transport conditions and performance of transport authorities.

3. Do you have any specific platforms to produce crowdsourced transportation data?

   No

4. Do you use another way of obtaining crowdsourced transportation data? With what aiming?

   No

B) Regulations in sharing economy

1. Are there any specific regulations that define when a person offering services is on an occasional basis and when he/she becomes a service provider acting in a professional capacity?

   At the national level, legislation is currently being modified to include new articles that affect the so-called collaborative economy, and more specifically in relation to the assignment of residential housing for tourism and in relation to platforms which offer transportation services, such as Uber.

   At the Catalan level (regional legislation), last September 2017, the Interdepartmental Commission on Collaborative Economics approved the Report "Proposals for a good fit between the collaborative economy and platforms in Catalonia". This report includes 24 proposals that cover different areas, which focus on:
   - Detecting the key elements that make up the activities of a collaborative economy, therefore, allowing to differentiate professional services from those that are not.
   - Identifying, revising and modifying sectoral regulations, especially those that regulate tourist accommodation and mobility.
   - Making recommendations in relation to cross-sectoral tax and labour regulations.
   - Making collaborative economy platforms sign the Code of Good Practices.
   - Promoting the signature of collaboration agreements between the platforms of collaborative economy and the Administration, to facilitate tax collection and transparency.

2. Are there specific requirements to service providers in the field of mobility? (For instance: type of vehicles, insurance obligations, specific training ...)

   Not at the moment, but Barcelona is considering working on this with the relevant stakeholders of the territory.

3. Are the collaborative platforms subject to sector-specific rules applicable to the underlying services (e.g. authorization and licensing in transportation service)?

   There is no specific legislation.

4. Is there any legislation that ensures that tax rules (VAT, personal income, corporate income) apply to the collaborative platforms?
   There is no specific legislation.

C) Transport business model in sharing economy

Self-evaluation of the local/regional transport business model in sharing economy. In order to better understand different kinds of business models, try to choose three different business models from the ones that you filled in the table in question 7 and answer the following questions for each one:

Name of the business model: Peer to peer or P2P

Goals: Maximising users and transactions

Responsible: **Amovens**

Short description: Car sharing service that offers different modalities: renting cars between individuals, sharing a trip and annual renting for private users, freelancers and companies.

1. What are the key activities?

Amovens' key activity is to act as an intermediary between different modalities of a car sharing services.

2. What are the key partnerships?

Relationships with strategic suppliers in order to create the maximum of partnerships between users

3. What are the cost structure?

It is a cost-driven service.

Registered users can:
- Publish a trip which they want to share (the cost is defined by the driver). Other users find, apply and pay for the trips published
- Publish their own car and decide the cost of the renting it. Other users find, accept and pay for renting the cars.
- Private users, freelancers and companies can rent a car per months, and also publish the rental car in the platform to sublet it.

4. What are the benefits?

The main benefits are that it offers a cheaper form of transport than traditional private vehicles, or in some cases even cheaper than public transport, and improving the efficiency of vehicle-use. In case of electric fleets, they also contribute to reducing GHG emissions.

5. Is it a local, regional, national or international business model?

International

6. Do you have concrete data related to the business model?

No

7. What is role of the mobility transport authority is this business model?

There is no specific role.

Name of the business model: Mixed model of subscription and payment for consumption (**Bicing**)

Goals: Maximising users and use

Responsible: Barcelona City Council

Short description: Bike sharing public service where users pay an annual fee (47 euros) and receive a card. With this card the user can use one of the 6000 bicycles in any of the 464 stations spread around the city and have up to 30 minutes to make the itinerary and leave the bike at another station without extra charge. After the first 30 minutes, different rates are charged depending on the time exceeded.

1. What are the key activities?

Bicing key activities include the management of the bicycle fleet, optimizing the bikes territorial distribution (moving bikes to match demand and supply at different hours in different locations), and management of the web and mobile applications.

2. What are the key partnerships?

The city council of Barcelona, the temporary union of companies *Pedalem Barcelona* (formed by CESPA and PBSC) that won the public procurement to provide the service, and advertising companies.

3. What are the cost structure?

It is a cost driven service.
Citizens need to register and pay an annual fee to get a user card (individual and non-transferable). With this card they can use the service for free during 30minutes, if this time is exceeded they begin to pay for the extra time used.
This service is only for residents of Barcelona, so tourists need to look for private companies if they want to move by bike in Barcelona.

4. What are the benefits?

The main benefits of the Bicing model is the promotion of sustainable urban transport models, the access to multiusers bikes at appropriate prizes, and avoiding security problems of parking on public space or the limitations of parking on housing.

5. Is it a local, regional, national or international business model?

International model of business, applied locally in the City of Barcelona.

6. Do you have concrete data related to the business model?

Barcelona city council, as the responsible administration, is the one that should have it.

7. What is role of the mobility transport authority is this business model?

Barcelona Metropolitan Area doesn't have any role as a mobility transport authority because this is a public transport mode offered by Barcelona city council.

Name of the business model: B2B and B2C (**Last-mile micro platform pilot project**)

Goals: Maximising daily operations in order to achieve the maximum savings of truck journeys.

Responsible: Barcelona City Council

Short description: Barcelona City Council, within the framework of the Smile European project, has enabled a micro-platform for urban logistics located in Passeig Lluís Companys, which works as a mini-loading and unloading dock, where trucks and vans arrive and unload packages destined to Ciutat Vella District, and from this point the distribution of goods is carried out by electrical tricycles.

1. What are the key activities?

Micro-platform for urban logistics: the key activity is to act as an intermediary between urban logistic companies and buyers.

2. What are the key partnerships?

Vanapeldal (private company for logistics using bicycles, which is the operator of the micro-platform), SABA (private company of parking facilities), Barcelona City Council, through the European SMILE project (Smart Green Innovative Urban Logistics for Energy efficient Mediterranean cities).

3. What are the cost structure?

It is a cost-driven structure.
The parcels destined to Ciutat Vella's district arrive at the micro-platform and Vanapedal charges a fee per package, for its last-mile distribution. Under this scheme, it is necessary for the company to perform 120 operations per day to make a profitable activity.

4. What are the benefits?

This experience is the first micro-platform for urban logistics in the centre of Barcelona using electric charge vehicles (with non-polluting vehicles, silent and environmentally friendly, avoiding large conventional vehicles entering the centre of large historic cities).

5. Is it a local, regional, national or international business model?

International business model, applied locally in the city of Barcelona

6. Do you have concrete data related to the business model?

No

7. What is role of the mobility transport authority is this business model?

Barcelona City Council is the local stakeholder of the European project, and also the local leader.

D) Good/bad practice presentation

Please, give a good and a bad example of a business model in sharing economy. Describe shortly the reasons for being a good/bad practice. You can include links and pictures (max 1 page).

Good practice	**Bad practice**
Name: **e-Bicibox**	Name: **Lack of regulation of metropolitan sharing services**
Context: In 2010 AMB created the Bicibox service, a secure parking network for bicycles distributed throughout the different municipalities of the Barcelona Metropolitan Area. To access the service, the user must register and give the data of his bicycle. Registration is free and parking is also, provided that it is for less than 48 hours (on working days) and less than 72 hours (on weekends and holidays). Beyond these time-slots a price / time is charged for the parking space. If bicycle parking is longer than 72 hours (on business days) and 96 hours (on weekends or holidays), the bicycle will be removed. Especially if this hinders the normal operation of the service. Next January of 2019, the new e-Bicibox shared electric bicycle service will be initiated associated with these secure parking modules. In this sense, if until now there was a single basic annual subscription (Bicibox subscription) that gives the right to occupy a parking space with a particular bicycle, a second annual instalment is established that will allow the use of an electric bicycle (e-Bicibox subscription) at a cost of 30 euros per year.  The e-Bicibox subscription will entitle users to temporarily use an electric bicycle and occupy a parking space for the Bicibox service with the	Context: Barcelona represents a pole of attraction for companies, tourism, as well as mobility. In this sense, different experiences of mobility-sharing have spontaneously appeared in parts of the city, to take advantage of this fact. The lack of regulations allows them to operate freely and maximising their benefits without offering a service throughout the city, limiting it to central areas or large centres for mobility. For this reason, the City Council of Barcelona has initiated a process to identify sharing companies that operate in the city of Barcelona, as well as a process for defining the regulation of these services (to specifically regulate who can operate, how, and under which rules). Unfortunately, this does not exist yet at metropolitan level. AMB 2010 Law defines its competencies, but when the metropolitan administration was created, sharing economy was still emerging; therefore AMB's law does not take them into account and they are not regulated at metropolitan level. AMB, as the authority of metropolitan transport, does therefore not have the legal bases to regulate these sharing companies, which strongly limits the metropolitan strategy for this new type of mobility. Nevertheless, the metropolitan dimension of sharing economy is starting to be regulated: AMB approved recently a regulation limiting the number of rental vehicles with a driver (such as Uber or Cabify) that can operate in the metropolitan area, in order to ensure that these services do not collapse the central parts of Barcelona and are also obliged to operate in other parts of the territory.

bicycle shared as many times as wished during the period of availability of the bicycle. This shared electric bicycle will have to be removed from a specific Bicibox place, and it will also have to be deposited in a specific Bicibox place.  The working hours of the service will be from Monday to Sunday from 7:00 AM to 12:00 PM.	
Main authorities and stakeholders involved: Metropolitan Area of Barcelona (AMB) and the different municipalities in this area.	Main authorities and stakeholders involved: AMB and metropolitan municipalities
Web links: Under construction (the e-Bicibox service) https://www.bicibox.cat/	Web links: N/A
Why is the practice considered as 'good'? This is a new concept of shared electric bike service, defined in a bigger area (supra-municipal) and associated with a previous service of secure parking network. Furthermore, with this experience, a service which breaks with the logic of municipal services is launched, operating in a supra-municipal area.	Why is the practice considered as 'bad'? The lack of regulation of metropolitan sharing services is considered a bad practice because it is a strong constraint in the development of shared mobility, from a broad territorial perspective. In the future it will be necessary to expand AMB's competencies to include these new shared-mobility models, and provide citizens of the entire metropolitan area supply of shared mobility services, in order to overcome the territorial imbalances generated by the centrality of Barcelona.

E) Current experiences

1. Has your organization already been involved in the promotion of a sharing economy business model? Please explain.

   Yes (Please see best practice above).

2. Were you directly involved in the activities or did you engage an external expert?

   AMB, as the leader of the e-Bicibox service has been directly involved in the activities, defining the service and its operations. We have also engaged external experts to provide support with technical aspects. The management of the service will be run by an external company, after a public procurement process.

3. What was the role of your organization? What stakeholders were involved?

   AMB is responsible for the metropolitan bike-sharing service. Other stakeholders include municipalities (where the safe parking boxes will be installed) and the private company that will run the service.

4. Has an evaluation been conducted and set in relation to set goals and objectives?

   Not yet, as the Project will start functioning from January 2019.

BUDAPEST

A) Open questions on sharing economy in the transport sector

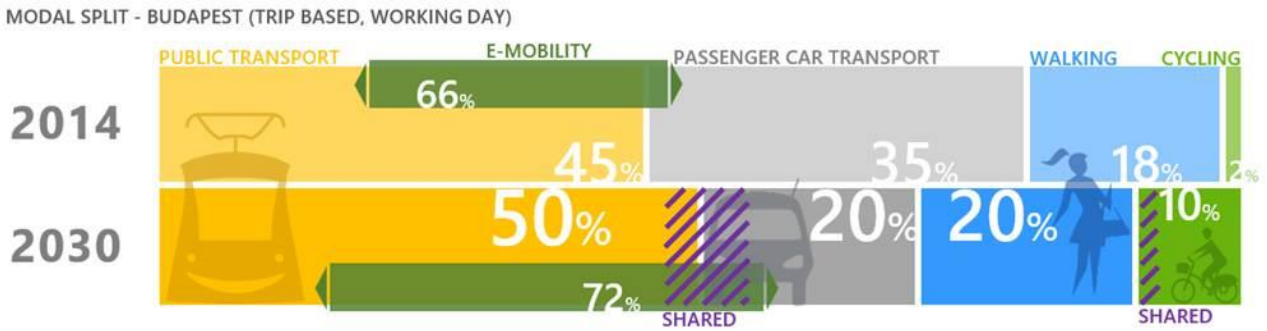
Shared Transport

1. Are there relevant policy documents or legislation that ensures or regulates shared transport in transport planning or management in general?

There are no relevant overall policy documents or legislation for shared economy or transportation policies. The Balázs Mór Plan, the sustainable urban mobility plan of Budapest has several shared mobility measures such as carsharing or bike sharing developments.

2. Have the region and/or the municipalities adopted a vision that includes shared use mobility and also defines mode-split goals?

In Budapest, shared mobility is considered as part of the mobility chain. The current and target modal split values do not contain any detailed shared mode values, but there are expert estimations for a future city modal share. Se the figure:



3. Is there a strategy to integrate shared-use transportation modes into mobility planning? For instance, that encourage the integration of public transport, bike sharing, ridesharing, car sharing around bus stops.

Our SUMP integrates the above mentioned mobility demands, there are nominated measures for shared use mobility development. However, there are no concrete measures yet to establish mobility points where shared mobility stations are placed near public transport stops. Current bikesharing stations are well connected to public transport, while carsharing operates on a freefloating model, where there are no special places reserved for carsharing cars, users can park them anywhere within service area.

4. What municipal/regional measures do you have in terms of land use planning to encourage shared transports?

There are currently no measures available in terms of land use planning to encourage shared transport.

5. What measures do you have or are being develop to integrate new shared mobility transports with PT? (ex. common payment system, intermodal car, information system, …)

Currently the publicly run bikesharing system is partly integrated into the public transport system, as bike docking stations are integral part of the FUTÁR application, which can plan travels besides public transport also with public bikes. Further developments are planned in order to integrate the ticketing system, as soon, as the new electronic ticketing system will be introduced.

6. Which forms of the sharing economy in mobility do exist in your metropolitan region?

There are currently two carsharing companies, one bikesharing system and a brand new scooter sharing system operating mainly in the inner city of Budapest. Furthermore, there are ridesharing companies operating countrywide.

7. What do you think are the main challenges related to the sharing economy? What are the strategies for improvement?

Sharing economy changes very rapidly, new forms appear which do not follow previous rules. For example 4 years after the introduction of the station based bikesharing system MOL-Bubi, dockless systems pop up in the city. The challenge is how to integrate new forms of mobility into the transport system, should conventional systems still to be improved, or shall we leave it to the market? Another challenge is the coexistence of the new and old systems, will both be able to survive (see taxi and Uber)? There are no strategies yet for improvement.

Collaborative platforms

1. What collaborative platforms in field of mobility are currently operating in your metropolitan region?

Type	Platform Name	Web link	Small description	Geographic regions of operation	Supply-side participants
Ride sharing	Blablacar, Oszkár	https://www.blablacar.hu/ https://www.oszkar.com/	classic Internet based ridesharing solutions	Europe	individuals with cars (owners)
Car sharing	MOL Limo, Greengo	https://www.mollimo.hu/ https://www.greengo.hu/	partly/full electric carsharing service	Inner city of Budapest	carsharing providers
Bike sharing	MOL Bubi	https://molbubi.bkk.hu/	station based public bikesharing system of Budapest	Inner city of Budapest	BKK, Municipality of the City of Budapest, MOL,
Shared freight mobility	fuvar.hu	https://fuvar.hu/	cargo delivery platform	Europe	private logistics providers

Park sharing	-				
Other: please identified	blinkee scooter sharing	https://blinkee.city/	electric scooter rental/sharing by mobile apps	Inner city of Budapest	E.ON, scooter provider company

Crowdsourcing

1. The transport authorities in your region have contracted third-party commercial providers to have access to crowdsourced data? For instance traffic speed and vehicle-count information. If yes, please explain.

BKK has a contract with Google, Google sends traffic data from Waze, while BKK provides GTFS for Google. (BKK does not use this data at all!)

2. In your region there are internet-based social networks to obtain public feedback regarding the conditions of the transportation system? And regarding the performance of the transport authorities?

An internet-based webpage, jarokelo.hu helps citizens to make requests about issues in the city. BKK has been collecting mobility related comments in the SUNRISE R&D project via an online map-based survey.

3. Do you have any specific platforms to produce crowdsourced transportation data?

No.

4. Do you use another way of obtaining crowdsourced transportation data? With what aiming?

No, but BKK uses social media for communicating news, and also receives some kind of information from users about its services.

B) Regulations in sharing economy

1. Are there any specific regulations that defines when a person offering services is on an occasional basis and when become a service provider acting in a professional capacity?

There are no specific regulations in this respect, but some of the mobility related issues (like taxi, carsharing, bikesharing) are regulated in the Passenger Transportation Law (Személyszállítási törvény) on national level.

2. Are there specific requirements to service providers in the field of mobility? (For instance: type of vehicles, insurance obligations, specific training ...)

Existing services, like taxi have specific requirements on engine category, luggage space, age, design, etc., set in national or local regulations, new forms of shared transport are not yet regulated. Basic regulations regarding carsharing on national level have been included in the Passenger Transport Law, but specific regulations on local level are still under preparation.

3. Are the collaborative platforms subject to sector-specific rules applicable to the underlying services (e.g. authorization and licensing in transportation service)?

There are no sector-specific rules applicable for shared transport modes yet. Vehicles of carsharing, bikesharing, scooter sharing are similarly regulated as their not shared counterparts. Drivers underlay the general Highway Code rules. There are however interesting situations on regulations regarding the international market. The Polish scooter firm Blinkee faces the problem, that their vehicles are categorised differently in different countries, in some they need for example a licence plate, in others don't.

4. Is there any legislation that ensures that tax rules (VAT, personal income, corporate income) apply to the the collaborative platforms?

Special tax rules have been made for electric vehicles only, not yet for collaborative platforms in mobility.

C) Transport business model in sharing economy

Self-evaluation of the local/regional transport business model in sharing economy.

Name of the business model: GreenGo e-carsharing
Goals: provide free floating car sharing service with fully electric cars
Responsible: GreenGo Ltd.
Short description: After 1,5 year of existence the service dynamically expanded from 45 cars to 200 as of now, with a service area of around 60 km2.

1. What are the key activities? Providing area based free floating car sharing with fully electric cars (VW e-up!)

2. What are the key partnerships? Porsche Hungaria as the supplier of the vehicles; Offsite – IT development

3. What are the cost structure? 43% - lease cost of vehicles; 35% - workforce; 10% - marketing; 5% - IT support and development; 5% overhead; 2,5% maintenance and cleaning of vehicles

4. What are the benefits? Flexible, cost effective substitution of own car usage

5. Is it a local, regional, national or international business model? Greengo is present in Budapest, but is planning to expand the service to other cities in the region

6. Do you have concrete data related to the business model? Yes 7. What is role of the mobility transport authority is this business model? As of now it is not clear as the legislation of the service has started but not yet been completed. Hopefully a regulated, competing market will be created instead of a monopoly

D) Good/bad practice presentation

Please, give a good and a bad example of a business model in sharing economy. Describe shortly the reasons for being a good/bad practice. You can include links and pictures (max 1 page).

Good practice	**Bad practice**
Name: MOL Bubi public bikesharing scheme	Name: Banning of Uber in Budapest
Context: • BKK Centre for Budapest Transport responsible for the mobility management as well as for urban cycling in Budapest. • When the scheme started in September 2014 there were 76 stations and 1,100 bikes. As of June 2018 this had increased to 126 stations, 1,506 bikes and altogether appr. 60.000 registered users, an estimated 4000 continuous users / 2 million trips. • The main aim of the bike-sharing scheme is to increase the promotion of urban cycling and combined public transport. Public transport plus bike sharing as an additional service. • Budapest's bike sharing scheme is aimed at public transport users, office workers, non-cyclists, students. The main target group is city users who haven't cycled before. BKK carried out research into attitudes towards cycling (2009/10) and it was revealed that more than two-thirds of respondents were open to cycling, but they didn't feel that it was particularly accessible. The main message was that bike sharing is accessible that can be used by anyone willing to try urban cycling – which can be considered to be a cheap and attractive form of transportation. The MOL Bubi brand is as well known as the bike sharing itself – it has helped to normalise cycling in the city. • It has been in operation since September 2014 and was implemented by BKK Centre	Context: This new and innovative service was very popular, as it was much cheaper than the fix priced taxi in Budapest. That was also one of the reasons, why shortly after its spreading taxi drivers and organizations started to opt against it. It offered a remarkable number of new jobs for drivers and a new way of transportation for the customers, while it caused a decreasing number of passengers for the conventional taxi companies. After heavy protests criticizing the loose regulations, and tax-evasion of Uber drivers, the government started to strengthen the regulations, which resulted the banning of Uber in Budapest in 2016., after a couple of years of service.

for Budapest.Transport with an EU fund (~3,5 M EUR). • In order to register to use the shared bikes, individuals must buy (virtual) tickets at self-service stations at transport terminals or via mobile application. 3-month, 6-month and 1 year Passes/subscriptions can also be purchased at the BKK Customer Service Centre. A one-day ticket starts at €1,62 (HUF 500) with a deposit of €81,11 (HUF 25000). 3 day, weekly and monthly passes are also available. • The technology involved is station-based smart bicycles. In 2008 when project started, one of the objectives was to use innovative solutions. Bubi was a good tool to introduce technical solutions such as apps, accessibility of the bicycles, integrated route planners in the app (tram/buses etc.) etc.. Another novelty is that they were able to solve the full docking station issue that is experienced in other cities. Bikes include an onboard computer so the user is able to leave the bicycle at their desired docking area using an additional rack and electronic lock. • Budget – implementation and maintenance ~ 1-1,5 M EUR/year (continuously expanding) • Implementation and operation model of the scheme is similar to TfL. According to the contract BKK is the owner of the software(s) and the hardwares. A contractor is used for the redistribution and maintenance of the bicycles and some IT-services and everything else is done inhouse. This ensures a lot of control, but also a lot of responsibility, which can sometimes be seen as a risk and a barrier in more dynamic development.	
Main authorities and stakeholders involved: • Municipality of the City of Budapest • BKK Centre for Budapest Transport Ltd. • Közbringa Ltd. • T-Systems Hungary • Nextbike	Main authorities and stakeholders involved: • Uber • Taxi companies • Hungarian state

• MOL – national petroleum company, name sponsor for MOL Bubi bikesharing • Hungarian Cyclists' Club	
Web links: molbubi.bkk.hu http://www.eltis.org/sites/default/files/b1_dalos_evolution_of_bubi_bike-sharing.pdf	Web links: https://www.uber.com/hu/cities/budapest/ https://www.researchgate.net/publication/325194364_Intermodal_Transportation_Does_Uber_Affect_Bicycle_Sharing_Usage
Why is the practice considered as 'good'? A highly integrated approach to establish a comprehensive framework of an innovative shared mobility service within a traditional (public) transportation scheme. Fields of integration: • Customer service • Fare structure • Signposting • Passenger info • Trip/Route planner • Surveillance • Transport policy • Traffic management • Branding • Marketing • Communication • Legislation/regulatory framework Key parameters for success: • MOL BUBI has also used innovative solutions, including on-board computers and electronic locks on bicycles effectively eliminating the problems associated with docking stations being full. • There has been a comprehensive/complex approach taken to incorporate bike sharing into the complex network of the public transport system. There have been a number of integrated solutions, involving road planning, customer services etc. and the development of road/streets in cycling friendly manner to support the scheme. • Strong communication is required for success. • During the initial stages of the project there was a policy regarding the location of docking stations to ensure they were	Why is the practice considered as 'bad'? Current regulations are not flexible enough to handle new forms of transportation. Neither a strong regulated market (like the taxis), nor a completely unregulated one (like Uber) is optimal. New ways of regulations, or recommendations are needed to handle the situation. Studies even showed, that the banning of Uber had a negative effect on public bike usage in Budapest.

off the pavement /in between curbs/away from pedestrian facilities/transforming space of former car parking places. Key insights and lessons learned • Budapest has used promotional tools, such as an integrated fare structure, multiple membership cards, and community-building gamification approaches to widen the target group of shared mobility services in order to achieve more social benefits. • Don't over complicate it. It is a huge challenge to educate the new users regarding the technical solutions of the scheme. In hindsight, they would have chosen more simple technical solutions, although the ones they did choose added to the accessibility of the system. • Bike sharing – don't start too small - Have to think big. It is relatively cheap to implement. It is recommended to try to cover large areas of the city with a large quantity of bikes/docking stations from the start in order for it to work. • Continuous feedback learning and development of the service. (currently lacking at the moment). Need to be able to implement new innovations from the market as they become available. If not on top of this, lose the opportunity • Many times when discussing cycling/bike sharing one forgets about the environment. Integration is important – if we are discussing parking policy – think about cars. One of the largest problems in the city is public space – bike sharing, walking etc need the space. Need a bigger picture than transport – urban structure development.	

E) Current experiences

1. Has your organization already been involved in the promotion of a sharing economy business model? Please explain.

- Bike sharing is transferable but we have to point out that in Budapest it is a public service. As such it should be non profit.
- Participation of stakeholders is vital in the design and implementation of the scheme. In the planning stages of the Bubi scheme all stakeholders were invited for a roundtable (twice). This included all the operators of existing bike sharing, vendors, operators, organisations for cycling etc. Forums/working groups have continued to meet since then.
- Integration in the transport and planning processes is also required.
- Regarding public opinion, part of the problem is that BKK hasn't been able to have a regular market research/survey that are representative. More generally, bike sharing has had a great reception so far (very positive). BKK bought huge innovation in Budapest – young and fresh representation. Since it has been fragmented, there have been more complaints and the opinion is less positive now due to these changes. Budapest has a traditional/strong PT service in city boundaries. There is currently debate on how to develop into a more comprehensive transport policy. Transport is on the agenda and is an interesting topic for the public

2. Were you directly involved in the activities or did you engage an external expert?

BKK was directly involved, but used also external expertise to make preliminary feasibility studies.

3. What was the role of your organization?

- Bike friendly area in city centre to support bike sharing, cycle lanes, advanced stop lines, traffic calming and contra-flow lanes – data available by district, including bicycle storage facilities implemented
- Bike and ride parking facilities - providing public transport lines with secure storage facilities for bicycles at stops. 250 spaces provided on lines M2 and M3 (2013-2016)
- Construction of 176km of bike-friendly roads (cycle tracks, cycle lanes, etc.) by 2013
- Other integrated bicycle developments (for example: speed reduction, traffic calming, opening up former one-way streets, etc.)
- Soft and hard measures have also been implemented. There are a number of pilot projects of interest which involve cycling and public transport, including cycling onboard PT, trolley bus lines etc.

4. What stakeholders were involved?

- Hungarian Cyclists' club – partnership with BKK to improve bicycle traffic conditions and promotion of urban cycling in Budapest. Work together on measures such as MOL Bubi, B+R parking, promotion of Budapest cycling, educational campaigns/programmes.

5. Has an evaluation been conducted and set in relation to set goals and objectives?

There is an ongoing evaluation.

- Set goal 1. 12.000 user. vs ~60.000 registered user so far, decreasing number of active users along the years (max: 8000 – min 2500)
- Set goal 2. Daily trips: should increase from 2000 to 5000 (1000/day more each year) vs ~ 2000 average so far

GÖTEBORG

A) Open questions on sharing economy in the transport sector

Shared Transport

1. Are there relevant policy documents or legislation that ensures or regulates shared transport in transport planning or management in general?

   No, there are no policy documents presently. But it can be considered to be included as a part of sustainable mobility initatives.

2. Have the region and/or the municipalities adopted a vision that includes shared use mobility and also defines mode-split goals?

   The region of Västra Götaland has adopted a vision that includes shared use mobility. The vision is described in the *Regional program for development of public transport* and is revised every fourth year. The overall goal is that the share of sustainable travel increases throughout the region and that public transport doubles to achieve an attractive and competitive region. On an overall level the vision also defines modal-split goals. More detailed modal-split goals are defined in *the Strategic public transport plans.*

3. Is there a strategy to integrate shared-use transportation modes into mobility planning? For instance, that encourage the integration of public transport, bike sharing, ridesharing, car sharing, and moto sharing around bus stops.

   Not formalized, but integrated in new developments of housing. This is done using a parking policy that focus on measures regarding mobility. The exploitation can substitute parking with, carpool, bicycle parking initiatives, parking lot sharing, etc. The policy also includes all other initiatives. See good practice.

4. What municipal/regional measures do you have in terms of land use planning to encourage shared transports?

   None

5. Which forms of the sharing economy in mobility do exist in your metropolitan region?

   Smarta kartan. An app bringing all sharing initiatives onto a map. Includes 17 initiatives within mobility, i.e. Carpool, bikepool, boatpool, rent a private car, ridesharing to cultural events

6. What do you think are the main challenges related to the sharing economy? What are the strategies for improvement?

The main challenge is how to make a business model, that works when financed or supported in a project concept, will continue even after the project has finished. The support from the public sector has also other considerations to take into account. One strategy to consider could be create a new third economic sector, beside public and private, a sharing economic sector. This sharing economic sector would in that case need specific rules and regulations regarding finance, taxation, working rules etc.

Collaborative platforms Supply-side participants:

1. What collaborative platforms in field of mobility are currently operating in your metropolitan region?

Type	Platform Name	Web link	Small description	Geographic regions of operation	Supply-side participants: Ex. Drivers, i.e., individuals with cars (owners)
Ride sharing	Skjutsgruppen	http://skjutsgruppen.nu/	A platform/ community for matching up people with the same route. Non-profit. Web site, fb-page & an app.	Sweden, mostly the densely populated southern parts.	Individuals owning cars.
Car sharing	Carpool: the dominating player is Sunfleet, wich is connected to Volvo.	https://www.sunfleet.com/	The classic concept of car sharing.	Sweden.	Sunfleet supplies cars and car-service.
Moto sharing					
Bike sharing	Styr & ställ, Donkey republic	http://www.gotebo rgbikes.se/ https://www.donkey.bike/	Styr & ställ is a bike-rental service provided by the municipality of Gothenburg. The user can pick up and leave the bike at docs placed out in the inner city. Donkey republic is a private-owned business, providing a franchise for any willing partner to join.	Origin: Copenhagen. Cities in Europe: https://www. donkey.bike/cities/	Rental bikes & docs

			The system is free floating and the bikes are not tied to docs.		
Shared freight mobility	Stadsleveransen	http://www.innerstadengbg.se/innerstaden-goteborg/stadsleveransen/	An initiative from the organisation Innerstaden (in co-op with the municipality of Gothenburg). The number of freights deliveries in the inner city is reduced by collecting small package-deliveries in one unified delivery route. The vehicles are electrified and adapted to operate in small spaces.	Gothenburg	Drivers and vehicles
Other: please identified	Smarta kartan see good practice				

Crowdsourcing

1. The transport authorities in your region have contracted third-party commercial providers to have access to crowdsourced data? For instance traffic speed and vehicle-count information. If yes, please explain.

   Yes, for example does Google provide some data for purchase. Public owned data is provided as an information providing platform, Trafiken.nu. Information regarding traffic flows, accidents, planned road work, travel times and CO2 emission for different modes of traffic is shared through the platform. Newspapers, radio etc act as information providers to the public.

2. In your region there are internet-based social networks to obtain public feedback regarding the conditions of the transportation system? And regarding the performance of the transport authorities?

   The Region of Västra Götaland (VGR) is the public transport authority in Västra Götaland. Västtrafik is the public transport company, owned by VGR, that is responsible for carrying out the long-term development plans for public transport in the region. Västtrafik has facebook as a social network to get feedback from the commuters. Through facebook Västtrafik is able to obtain feedback both regarding the conditions of the transport system and the performance of the public transport authority.

3. Do you have any specific platforms to produce crowdsourced transportation data?

The public transport system is registering where and when its passengers are buying onboard tickets. This data is not considered to be fully sufficient for understanding the flux of passengers in any great detail.

The city of Gothenburg has a system of road tolls to prevent traffic jams. The tolls are withdrawn through an atomized system, where cameras register the by-passing cars. This is also producing numbers describing how many cars there are out on the roads.

4. Do you use another way of obtaining crowdsourced transportation data? With what aiming?

   Dialog med hushåll (dialogue with households) is a recently completed project financed by Västsvenska paketet (the west Swedish package). 11 000 car owners, populating areas outside Gothenburg with high numbers of job commuters to the city, have been contacted over telephone. The dialogue contained information about how the contacted persons commute between home and workplace would be affected by the planned reconstructions, questions about travelling habits, a free trial period for public transport and tips and encouragement to try sustainable travelling. This provided us with data describing both travelling behaviours and the reactions on this kind of campaign.

B) Regulations in sharing economy

1. Are there any specific regulations that defines when a person offering services is on an occasional basis and when become a service provider acting in a professional capacity?

   Uber is providing a platform for sharing private cars and driver to the public giving an opportunity for individuals acting as a taxi service. Uber is providing a mobility service combining the needs of the rider, the driver and the city. These stakeholders get these respective benefits in short, an easy ride, opportunity to earn money, and a more effective mobility situation as a complement to car ownership, public transport etc.

2. Are there specific requirements to service providers in the field of mobility? (For instance: type of vehicles, insurance obligations, specific training ...)

   Yes, there are a screening regarding the driver's qualification within Uber, MoT (Mobility as a service) for the car etc. Uber Pop is not permitted in Sweden.

3. Are the collaborative platforms subject to sector-specific rules applicable to the underlying services (e.g. authorization and licensing in transportation service)?

   Yes

4. Is there any legislation that ensures that tax rules (VAT, personal income, corporate income) apply to the collaborative platforms?

   No, this is considered a problem. The Uber driver is responsible for declaring and paying tax on earnings.

C) Transport business model in sharing economy

Self-evaluation of the local/regional transport business model in sharing economy.
In order to better understand different kinds of business models, try to choose three different business models from the ones that you fill in the table in question 7 and answered the following questions for each one:

Name of the business model: Skjutsgruppen
Goals: Increase the number of shared rides
Responsible: Skjutsgruppen
Short description:
The website and Facebook-page has existed for 10 years and grown without any commercial activity, almost entirely user-driven. Recently, an app has been developed with financial support from Västra Götalandsregionen.

1. What are the key activities?

Providing a digital platform for matching travellers with the same destination. The participants owning a car gets help to split the cost for fuel.

2. What are the key partnerships?

Region of Västra Götaland (VGR)

3. What are the cost structure?

The organisation is non-profit, and a lot if the work is done without economical compensation. Costs are mainly for maintaining and developing software.

4. What are the benefits?

The activity can improve the efficiency of the transportation system.

5. Is it a local, regional, national or international business model?

Right now, it's national, but there is probably international potential.

6. Do you have concrete data related to the business model?

Please contact Skjutsgruppen for more info.

7. What is role of the mobility transport authority in this business model?

-

Name of the business model: Donkey republic
Goals: Increasing bicycling in the inner city
Responsible: Donkey republic
Short description: Donkey republic is a private-owned business, providing a franchise for any willing partner to join. The system is free floating and the bikes are not tied to docs. Available bikes can be spotted through an app/ website.

1. What are the key activities?

Anyone who has a bike that they are not using can rent it out through the platform of Donkey Republic. When a private person has announced interest in renting out a bike, Donkey Republic sends out a start-kit with gadgets to be attached on the bike. The kit contains a lock that can be unlocked through the platform, an instruction panel that can be attached to the handle bar and an orange sticker that will make the bike easy to locate.

Companies can also participate and have as many bikes to rent out as they want.

2. What are the key partnerships?

Anyone, both private persons and private business.

3. What are the cost structure?

Serving the platform and franchise takers.

4. What are the benefits?

It is an easy way of renting out bikes, beneficial for both public and private interest.

5. Is it a local, regional, national or international business model?

International.

6. Do you have concrete data related to the business model?

Not for Gothenburg. For Copenhagen, the number of registered users is 500 and amount of trips is 10 000, according to Donkey Republic.

7. What is role of the mobility transport authority is this business model?

No explicit role.

D) Good/bad practice presentation

Please, give a good and a bad example of a business model in sharing economy. Describe shortly the reasons for being a good/bad practice. You can include links and pictures (max 1 page).

Good practice	Good practice	Bad practice
Name: Skjutsgruppen	Smarta kartan	Name: Hållbara Attraktiva Stationssamhällen (Sustainable and Attractive Station Communities)
Context: Skjutsgruppen is providing a digital platform for matching travellers with the same destination. The participants owning a car gets help to split the cost for fuel.	Context; The Smart Map aims to make it easier for the people of Gothenburg and visitors to the city to live sustainably by encouraging a sense of community, facilitating new ways of linking up, and promoting access rather than ownership. The Smart Map highlights current and upcoming activities and networks throughout the city. The map shows 'bike kitchens', where people can learn to fix their own bikes, as well as exchange groups and clothing exchange days, give-away shops, and digital platforms. Criteria Number 1 – 5 are compulsory. 1. Open to everyone, or limited to a particular block or group of residents 2. Items and services are provided free of charge (or at the same cost as of it self) 3. A local community 4. Facilitates urban commons and access rather than ownership 5. Promotes renting, sharing, exchanging, borrowing and giving, rather than buying and selling 6. Promotes exchange between private individuals 7. International companies are not allowed if they are not a coop	Context: HASS was a 2-year project funded by Vinnova, which ran between 2016-2018. The goal of the project was to reduce the environmental impact of transport while making it more attractive to live in station communities, and the focus was to find various means of competing with cars as the "simple solution", even in smaller areas with high car dependency. The project had a diverse portfolio of work packages, including tools and methods for land use planing (related to parking, mobility patterns and climate impact), as well as testing mobility services with residents to incentivise car-free travel. The mobility services where collected in an app, and part of the project involved creating a business model for the mobility services platform. The project had a strong focus on citizen engagement and conducted workshops with locals to identify needs and opportunities.

	Who are included? The Smart Map is not a list of companies; it is about people and communities that share things. We will not highlight second-hand stores, pawnbrokers, charity shops, jumble sales, or vinyl stores. What is presented online is decided through joint consultation between the association Collaborative Economy Gothenburg and the City of Gothenburg Consumer and Citizen Services Administration, and is founded on their collective values and common remit. Anyone can submit a proposal by completing a special 'Add an activity' form. Activities are then selected following a discussion between the project owners.	
Main authorities and stakeholders involved: Skjutsgruppen, Västra Götalandsregionen.	Creator and organisations responsible The Smart Map has been created as part of an innovative civil-public partnership between the association Collaborative Economy Gothenburg and the City of Gothenburg, Consumer and Citizen Services Administration.	Main authorities and stakeholders involved: GR was the project owner, with project management at IVL. A triple helix consortium of 20+ actors was involved in the project, including several research organisations, representatives of local businesses, as well as the two test municipalities of Lerum and Ale.
Web links: https://web.skjutsgruppen.nu/	http://smartakartan.se/about/	Web links:
Why is the practice considered as 'good'? Skjutsgruppen is a non-profit organisation that has grown	Why is the practice considered as 'good'?	Why is the practice considered as 'bad'? The mobility services tested included e.g. car pools,

organically for 10 years, without any budget for advertising. This is by itself a proof of its strength in terms of a business model. The platform is simply connecting people who are interested in making transactions. The business, or “movement” as the company calls itself, is still a marginal phenomenon and the future will tell whether it will ever have a considerable impact on the flows of traffic. Through financial support from Västra Götalandsregionen the app-version of Skjutsgruppen has just recently been launched, hopefully it will increase the usage of the service.	The practice show all initiatives in Gothenburg for its citizens and visitors. It even includes a toy library. Kids in Sweden has some 500 toys in their room. Even so they get bored and want a change. The toy library facilitas their needs The app is also open source and is therefor tranferable to other cities or regions.	electric pod-taxis, and discussion with local shops involving home deliveries, all of which were collected in an app that connected them to bonuses/discounts at local businesses, with the idea of encouraging loyal customers and more sustainable travel habits. There was an intention to produce a business model for this platform of services and bonuses. The business model part of the project was unsuccessful in several ways. Firstly, several possible business models were formulated over the course of the project, but no single model was tested to the degree that it could be implemented. A contributing, and significant, factor is the lack of an owner for such a business model after the project's end. Neither the research organisations nor the municipalities have a mandate to or interest in maintaining the app or platform, and many of the services tested were not sufficiently profitable for any one of the local businesses to maintain. This was particularly due to lack of demand / too small population, and possibly also reflects that the project was not structured in a way that allowed for citizen dialogues to at an early stage define the mobility services tested. Local businesses were not involved in the process of linking the bonuses/discounts to mobility services, but were

		simply presented with a proposal. This meant they felt less ownership. A reflection is that business models created within triple-helix cooperation need to clearly identify a relevant stakeholder (or stakeholders) with a mandate and interest in pursuing the venture. Further it is important to note that innovation projects involve testing various ideas and that there is always a risk that these will not be worth pursuing further.

E) Current experiences
Region of västra Götaland

1. Has your organization already been involved in the promotion of a sharing economy business model? Please explain.

   The Region of Västra Götaland is involved in the promotion of sharing economy business models through their role as the public transport authority. The region:

   - is funding pilot projects in the field of research and development (for example, supporting construction companies to provide combined mobility solutions when they built new housing. Another example is funding a parking-app that provides combined mobility solutions)

   - has assigned the public transport company, Västtrafik, to develop a *Plan for combined mobility.*

2. Were you directly involved in the activities or did you engage an external expert?

   The region is providing the arena and the funding to create innovative solution within the field of combined mobility.

3. What was the role of your organization? What stakeholders were involved?

   See answer 38. Different stakeholders are involved depending on the pilot project or the themes that are described in the Plan for combined mobility.

4. Has an evaluation been conducted and set in relation to set goals and objectives?

   Not yet since many of the initiatives taken are in an early stage.

HELSINKI

A) Open questions on sharing economy in the transport sector

Shared Transport

1. Are there relevant policy documents or legislation that ensures or regulates shared transport in transport planning or management in general?

   Legislation on transport has just been upgraded in Finland, but regulation on shared transport in transport planning is not included in the law. The new law enables mobility as a service solutions and opening data for digital solutions.

   The need to reform legislation in shared transport has been identified.

2. Have the region and/or the municipalities adopted a vision that includes shared use mobility and also defines mode-split goals?

   In Helsinki region, municipalities do not have specific goals for shared mobility yet. One reason for this is that it has been somewhat unclear what actual impacts shared mobility services have to mode share. For instance, according to some model-based studies in Helsinki region shared ride trips may replace a significant proportion of trips (even 2/3) otherwise made by public transport. The biggest potential for services is where there is enough people and the same goes for PT. As a whole, shared mobility services are seen as something that complements public transport and reduces car ownership. Thus, in the on-going planning process of the Helsinki Region land use, housing and transport plan (MAL 2019), of which a draft will be circulated for comments in autumn 2018, it is emphasised, that shared transport is promoted in ways that ensure sustainability. One of the primary measures in the draft states: (June 2018): ”Transport investments and services in the region are directed to public transport and cycling supporting current structure. Transport services based on sharing economy are used in ways that replace passenger car use and ownership in a sustainable way”.

   One of the main indicators of the on-going plan’s impact assessment is the modal split of sustainable transport modes (walking, cycling, public transport). The current share in the Region is 57% and the goal in the MAL 2019 plan for 2030 is 70%.

   Despite the lack of legislation, cities are able to make their own policies. In shared use mobility, the cities are focusing more in allowing, enabling, and using open data than through actual transport planning. Cities are also developing their own shared car use.

   (*Some Finnish research shows that shared free-floating cars are getting more public transport users than station based cars.)

3. Is there a strategy to integrate shared-use transportation modes into mobility planning? For instance, that encourage the integration of public transport, bike sharing, ridesharing, car sharing, and moto sharing around bus stops.

   Not strongly in strategic level. The need has been identified. The regional MAL2019 plan will include some measures (see above).

   One exception to this is the city bike system, which has been systematically developed. The first city bike system in Helsinki was based on a coin token of 2 Euros and was in use in 2000-2010. Due to many problems with the system (e.g. vandalism, poor usability of the bikes) it was run down and a new, modern, and registration-based system was taken into use in 2016 in Helsinki. Since then, the system has been expanded every year and will be expanded further in the coming years. This year the system was expanded to the city of Espoo. In the opening year (2016) there were 500 bikes on 50 stations, and currently there are 2550 city bikes, with 70 stations in Espoo, and 150 stations in Helsinki. In the course of the summer, 35 stations will be added to Espoo.

   The city bike system has been greatly valued by users, and it is an integrated part of the public transport system, as the system can be used with the public transport travel card, and the stations are located so, that the bikes serve as feeder traffic in many places. The system also complements the PT system and provides, in many cases, a faster way to the destination. As in many places, the fastest way to travel distances less than 5km, is often the bicycle.

4. What municipal/regional measures do you have in terms of land use planning to encourage shared transports?

   The latest land use plans include parking spaces for car sharing cars, for example in Kalasatama and Jätkäsaari in Helsinki. The parking requirement for new apartments is lower when car sharing contract has been made with a car sharing company.

   The Low Carbon District -concept for station areas, developed by HSY, will include some recommendations to reserve parking spaces for car sharing cars and bicycles near the stations.

5. Which forms of the sharing economy in mobility do exist in your metropolitan region?

   Car sharing, ride sharing, city bike sharing, P2P car sharing, P2P ride sharing, B2C car sharing and B2B car sharing. Also a small scale P2P freight transport is in use.

6. What do you think are the main challenges related to the sharing economy? What are the strategies for improvement?
   - high threshold to start using the service (social constraints) -> More user understanding of whether ownership can be discarded and how. There is a need for extensive social research on new thinking.
   - Users' needs and attitudes and regional distribution of demand. On the one hand, the supply of shared transport services in metropolitan regions versus the surrounding rural regions -> Different solutions for different types of regions
   - Reduction in share of public transport if users come from commuter traffic. -> Co-operation with public sector and public transportation and private services needs to be developed.

- Connection to feed transport and trunk network, if needed. Also the pricing of services and specially travel chains combining public and private services.
- Pricing car usage to cover the externalities has a big influence also on sharing mobility potential
- Lack of legislation, in relation to responsibility issues -> development of legislation
- Responsibility issues -> best practises in responsibility solutions, service design

Collaborative platforms

1. What collaborative platforms in field of mobility are currently operating in your metropolitan region?

Type	Platform Name	Web link	Small description	Geographic regions of operation	Supply-side participants
Ride sharing	Tziip	http://www.tziip.com/ https://www.facebook.com/tziip/	Application for offering a scheduled or instant ride, based on registration and given ratings. Possibility also for planning rides.	Helsinki region, Tampere	P2P: individuals with their own cars (owners)
	Facebook groups, eg "Kimppakyyti"	https://www.facebook.com/groups/kimppakyyti/	Several active facebook groups where shared rides are agreed.	Nationwide or for specific route or city	P2P: individuals with their own cars (owners)
Car sharing	City Car Club	http://www.citycarclub.fi/en	City Car Club offers car sharing solutions for citizen and companies (housing companies, SME´s etc.) It is a 100 % privately owned company and has been a pioneer in field, beginning in late 1990s´.	Helsinki	B2C and B2B Owned by two joint SME´s (Suomen kaupunkiautot Oy and O2Media)
	Ekorent	http://ekorent.fi/en	Full-electric vehicle car sharing service for citizens and communities, such as housing communities and public and private sector offices. Service is hour based rental and all-inclusive, which covers electric vehicles, compatible charging stations, customer support, EkoRent application (also for discount on parking fees) and car maintenance.	Helsinki region, Turku, Tampere	B2B and B2C
	24Rent	https://www.24rent.fi/jasenyys-ja-yhteiskaytto/	Dispersed cars close to homes and jobs, booking online, pay for online banking and take the car for yourself by SMS. Also hour based rental. For individuals and companies.	Nationwide, almost 100 cars in many different locations, each in their own unique location.	B2C and B2B
	OP Kulku Car Sharing	https://op-kulku.fi/yhteiskaytto	Full-electric and hybrid car sharing service for groups, companies and municipalities as owners, priced hourly.		B2B, B2C OP as a service provider is a combined bank and insurance

			Mobile app for renting, paying and locating cars.		company which is going into MaaS-business.
	OP Drive Now	https://uusi.op.fi/private-customers/themes/transportation/drivenow	Floating cars, nearest car found with an application. Charged per minute, parking, insurance and fuel included.	Helsinki, Espoo and Helsinki-Vantaa Airport	B2C, B2B OP has a franchising contract with Drive Now.
	ShareIt Blox Car	https://bloxcar.fi/ https://shareit.fi	Private cars shared through web site. The owner of the car decides the kilometer, hour, day or week price for the car.	Finland	C2C, private cars for private customers via internet service or App
Bike sharing	City bikes	https://kaupunkipyorat.hsl.fi/en	City Bike sharing system, used by HSL Travel Card with registration. 2550 bikes in 150 stations of Helsinki and in 70 stations of Espoo (35 more in 2018).	Southern Helsinki and Southern Espoo	G2C Helsinki City Transport (HKL) is responsible for the city bike system in Helsinki and Espoo Technical and Environment Services in Espoo. The system is administered by CityBike Finland, which is a subsidiary of Smoove and Moventia, the consortium responsible for producing the system. HSL is responsible for marketing, the HSL.fi city bikes online service and for the city bikes as part of the HSL app and Reittiopas. Ad space is sold by Clear Channel and the main partner of the city bike service is HOK Elanto.
Shared freight mobility	Piggy baggy	http://piggybaggy.com/en	Ride sharing for goods. App based service solution which combines needs and services.	Capital region, pilot in Lahti	C2C Individuals as service subscribers and delivery operators

Park sharing	Barking	https://barking.city/	App for booking, renting and paying a parking space in advance.	Capital region	P2P, Individuals, public and private organization are leaseholders and individuals are users.
Other: please identified	Whim (MaaS-solution)	https://whimapp.com/	Mobile app which enables users to order different transport and other mobility services in the same service. The service includes PT, city bikes, taxi services and car rental. Different pricing models.	Helsinki Region	Whim offers the application. Public transport, taxi companies Taksi Helsinki and Lähitaksi, car rental service company Sixt
	Kyyti transport service (MaaS-solution)	https://www.kyyti.com/english.html	Mobile app called Kyyti, which allows users to order Kyyti transport service and other mobility services. From address to address based on customers' orders and pools the trips ordered by different customers to the same cars and routes, shared taxi option ("cheaper taxi"). Different pricing models. Utilizing the use of depleted resources by expanding sharing, ie in times of worse demand lower priced service	Turku, Tampere, Oulu, pilot in Helsinki	Finnish licensed taxi and public transport companies
	Kutsuplus pilot (2013-2015)	https://www.hsl.fi/en/news/2016/final-report-kutsuplus-trial-work-develop-ride-pooling-worth-continuing-8568	Pilot for on- demand call transport. People going to the same direction, were efficiently collected in the same vehicle An alternative to multiple-change trips and private car drives A novel form of public transport complementing the public transport offering • Real-time, automated, demand-responsive public transport • Trip order, payment, optimized trip combining, and driver's instructions in real-time, within seconds Advance payment enabled fast pick-up and delivery.	Helsinki-Espoo	G2C Helsinki Region Transport piloted the service for two years. In addition to HSL, other operators were software developer Split Finland OY (formerly Ajelo Oy), Aalto University and the Finnish Transport Agency
	Municipalities own transportation		Municipalities are opening their own cars and transport services for sharing		

Crowdsourcing

1. The transport authorities in your region have contracted third-party commercial providers to have access to crowdsourced data? For instance traffic speed and vehicle-count information. If yes, please explain.

   No

2. In your region there are internet-based social networks to obtain public feedback regarding the conditions of the transportation system? And regarding the performance of the transport authorities?

   Not any official feedback system. Helsinki Region Transport and Finnish Transport Agency have social media presence and some feedback comes through it.

3. Do you have any specific platforms to produce crowdsourced transportation data?

   No

4. Do you use another way of obtaining crowdsourced transportation data? With what aiming?

   No. In some specific projects have been utilized for example TOM-TOM navigator data or location information of mobile phones. This kind of data is expensive to use. Possibilities to use mobile location data in transport planning regarding data protection has been researched.

B) Regulations in sharing economy

1. Are there any specific regulations that defines when a person offering services is on an occasional basis and when become a service provider acting in a professional capacity?

   The legislation on transport has just been upgraded and one part of the reformation was to lower the requirements of taxi license and drivers. When a driver applies for a taxi driver license and gets one, he/she is regarded as a professional taxi driver. To be able to provide official taxi services, one also needs to work for a licenced taxi company.

2. Are there specific requirements to service providers in the field of mobility? (For instance: type of vehicles, insurance obligations, specific training ...)

   Taxi drivers still need to apply for a taxi driver's license which includes for example taxi driver examination, health criteria and criminal report to ensure taxi service to be safe.

   Vehicle can be a car, a van, a lorry, a light or heavy 4-wheel or 3-wheel.

3. Are the collaborative platforms subject to sector-specific rules applicable to the underlying services (e.g. authorization and licensing in transportation service)?

The platform provider have to register to Finnish Transport Safety Agency. They have to make sure for instance that the service providers have a license.

4. Is there any legislation that ensures that tax rules (VAT, personal income, corporate income) apply to the collaborative platforms?

   Tax rules say: "The income you receive from the provision of passenger transportation on a crowdsourcing basis (Crowd-based passenger transport service e.g. Uber) is regarded as taxable earned income.
   Crowd-based passenger transport is treated as a service you provide in a small scale, i.e. not as your principal occupation. If annual income exceeds €10,000 per calendar year, you must enter into the VAT register.
   You can deduct the expenses that relate to the operation of the services i.e. deduct the Uber-related part of your car's running costs. The deductible amount is the actual costs."

C) Transport business model in sharing economy

Self-evaluation of the local/regional transport business model in sharing economy.
In order to better understand different kinds of business models, try to choose three different business models from the ones that you fill in the table in question 7 and answered the following questions for each one:

Name of the business model: Blox Car – Aggregator business model (P2P)
Goals: The principle of Blox Car is to handle the fragmented car-sharing market and provide a matchmaking platform for consumers to increase the volume of private car usage and financially reward owners by covering the cost of ownership and use.
Responsible: ShareIt Blox Car Ltd
Short description: Blox Car is a peer-to-peer car sharing service that helps car owners find someone to rent their car to when they don't need it. Private cars are shared through website and the owner of the car decides the kilometre, hour, day or week price for the car. The service offers a payment process and feedback on all members (for member level definition) and vehicles. It also includes insurances.

1. What are the key activities?

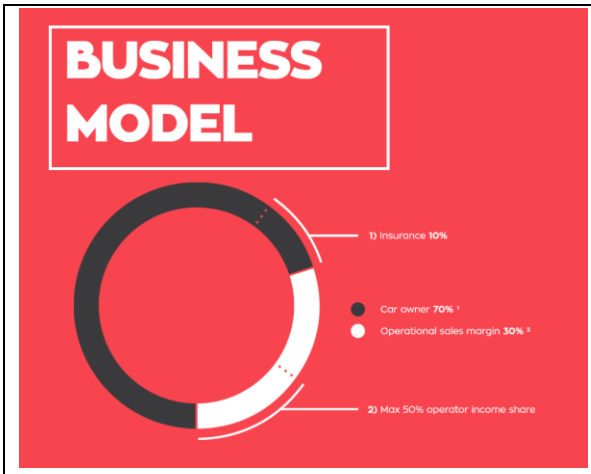
A scalable platform that enables car sharing for both consumers and businesses and services.

2. What are the key partnerships?

Blox Car offers the internet platform for peer to peer operation.

3. What are the cost structure?

Private car owners determinate the renting price (km, day price) and get paid via the secure online platform. Blox Car offers the payment platform and transactions are made within it.



4. What are the benefits?

Increase the volume of private car usage and financially reward the car owner by covering the cost of ownership and use.

5. Is it a local, regional, national or international business model?

The business model is international and Blox Car intends to expand its services abroad. At the moment Blox Car service is available nationally in Finland.

6. Do you have concrete data related to the business model?

Blox Car has nearly 7,000 users and over 400 cars have been listed in the service during its history. The availability of cars varies according to people's own needs, but around the country there are almost one hundred cars available at any given time.

7. What is role of the mobility transport authority in this business model?

Blox Car can also be a car-sharing enabler for public transport. Co-operation between carsharing platforms and public transport could enable consumers to have more diversified travel chains that could answer better to consumers' dynamic mobility needs.

Name of the business model: City bike, **G2C, Combined public investment, subscription and transaction fee based and advertising support model**
Goals: Integrate bike sharing as a part of the transport system.
Responsible: Helsinki City Transport (HKL) is responsible for the city bike system in Helsinki and Espoo Technical and Environment Services in Espoo. The system is administered by CityBike Finland, which is the consortium responsible for producing the system. HSL is responsible for marketing, the HSL.fi city bikes online service and for the city bikes as part of the HSL app and Reittiopas. Ad space is sold by Clear Channel and the main partner of the city bike service is HOK Elanto.
Short description: City Bike sharing system, is a G2C business, which offers 2550 bikes in 150 stations of Helsinki and 105 stations in Espoo. The bikes are used by an app and HSL Travel Card is used for registration. City Bike Finland has been responsible for the detailed bike station design, site construction works and installations. The Public bike service network has been designed together with the City

Planning Department. Furthermore, CBF operates the service and provides the stations, bikes and payment terminals, and is responsible for the public bike system maintenance, administration and the customer service.

1. What are the key activities?

City bike sharing, adding bikes as part of public transport system and offering space for advertisements.

2. What are the key partnerships?

Cities of Helsinki and Espoo, City Bike Finland (subsidiary of Catalan Moventia and French Smoove), HSL, Clear channel and HOK Elanto (retail chain).

3. What are the cost structure?

Outcomes: Investment in the city bike system in the beginning. Cities pay the yearly service costs for CBF. Incomes: users pay bike rent (day, week, season) and also incomes from advertisement in bikes. (eg. City of Helsinki 2017 expenditure 1,3 Million Euros, income 1,4 Million Euros)

4. What are the benefits?

Solution for short journeys and last mile services and integrating bikes in regional transport system and reducing GHG-emissions.

5. Is it a local, regional, national or international business model?

Regional

6. Do you have concrete data related to the business model?

No.

7. What is role of the mobility transport authority is this business model?

HSL is responsible for marketing, the HSL.fi city bikes online service and for the city bikes as part of the HSL app. HSL collects user fees. The infrastructure and running the system is controlled by cities of Helsinki and Espoo using a private company.

Name of the business model: DriveNow
Goals: DriveNow offers self-service car sharing services in close proximity and with flexible time options. (B2C & B2B)
Responsible: DriveNow Finland, OP Co-ride Ltd
Short description: DriveNow provides floating cars that can be found with an application. All cars are white BMW, or MINI models and are easily recognizable. Also electric cars are available. Car usage is charged per minute or hourly. Parking, insurance and fuel are included. On-line registration is needed and costs 30 euros.

1. What are the key activities?

Providing flexible, spontaneous car-sharing service.

2. What are the key partnerships?

OP has a franchising contract with DriveNow and operates the service in Finland.

3. What are the cost structure?

The registration fee is 30€. Rental rate is calculated according to minute (0.57 € /min). Refuelling and charging, parking, car tax and insurance are all included. Hourly packages at a cheaper rate are also available, and extra services for additional fees.

4. What are the benefits?

The service provides an easy access to car usage without the disadvantages of owning a car. It enables to choose a suitable car for different needs (eg size, length of journey, fuel consumption, CO2-emissions), and provides a possibility to test different cars (eg. an electric car). The service increases the volume of car usage with an effective car sharing service model, and also reduces the need for car ownership.

5. Is it a local, regional, national or international business model?

At the moment regional. Service is provided in several locations in Helsinki region: Helsinki; Leppävaara, Otaniemi and Keilaniemi in Espoo; and at Helsinki-Vantaa Airport. DriveNow will enable customers that are registered to other DriveNow cities to use the service in Helsinki starting from August 2018 onwards. Customers that are registered in Finland can use the service in other 12 European cities where the service already operates during 4Q/2018.

6. Do you have concrete data related to the business model?

Amount of cars in Helsinki region 150, electric cars 10, operating area around 40 km2.

7. What is role of the mobility transport authority is this business model?

No role.

D) Good/bad practice presentation

Please, give a good and a bad example of a business model in sharing economy. Describe shortly the reasons for being a good/bad practice. You can include links and pictures (max 1 page).

Good practice	**Bad practice**
Name: City bikes **Combined public investment, subscription and transaction fee and advertising support model**	Name: Kutsuplus ride-pooling service (G2C)
Context: City bike sharing system is integrated to regional transport system serving citizen during summer time (April-October) in Helsinki and Espoo. It is a G2C business, which offers 2550 bikes in 150 stations of Helsinki and 105 stations in Espoo. Service is expanding. Service is funded by internationally owned City Bike Finland and cities of Helsinki and Espoo. Part of the yearly	Context: Kutsuplus, a novel form of public transport, was launched in Helsinki 2012. The pilot tested a real-time, automated, demand-responsive public transport which was planned to be a competitive alternative for privately owned and leased cars. The service enabled trip order, payment, optimized trip combining, and driver's instructions in real-time, within seconds. The

costs are covered by user fees and advertisements.	advance payment enabled fast pick-up and delivery. The service gained popularity among users and received interest also outside Finland over the three years of its operation. According to customer surveys, Kutsuplus benefitted many people by saving time spent on travel, searching for a parking space and car maintenance. The service was a welcome addition particularly to crosstown transport links. According to the final report, the trial proved that there is a range of possibilities for intelligent, automated demand-responsive transport, provided the appropriate implementation approach is found. The financial profitability of the service did not increase along with the popularity. At the end of the trial, the service had over one thousand stops supplemented by virtual stops, but, the number of cars did not increase from the 15 cars used in the trial due to lack of funding. At the end of 2015, the HSL Executive Board decided to discontinue the service due to the poor economic situation of the municipalities. HSL commissioned a study to look for a market-driven way to implement the service.
Main authorities and stakeholders involved: Helsinki City Transport (HKL) is responsible for the city bike system in Helsinki and Espoo Technical and Environment Services in Espoo. The system is administered by CityBike Finland, which is the consortium responsible for producing the system. HSL is responsible for marketing, the HSL.fi city bikes online service and for the city bikes as part of the HSL app and Reittiopas. Ad space is sold by Clear Channel and the main partner of the city bike service is HOK Elanto. City Bike Finland has been responsible for the detailed bike station design, site construction works and installations. The Public bike service network has been designed together with the City Planning Department. Furthermore, CBF operates the service and provides the stations, bikes and payment terminals, and is responsible for the public bike system maintenance, administration and the customer service.	Main authorities and stakeholders involved: Helsinki Region Transport HSL, and the participants to the trial included the software developer Split Finland OY (previously known as Ajelo Oy), Aalto University and the Finnish Transport Agency.

Web links: https://kaupunkipyorat.hsl.fi/en	Web links: https://www.hsl.fi/en/news/2016/final-report-kutsuplus-trial-work-develop-ride-pooling-worth-continuing-8568
Why is the practice considered as 'good'? City bike system as a part of regional transport system is a good way to increase the amount of sustainable mobility in modal split. Collaboration has been made widely, costs are allocated for many operators and there are incomes both from users and advertisements. Recent user analysis shows that cost-efficiency rate is 3,7 including health benefits.	Why is the practice considered as 'bad'? On a small scale, the cost structure of the service was not sustainable, and therefore the implementation of the service would have required significant subsidies, especially at the beginning of deployment. Due to lack of funding the service could not be expanded by adding the number of cars. The resources provided by the municipalities was not sufficient for implementing the service cost-effectively with the chosen service design.

E) Current experiences

1. Has your organization already been involved in the promotion of a sharing economy business model? Please explain.

   HSY has been part of developing Liiteri sharing economy pilot and research of sharing economy business models. Liiteri-service is a urban tool shed where you can rent tools for your use 24/7. In collaboration were also Coreorient, a start-up developing the service, and VTT, which is a national research center. In developing process the service ended up from single payment for each rental to monthly payment for all tools.

2. Were you directly involved in the activities or did you engage an external expert?

   No. Main actor was the start-up, Coreorient Ltd.

3. What was the role of your organization? What stakeholders were involved?

   HSY was funding the project and was involved in communication co-operation in lauching the new service.

4. Has an evaluation been conducted and set in relation to set goals and objectives?

   Not yet.

LJUBLJANA

A) Open questions on sharing economy in the transport sector

Shared Transport

1. Are there relevant policy documents or legislation that ensures or regulates shared transport in transport planning or management in general?

There are no general policy documents or legislation that regulates shared transport in Slovenia, although there is a special regulation for the Municipality of Ljubljana. The Official Gazette N.8/2017, defines the term “car-sharing” and promotes the use of “Car-sharing” offering free parking for the users of the service. This document defines as well special parking spaces for electric car-sharing for the providers of the service. Parking on these spaces is allowed only with permission, which costs 100 Euro per year per parking space for the provider of the service.

2. Have the region and/or the municipalities adopted a vision that includes shared use mobility and also defines mode-split goals?

In 2017, the City of Ljubljana has adopted the Comprehensive Transport Strategy of the City which states that alternative opportunities will be offered to residents and visitors, such as: improved public transport service, construction of P + R car parks and cooperation in the optimization of personal transport, such as car-sharing and carpooling. In case of insufficient efficiency of all adopted and implemented measures to promote sustainable mobility, the City of Ljubljana will also check the possibility of introducing an entry fee into the city.

The main goal of SUMP is to achieve 1/3 pedestrians and cyclists, 1/3 public transport and1/3 private cars by 2020.

3. Is there a strategy to integrate shared-use transportation modes into mobility planning? For instance, that encourage the integration of public transport, bike sharing, ridesharing, car sharing, and moto sharing around bus stops.

The existent P & R scheme is a combination of private and collective transport enabling the user to drive to key locations on the fringes of the city in their own car or in some other vehicle, leave the car at the P & R car park, and head towards the inner city on public transport. The scheme has some variants: the ‘park and bike’ scheme found at certain locations involves parking a private car and bike-sharing to continue the trip. And there is a ‘park and pool’ scheme involving car-pooling i.e. one or more drivers arrive in their own cars and continue the travel sharing one of their cars.

4. What municipal/regional measures do you have in terms of land use planning to encourage shared transports?

There are no municipal/regional measures in terms of land use planning encouraging shared transports in Ljubljana.

5. Which forms of the sharing economy in mobility do exist in your metropolitan region?

Electric car-sharing scheme: provided by Avant car, an established international provider of mobility. The key business lines are short-term rentals, long-term business rentals, fleet management and vehicle rentals with drivers.

Car-pooling: associated with vehicle owners allowing other passengers to ride in the same vehicle, supporting the subsidizing of the vehicle owner's costs.

Bike-sharing: In May 2011, the City of Ljubljana launched in public-private partnership with the company Europlakat a bicycle rental or sharing system known primarily under the name BicikeLJ. The first hour of use is free-of-charge which contributed to the popularity of the system and consequentially to the higher share of cycling. The bicycles in the system can be rented by registering the multipurpose city card Urbana.

6. What do you think are the main challenges related to the sharing economy? What are the strategies for improvement?

Alongside the positive effects brought by the sharing economy, it is important to be aware of its potentially undesirable effects. Such as possibility of a booming grey economy, although at the same time it is important, when drafting legislation, not to limit the development potential of the sharing economy. This type of economy can have the effect of compelling people to work harder in order to attain the same standard of living.

Collaborative platforms

1. What collaborative platforms in field of mobility are currently operating in your metropolitan region?

Type	Platform Name	Web link	Small description	Geographic regions of operation	Supply-side participants
Car-pooling	prevoz.org	https://prevoz.org/	Initially designed as a platform for students travelling from university cities to their hometowns, it later became widely used as an alternative to public transport for Slovenians. In time, the platform moved from travel within Slovenia to travel across Europe. The online platform is based on a cost-sharing principle, therefore falls outside	Slovenia and international ground	Drivers, i.e., individuals with cars (owners)

			the scope of taxi transport regulations.		
Car-pooling	PROSTOFER	http://www.prostofer.si	It connects older people via a call center (free number 0801010). The user in need of transport calls and in the call center they provide the user with the contact details of the appropriate drivers from the list of registered volunteer "drivers". The user and the “drivers” agree the transport among themselves.	Slovenia	Elderly active drivers (car owners)
Car sharing	Avant2go	https://avant2go.com/	In Slovenia such a system has been available since July 2016. Today one can borrow 100% electric cars for any rental period. The payment is done only when using the vehicle; electricity and insurance are already included; no cost of ownership and maintenance of the vehicle; service using a mobile application.	Ljubljana, Murska Sobota, Maribor and Kranj.	AVANT CAR d.o.o.
Bike sharing	BICIKE(LJ)	http://en.bicikelj.si/	Bicikelj system stations consist of a main terminal and individual stands to which the bikes are attached. The stations are located in busy residential and shopping areas and near public transport. Bicikelj system encourages intermodality. There are two modes, a short and a long term subscriber. The first hour period of each journey is free. After the first 60 minutes, the user pays the appropriate hourly hire	58 stations across Ljubljana	Družba Europlakat d.o.o.

			rate. Hours used are debited to user's bank account.		
Passenger transport online	HOPIN	https://hopintaxi.com/en/	It is a Slovak passenger transport online platform that entered the Slovenian market in 2016. It can be used to order a taxi ride via the smartphone app; the payment can be done by cash or by credit card via the app. The customer can choose the taxi driver and the vehicle himself. The provider can also choose between the nearest, cheapest taxi or taxi with the best rating.	8 European cities – Bratislava, Košice, Humenné, Michalovce, Prague, Ostrava, Kyiv and Ljubljana.	PURPUR, s. r. o., Pribinova 4/17952, 811 09 Bratislava

Crowdsourcing

1. The transport authorities in your region have contracted third-party commercial providers to have access to crowdsourced data? For instance traffic speed and vehicle-count information. If yes, please explain.

No.

2. In your region there are internet-based social networks to obtain public feedback regarding the conditions of the transportation system? And regarding the performance of the transport authorities?

The Ljubljana passenger transport (LPP), has its own system of acquiring feedback regarding the conditions of the transportation. LPP has an online survey (http://www.lpp.si/anketa/), and the answers to the survey are seen in the screens of the LPP buses.

3. Do you have any specific platforms to produce crowdsourced transportation data?

No, there are no specific platforms to produce crowdsourced transportation data.

4. Do you use another way of obtaining crowdsourced transportation data? With what aiming?

No.

B) Regulations in sharing economy

1. Are there any specific regulations that defines when a person offering services is on an occasional basis and when become a service provider acting in a professional capacity?

   In Slovenia, an individual providing collaborative services for profit, no matter how small in scope, is subject to more or less the same market access requirements as providers of traditional services. Consequently, all persons utilising collaborative platforms are required to meet numerous regulatory requirements, making peer-to-peer transactions less attractive. In some cases, regulation in Slovenia imposes disproportionate obligations (information obligations, technical requirements, etc.) and other administrative burdens on individuals who are not traders, despite providing services on an occasional basis.

2. Are there specific requirements to service providers in the field of mobility? (For instance: type of vehicles, insurance obligations, specific training ...)

   When it comes to the collaborative economy in transport, Uber is not yet operating in Slovenia. However, a letter of intent has been signed by Uber and the Slovenian Ministry of Public Administration, establishing a dialogue with the intent to explore the social, environmental and economic potential of the growing collaborative and digital economy. Such efforts are tied to the vision of Slovenia as being a Green reference state in digital Europe. Despite the letter, Uber has not yet decided to start operating in Slovenia, primarily due to the regulatory requirements which would have to be met by Uber drivers pursuant to the Road Transport Act (Zakon o prevozih v cestnem prometu). All drivers would need to obtain taxi licences by fulfilling the following conditions:
   - have a good reputation;
   - have professional competence, proved by successfully passing an exam;
   - have adequate financial standing;
   - own at least one vehicle registered in Slovenia, or have the legal right to use such vehicle;
   - have no outstanding tax obligations; and
   - meet the establishment criteria in line with Regulation (EC) No 1071/200943.

   In Slovenia, taxi drivers are required to use taximeters, with the price of the ride being calculated based on the distance and duration of the journey. In addition, taxi drivers in Ljubljana, need to pass an exam on the knowledge of the Municipality of Ljubljana and must pay a special city fee of EUR 200.44.

3. Are the collaborative platforms subject to sector-specific rules applicable to the underlying services (e.g. authorization and licensing in transportation service)?

   No.

4. Is there any legislation that ensures that tax rules (VAT, personal income, corporate income) apply to the collaborative platforms?

To date, the Slovenian Parliament has not passed any collaborative economy related tax legislation. Also, the Slovenian Tax Administration (Finančna uprava Republike Slovenije – FURS) has not published any comprehensive guidelines for the application of the existing tax legislation to collaborative economy business models. However, FURS has provided partial explanations for the application of existing tax legislation. Unfortunately, no clear quantitative guidelines have been provided as to when an individual is

deemed to perform an “economic activity” (and is consequently deemed a taxable person for the purposes of VAT and as such is obliged to comply with VAT legislation, i.e. to charge VAT on services offered through online platforms registered in foreign countries, such as booking.com or Airbnb). The threshold for when a person is generally liable to register for VAT (in the case of a person who is deemed to perform an economic activity, which is however not clear under the current guidelines) is an income of EUR 50,000 within the previous 12 months. The standard VAT rate is set at 22%, while the reduced rate is 9.5%. Lastly, no income threshold exists to exempt private individuals (peers) from paying taxes on earned income. At the same time, a sole entrepreneur status may provide substantial tax benefits. Choosing a lump-sum accounting scheme (normiranec), the entrepreneur is effectively taxed at a flat rate of 20% on 20% of the income (calculated as the business income minus lump-sum costs in the amount of 80% of that income). Moreover, sole entrepreneurs may choose to pay only a minimum of EUR 355.36 in social contributions. In addition, there are indications that FURS is missing out on the opportunity to effectively tax income from work performed through global online labour platforms (while it is unclear which rules would apply to tax on such an income) by programmers and other (in most cases, highly qualified) individual service providers, who — according to discussions on various Internet forums — remain largely noncompliant.

C) Transport business model in sharing economy

Self-evaluation of the local/regional transport business model in sharing economy.
In order to better understand different kinds of business models, try to choose three different business models from the ones that you fill in the table in question 7 and answered the following questions for each one:

Name of the business model: Prevoz.org
Goals: Marketplace for carpooling.
Responsible: A group of private software developers.
Short description: Prevoz.org is a website and mobile app to help coordinate carpooling within Slovenia, primarily for students.

1. What are the key activities?

Development and support of web and mobile application.

2. What are the key partnerships?

None. It is a stand-alone application without external partners.

3. What are the cost structure?

It is free to use for both ride providers and riders. The application does not need maintenance and does not have an active development team. The only cost is web hosting, which is donated.

4. What are the benefits?

The main benefit is to match ride supply and demand for personal transportation in Slovenia. The service is free to use and has become successful due to poor public transportation services and high degree of motorisation.

5. Is it a local, regional, national or international business model?

It is a national business model in Slovenia but with some recognition also in the neighbouring countries. There is, however, always a Slovenian town at the beginning or the end of the travel.

6. Do you have concrete data related to the business model?

Since beginning, the application has had a steady increase of usage: from January 2010 to March 2014 the monthly website sessions rose from 50,000 to 250,000.
On monthly level, the advertised travels also rose from 25,000 in January 2012 to 55,000 in April 2014.

7. What is role of the mobility transport authority is this business model?

None.

Name of the business model: BicikeLJ
Goals: Provision of affordable rental bike in the city
Responsible: Europlakat d.o.o. and City of Ljubljana
Short description: The BicikeLJ bicycle-sharing system gives you an opportunity to hire bikes from self-service terminals located across the wider Ljubljana city centre.

1. What are the key activities?

Development of bicycle station network, bike repair, bike transportation.

2. What are the key partnerships?

It is a partnership with the public-space advertising part of the company Europlakat. Based on a contract with City of Ljubljana, they operate BicikeLJ in exchange of possibility to place advertising on bus stations and in the city centre.

3. What are the cost structure?

Development of bicycle stations,
purchase of bikes,
bike repairs,
bike transportation.

4. What are the benefits?

The self-rental bikes are very affordable to use for short-term rentals. Annual subscription is 3 €, weekly is 1 €. It is free to use for the 1st hour, second hour costs 1 € and so on. Rental is utilised by Urbana city card, which is used also for buses, parking, library etc

5. Is it a local, regional, national or international business model?

It is a business model, developed by JCDecaux and is adapted to Ljubljana.

6. Do you have concrete data related to the business model?

In the year 2017, the average time of bike use was 15 minutes. Daily 5 bikes were repaired. The most frequent rental place (Cankarjeva street – Nama) had 58,514 rentals. Between the introduction in 2011

and the end of 2017 there have been 4.7 bike rentals. Revenues from borrowing for more than one hour, at the start of the system in May 2011 were amounted to 6303 €, and in 2017, 19,078 €,

7. What is role of the mobility transport authority is this business model?

Municipality has been included in the placing of the BicikeLJ rental stations and the nearby cycling tracks.

Name of the business model: Avant2go
Goals: Provision of rental electric cars in the city centre.
Responsible: Avant car, d.o.o.
Short description: Avant2Go is a car sharing service available in major cities in Slovenia.

1. What are the key activities?

Establishing new partnerships with towns and providers, Construction of parking spaces with charging station, service of cars, education, registration, development of IT support, call centre, etc.

2. What are the key partnerships?

Towns, car fleet providers, building contractors, insurance, IT service providers, logistics operators, Eco fund.

3. What are the cost structure?

For users, the promotional price for registration is 29 € and there are packages for 70 €, 150 € and 300 € of usage. Cost is calculated by the time, distance and the type of vehicle.

4. What are the benefits?

Easy, emission free and affordable rental of electric cars that is in more affordable than taxi in most cases.

5. Is it a local, regional, national or international business model?

It is a national business model.

6. Do you have concrete data related to the business model?

The company Avant car, operating also other business activities, had an annual turnover of 11 M in 2017.

7. What is role of the mobility transport authority is this business model?

Municipalities are involved in selection and provision of parking/charging stations and in its pricing.

D) Good/bad practice presentation

Please, give a good and a bad example of a business model in sharing economy. Describe shortly the reasons for being a good/bad practice. You can include links and pictures (max 1 page).

Good practice

Name: Sopotniki (meaning: Cotravellers)

Context: Sopotniki is an organization for intergenerational solidarity which was established to help elders get involved in active social life.

The free transport service enables elders to attend cultural events, visit friends, go to the doctor, go shopping etc. In this way they can run their errands independently and carefree as well as make new acquaintances and keep social contacts with the wider environment, which would otherwise be out of reach. They are volunteer drivers of different ages and occupations that have adapted their work and study obligations in such way that they can in turn provide the service six days a week, from morning and until the last passenger arrives home safely. This service covers small villages and towns outside Ljubljana urban region (in the municipalities of Hrpelje - Kozina, Divača, Sežana, Sevnica, Brežice, Postojna, Krško and Kočevje). The service is considered an innovative approach towards the mobility of rural elders which will soon expand to many other parts of Slovenia.

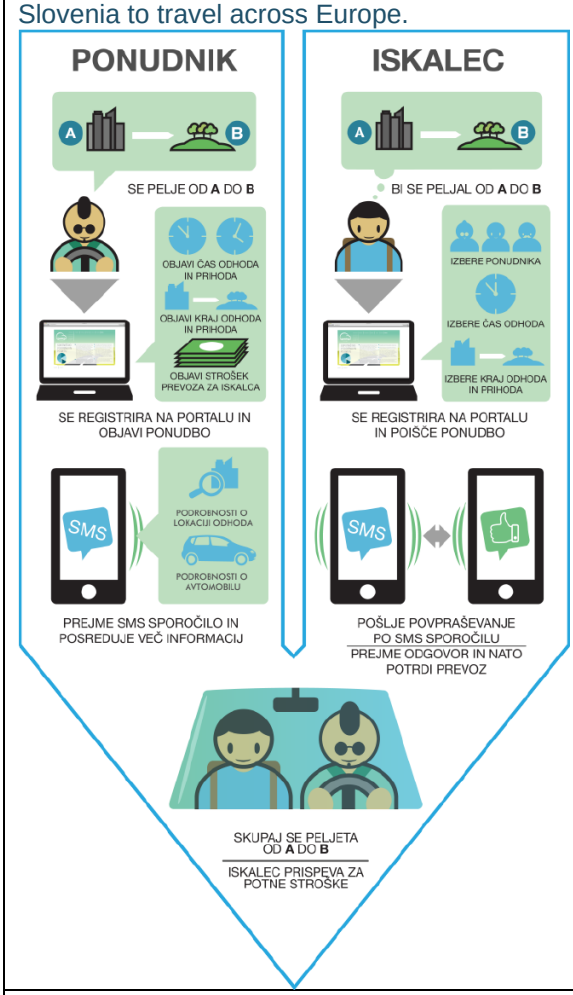
Currently it's been financed from three sources: donations from supporters and satisfied users, corporate donations and by municipalities.

Main authorities and stakeholders involved:
Municipalities; rural population; elders

Web links: http://www.sopotniki.org/o-nas.html

Why is the practice considered as 'good'?

Through intergenerational solidarity aims to prevent the state of isolation and loneliness of elderly people from small remote villages, who almost never leave their homes due to remoteness, lack of transport means or poor traffic connections.

Good practice	**Bad practice**
Name: prevoz.org	Name: prevoz.org
Context: Initially designed as a platform for students travelling from university cities to their hometowns, it later became widely used as an alternative to public transport for Slovenians. In time, the platform moved from travel within Slovenia to travel across Europe.  	Context: Even though we assume prevoz.org as good practice some unwished side effects could be identified therefore these were considered as bad practice.
Main authorities and stakeholders involved: Drivers (car owners), passengers (who need a ride)	Main authorities and stakeholders involved: Drivers (car owners), passengers (who need a ride)
Web links: https://prevoz.org/	Web links: https://prevoz.org/
Why is the practice considered as ‘good’? This practice allows that people going in the same direction travel together and at same time saving money for fuel by sharing this cost. It's a	Why is the practice considered as ‘bad’? This practice has some unwished side effects as some providers are using it to obtain economic profit. Some individual providers are travelling to

simple platform where people who have space in the car, before leaving for a specific place, advertise an ad. The platform also allows people who are looking for a ride to advertise it.	certain places just to have profit; if the travel doesn't bring them profit they cancel it. The platform is also being used by businesses. In this way the system is being abused and became a disloyal concurrence to public transport and other businesses as it falls outside the scope of taxi transport regulations.

E) Current experiences

1. Has your organization already been involved in the promotion of a sharing economy business model? Please explain.

Yes, RRA LUR has been active promoter of carpooling (link) in 2013 and 2014, when a specialised website was put up to promote daily rides to work.

2. Were you directly involved in the activities or did you engage an external expert?

Both. RRA LUR was a project leader, but also engaged the external experts.

3. What was the role of your organization? What stakeholders were involved?

RRA LUR was a project partner in the Poly 5 project in the Alpine Space programme.
Mayer McCann advertising agency did a marketing campaign.
Prevoz.org developed the website.
IPoP – Institute for Spatial Policies consulted the RRA LUR.

4. Has an evaluation been conducted and set in relation to set goals and objectives?

Yes, the evaluation showed that the carpooling Sopotnistvo.si changed behaviour of employees, but the number was too small to sustain the project. It does not operate any longer.

Does your organization have questions about sharing economy that you would like to be discussed in the forthcoming workshop?

Which is the contribution of sharing economy to the mobility?
Legal aspects of sharing economy;
Where is the limit between sharing economy and an established business?

OSLO/AKERSHUS

A) Open questions on sharing economy in the transport sector

Shared Transport

1. Are there relevant policy documents or legislation that ensures or regulates shared transport in transport planning or management in general?

The City Government in Oslo have a vision to reduce the consumption in order to reduce the global ecological footprint of the city and the greenhouse gas emissions. The City Government wants to facilitate for more recycling, re-usage and sharing.

Every fourth year, Ruter (the management company for public transport in Oslo and Akershus, owned by Oslo municipality and Akershus County Council) presents a public transport strategy. In the latest strategy, *M2016* (2016), the focus shifted from public transport to mobility solutions to ensure the development of an increasingly attractive service for the region's residents. As a part of the chapter presenting Ruter's vision for the capital region of the future – green mobility, the following is stated:

> *System integration is about creating a system that delivers integrated, green mobility services to residents. The integration concerns public transport services, information, ticketing systems, fares, digital services and other green mobility modes, such as walking, cycling, and car and bicycle sharing initiatives.*
>
> *This is a development that Ruter, along with others, can influence to a great extent. A coordinated and flexible service will lead to higher market shares for green mobility. Great faith in the significance of system integration is based on trends and experiences from other big cities. Ruter thus builds important parts of the strategy on a development in a direction of more integrated mobility solutions.*

The Bicycle strategy for Oslo (policy document adopted by the City Council in 2015) ensures, to a certain extent, that the bicycle sharing scheme is considered as a part of the transport planning process and management. One of the measures in the strategy is to expand the scheme, by doubling the capacity and expand the area where bicycles are available. There are also other measures in the strategy regarding the bicycle scheme. E.g.., it is a measure to coordinate bicycle and public transport planning, making it easier to combine these two modes of transportation. Further, bike sharing is stated as an effective solution as the first or last part of a travel chain.

In the Oslo metropolitan region, shared transport mainly consists of privately operated car-sharing schemes and bike sharing schemes. There is no special legislation that regulates how the subject of shared transport is handled in transport planning.

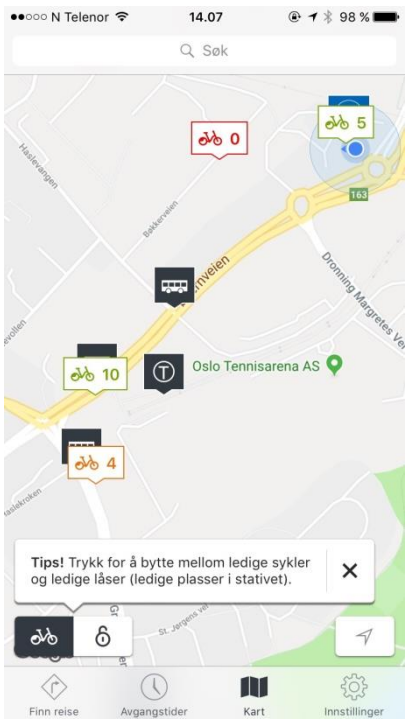
2. Have the region and/or the municipalities adopted a vision that includes shared use mobility and also defines mode-split goals?

   No. The municipalities have goals for e.g. modal-split of bicycling, but it is not defined what part of this that should be bike sharing.

3. Is there a strategy to integrate shared-use transportation modes into mobility planning? For instance, that encourage the integration of public transport, bike sharing, ridesharing, car sharing, and moto sharing around bus stops.

   In Ruter's public transport strategy, M2016, Ruter state that they build important parts of the strategy on a development in a direction of more integrated mobility solutions. Link to the strategy (EN): https://m2016.ruter.no/en/.

   A small start is the app *Ruter Reise* developed by Ruter. The app can be used for planning travels by public transport in Oslo and Akershus, but it also provides information about the Oslo City Bikes. In the map in the app, you can see both localization of metro stations/bus stops/train stations/tram stations and localization of Oslo City Bike docking stations (including information about the amount of available bikes and locks, see screenshot below).



   In Oslo, a part of the Bicycle strategy is to integrate bike sharing with public transport. When planning for new bike sharing docking stations, the proximity to a transport hub is one factor for localization.

   The Norwegian State Railways, the railway company which operates most passenger train services in Norway, have signed a letter of intent on a concept for the rental of electric city cars in Oslo. The

agreement has been signed with the company GreenMobility, which offers city cars in Copenhagen. The goal is that NSB will offer 250 electric cars in Oslo by the end of 2018.

4. What municipal/regional measures do you have in terms of land use planning to encourage shared transports?

   In the City of Oslo, the municipality offers space for public advertising and gets the city bike docking stations in return. This is one measure in terms of land use planning to encourage the usage of shared bikes by expanding the scheme.

   The Department of Environment and Transport are planning to facilitate 600 parking spaces for car-sharing vehicles within 2020, many of which will be facilitated for electric cars.

   According to the Parking Standard for the City of Oslo the required amount of parking spaces can be reduced if you arrange for car sharing when building new apartment buildings (1 car sharing space replaces 4 regular parking spaces). It is a requirement that you enter into an agreement with a car sharing scheme that lasts for at least five years.

   A few places in Oslo/Akershus, EVs can use the bus lanes if there are two persons or more in the car (incentive for car pooling/ride sharing).

   The City of Oslo is currently working with several projects to reprogram parking garages to 'green mobility garages'. The concept is not fully developed, but the ideas is to facilitate the garages for bicycles (storage and charging), EVs (charging), car-sharing, etc.

   As a part of the Residential parking scheme, the Agency for Urban Environment plan to facilitate parking spaces and charging facilities for electric motorcycles in the residential areas in Oslo.

5. Which forms of the sharing economy in mobility do exist in your metropolitan region?

   Several car-sharing schemes (all privately operated), bike-sharing, to some extent ride-sharing. Also, more and more people are using various collaborative platforms to rent or to offer for rent private assets (e.g. www.finn.no (web-site and app), Nabohjelp (app), Nabobil (web-site and app) etc.). Many different types of assets are rented out, e.g. bicycle trailers, cargo bikes, cars, etc.

   In Oslo, there was a meeting in June, with the intention of entering into a collaboration on testing of eco-friendly two-wheeler sharing services in 2019. The City Government wants to introduce a scheme for shared electrical moto's, bikes and scooters to the residents.

   The City of Oslo also plans to establish a Reloading Centre for goods in the central part of the city. Here, goods can be reloaded from large vehicles to smaller and more environmentally friendly vehicles for the last-mile distribution. This could possibly work as a shared solution for freight transport/delivery of goods.

6. What do you think are the main challenges related to the sharing economy? What are the strategies for improvement?

The Solberg Government appointed the Sharing Economy Committee by Royal Decree in 2016. The Committee was asked to evaluate opportunities and challenges presented by the sharing economy. The Committee was tasked with identifying and assessing regulatory provisions challenged by the sharing economy, including regulations in markets in which the sharing economy is particularly prominent. A further priority specified in the mandate, was the labour-market consequences of the sharing economy. Finally, the Committee was requested to consider consumer protection rules and the objective of consumer safety. The Committee concentrated on new taxi and small-scale passenger transport services and the accommodation market, but also examined a number of tax issues.

The Committee concluded that the sharing economy holds promise for the Norwegian economy, not least in terms of boosting competition, innovation and consumer choice. Sharing economy companies can potentially improve economic efficiency and thereby free up resources for other socially beneficial purposes. The sharing economy may also have positive environmental effects.

According to The Committee, the sharing economy also presents various challenges. It entails far greater direct trade between private individuals than previously envisaged. The regulatory frameworks for different areas have yet to be fully adapted to this new reality. Difficulties may arise in the context of labour-market regulation and taxation. Since the sharing economy is a relatively new phenomenon, there is considerable uncertainty about which regulatory provisions apply and how rules should be interpreted. The Committee therefore identified a need to provide better information on rights and duties in the sharing economy.

In the area of transportation, a majority proposed the following changes:

- That the current duty to hold a licence be repealed for persons who wish to operate or provide remunerated taxi transportation using a personal vehicle. This will also entail repeal of the system of needs assessment of the number of taxi licences and the duty to operate.
- The repeal of several other regulatory provisions, including maximum price regulation and the duty for licence holders to have taxi transportation as their primary occupation. Certain minimum requirements applicable to individual drivers should be retained, such as the good repute requirement.
- Rules should be introduced to ensure that information on trips and prices is registered and stored, but the requirements must be formulated to be technology neutral. The purpose of the rules is to ensure passenger safety and the provision of price information, and that the tax authorities receive relevant information.
- That a duty be introduced to quote prices in advance in the booking segment.

To ensure that participants in the sharing economy pay taxes on an equal footing with others, the Committee proposed the following measures:

- The Norwegian Tax Administration should maintain and develop guidance that clarifies the rules on taxes relevant to participants in the sharing economy.
- Digital technology should be used for reporting, control and guidance functions. Digital solutions should be open to all relevant users.
- A disclosure duty should be introduced for data-holders who enable or facilitate rentals or paid services via digital platforms.

- Consideration should be given to simplified tax treatment of small incomes from services, including service provision that would not otherwise be taxed.
- If a licence is no longer to be required in order to provide taxi services, as proposed by a Committee majority, it will be necessary to revise the tax treatment of personal cars used for occupational purposes. Taxis currently enjoy certain tax reliefs.

In Oslo, the lack of guidelines for mobility in general (e.g. a SUMP) is a challenge. This may lead to a large number of different platforms/businesses in the market, who develops different business models that do not interact. Solutions must be easy to use and well integrated in order to get the consumers to use it. Another challenge is the business models, which seem challenging to develop. Also, the lack of areas in the dense city is a challenge, e.g. finding new areas to localize Oslo City Bike-docking stations is often hard. It is also a challenge to change the mindset of the older generations. We have a long tradition of owning our own assets. Another challenge is to prevent the development of illegal/black economy.

Collaborative platforms

1. What collaborative platforms in field of mobility are currently operating in your metropolitan region?

Type	Platform Name	Web link	Small description	Geographic regions of operation	Supply-side participants
Ride sharing	SammeVei	www.sammevei.no	An app that enables drivers and passengers to connect and carpool/share ride	Nationwide	Private individuals who own a car
Ride sharing	SameWay	www.same-way.com/no	An app that enables drivers and passengers to connect and carpool/share ride	Nationwide	Private individuals who own a car
Ride sharing and car sharing	GoMore	www.gomore.no	Web-site/app that enables drivers and passengers to connect and carpool/share ride, and that enables private car owners to offer their own car for rent	Nationwide	Private individuals who own a car
Car sharing	Nabobil	www.nabobil.no	Web-site/app that enables private car owners to offer their own car for rent. No key is needed, cars can be unlocked by phone.	Nationwide	Private individuals who own a car
Car sharing	Hyre	www.hyre.no	Web-site/app that enables private car owners to offer their own car for rent. No key is needed, cars can be unlocked by phone	Nationwide	Private individuals who own a car
Car sharing	Bilkollektivet	www.bilkollektivet.no	Car-sharing service owned by its members, providing different vehicle types and models to members for rent. To become a member, you need to sign up and pay a share (500 EUR) and deposit (100 EUR), the annual subscription cost is 80 EUR.	Oslo, Stavanger, Kristiansand, Tromsø.	Bilkollektivet is a user-owned, non-profit organisation.

Car sharing	Hertz BilPool	www.hertzbilpool.no	Commercial car sharing service.	Nationwide.	Hertz BilPool
Bike sharing	OsloBysykkel	www.oslobysykkel.no	The biggest bike sharing scheme in Oslo. Shared bikes available for rent. There are app. 233 stations in the City of Oslo. You can buy a day pass (5 EUR) or a season pass (40 EUR).	Oslo, within Ring road 3.	The City of Oslo/Clear Channel Norway AS
Bike sharing	OBOS elsykler (Kværnerbyen)	https://www.mobility-parc-ga.com/m/welcome.do	Electric bike sharing scheme at 9 different locations in Oslo and Akershus. Through an app you can rent shared electric bikes.	Oslo and Akershus.	OBOS/WattWorld.
Bike sharing	oBike	www.o.bike	Bike sharing scheme at the campus of the University of Oslo. Through an app you can rent shared bikes. The system is stationless. Pay as you go (0,50 EUR/30 min).	University of Oslo, campus in Oslo.	oBike
Bike sharing	Bærum bysykkel	www.baerumbysykkel.no	Bike sharing scheme in Bærum municipality. Shared bikes available for rent. There are 10 stations with bicycles in the municipality. You can buy a season pass (20 EUR).	Bærum Municipality.	Bærum Municipality
Bike sharing	Bygdebike	www.nmbu.no/om/miljoarbeidet/bygdebike	Bike sharing scheme in Ås, implemented to simplify the transport between the City centre (public transport hub) and the campus of the Norwegian University of Life Sciences. Through an app you can rent shared bikes. The system is stationless, but bikes must be parked in virtual stations.	Norwegian University of Life Sciences, campus in Ås.	Norwegian University of Life Sciences, campus in Ås.
Shared freight mobility	(see description of Nabohjelp and Finn.no)				
Park sharing	Vulkan parking-garage	www.fortum.no/vulkan	Parking garage offering 100 new and modern charging stations and two fast chargers. During daytime, the parking garage is used mostly by business vehicles (taxis, delivery vans, etc.). Oslo Municipality offer free parking for residents who own electric cars (not hybrid) in the garage between 17-09 on weekdays and 17-11 on weekends and bank holidays.	Oslo	Fortum, Vulkan Eiendom, Oslo municipality
Other: Online market-place	Leieting	www.leieting.no	Web-site that enables private individuals to offer their assets for rent, e.g. cars, motorcycles, boats, trailers, photo and video equipment, leisure equipment, tools, etc.	Nationwide	Private individuals who own different assets

Other: Online market-place	Nabohjelp	www.nabohjelp.no	App that makes it easier to ask your neighbour for help or to help your neighbour. Requests are distributed to relevant neighbours who can answer you directly. You can both ask for help and offer help, e.g. ask for or offer things and services for rent/loan (e.g. cargo bike, transport services, etc.)	Nationwide.	Private individuals who own different assets
Other: Online market-place	Finn.no	www.finn.no	Web-site/app. Norway's largest online marketplace for buying and selling goods and services between individuals and small/large businesses. The marketplace is also used for renting out assets, or asking/offering services like e.g. transport of goods.	Nationwide.	Private individuals who own different assets

Crowdsourcing

1. The transport authorities in your region have contracted third-party commercial providers to have access to crowdsourced data? For instance traffic speed and vehicle-count information. If yes, please explain.

   No. The transport authorities don't have strategies for making BIG data available. This delay the development of solutions based on BIG data. Some public and private organisations are not interested or unable to see the benefits of sharing data.

2. In your region there are internet-based social networks to obtain public feedback regarding the conditions of the transportation system? And regarding the performance of the transport authorities?

   The Agency for Urban Environment, which is responsible for operation and development of most of the public areas in the City of Oslo, have developed the website and app BYMelding. With this tool, you can quickly and easily report errors and omissions on public areas such as streets, squares, parks, sport facilities, the forest and the fjord (e.g. beaches, walking trails, etc.). E.g. if you report a bump in the road, the contractor responsible for the operation of the area will be notified and can fix the error quickly. The Agency for Urban Environment is also on Facebook.

   To give feedback on the public transport system, you can use either the Ruter app or the Ruter website. Ruter is also on Facebook.

   Trafikkflyt is a web-site/app where users can report congestion. The scheme is run by the radiochannel P4.

3. Do you have any specific platforms to produce crowdsourced transportation data?

The Oslo City Bike scheme makes available data produced by the running of the scheme. Data is offered to anyone who is interested as APIs – e.g. to those who would like to analyse how the system is used, visualize movements, build bike sharing into apps, or similar.

The Norwegian Public Roads Administration collects large amounts of road and traffic information that they make available as APIs.

4. Do you use another way of obtaining crowdsourced transportation data? With what aiming?

   No.

B) Regulations in sharing economy

1. Are there any specific regulations that defines when a person offering services is on an occasional basis and when become a service provider acting in a professional capacity?

   The borderline between private activity and professional business is not clearly defined. If there is uncertainty whether the activity is considered as a private activity or professional business, the Norwegian Tax Administrations should be contacted. In order to determine whether it is a matter of private activity or business, one must consider whether the activity performed has a certain extent, aims for a certain duration and a certain profit, is performed with the owners own risk, etc.

   Different models for sharing economy affect the tax in different ways. E.g., when a person both uses a car privately and rent it out occasionally, he/she will not pay tax on a rental income of maximum 10,000 kroner (1000 EUR) a year. If the rental income exceeds 10,000 kroner, it must be reported in the tax return as income. When ride sharing, the driver will not pay tax if the purpose of the drive sharing is to cover your own costs (e.g. expenses for gasoline, etc.). If there ride sharing provides an actual payment/income, the income is taxable.

2. Are there specific requirements to service providers in the field of mobility? (For instance: type of vehicles, insurance obligations, specific training ...)

   Vehicles must pass the roadworthiness test (international standard). Passenger cars (max. authorised mass of 7500 kg) and delivery vans are to be tested for the first time within the fourth calendar year after first-time registration, and then every second year thereafter. Passenger cars (max. authorised mass of *more* than 7500 kg), buses, lorries, trailers (max. authorised mass of *more* than 7500 kg) and taxis must be tested for the first time at least 12 months after first-time registration and then every calendar year thereafter.

   All registered vehicles below 7500 kg must pay traffic insurance fee (annual fee) and have liability insurance (traffic insurance). If you do not pay the insurance and traffic insurance fee (annual fee) for a vehicle, you will be charged a fee for each day the vehicle is uninsured.

   In order to offer passenger transport with an exclusive car registered for a maximum of nine people including the driver, you need to apply for a permit.

Also, the new General Data Protection Regulation applies to all providers.

3. Are the collaborative platforms subject to sector-specific rules applicable to the underlying services (e.g. authorization and licensing in transportation service)?

   See above (question 13).

4. Is there any legislation that ensures that tax rules (VAT, personal income, corporate income) apply to the collaborative platforms?

   See above (question 12). The providers of the platforms for sharing economy (e.g. app providers, website providers) are covered by corporate legislation.

C) Transport business model in sharing economy

Self-evaluation of the local/regional transport business model in sharing economy.
In order to better understand different kinds of business models, try to choose three different business models from the ones that you fill in the table in question 7 and answered the following questions for each one:

Name of the business model:

Oslo City Bike

Goals:

The partners have different goals. The overall goal of the City of Oslo is to increase the use of environmentally friendly and area-effective means of transport. The goal of Clear Channel Norway AS is to generate revenue based on advertising.

Responsible:

Urban Infrastructure Partner/Clear Channel Norway AS/The City of Oslo.

Short description:

The city bike scheme in Oslo.

1. What are the key activities?

Offering bikes for rental.

2. What are the key partnerships?

The city bike scheme in Oslo is a collaboration between the City of Oslo and Clear Channel Norway AS. The municipality makes public advertising space available and gets a city bike space in return. The scheme is owned, managed and developed by Urban Infrastructure Partner, a subcontractor of the

contracting party Clear Channel Norway AS. ShareBike AS is the provider and subcontractor to Urban Infrastructure Partner.

3. What are the cost structure?

The scheme is financed by subscriptions, advertisements on the docking stations, and sponsorship.

4. What are the benefits?

The benefits for the users are avoiding the disadvantages of owning your own bike (e.g. service, storing), easy access to bikes, and a quick alternative to short rides with public transport or taxi.

5. Is it a local, regional, national or international business model?

The business model is local.

6. Do you have concrete data related to the business model?

Yes.

7. What is role of the mobility transport authority is this business model?

The role of the Agency of Urban Environment is among other things to cooperate with the operator in order to find new locations for new City Bike docking stations. The Agency of Urban Environment is also responsible for the application for the building permit.

Name of the business model:

Nabobil.no

Goals:

The partners have different goals. The overall goal of the private owned company Nabobil.no is generating revenue by offering a platform/marketplace where private individuals who own a car can offer their car for rent. The goal of the owners is to generate income by renting out their car.

Responsible:

Nabobil.no (privately owned company)

Short description:

A platform for offering privately owned cars for rent.

1. What are the key activities?

Norwegian cars are at a standstill 96% of the time. Nabobil.no is a marketplace that connects individuals that are in need of a car with others who own a car but don't use it all the time. You can use Nabobil.no to rent a car in your neighborhood.

2. What are the key partnerships?

The privately owned company, individuals in need of a car, individuals who own a car they don't use all the time.

3. What are the cost structure?

20% of the rental income goes to insurance and administration fees and 5% goes to value added tax (VAT). As a car owner you get 75% of the total earnings from the price of your car.

4. What are the benefits?

The benefits for the owner is income from renting out a car that is not in use at all times. The benefits for the renter is to easily be able to find a car in their neighbourhood that caters for their needs.

5. Is it a local, regional, national or international business model?

The business model is local.

6. Do you have concrete data related to the business model?

Yes.

7. What is role of the mobility transport authority is this business model?

The mobility transport authority has no role in this business model.

Name of the business model:

Nabohjelp

Goals:

Making it easier for people to ask their neighbour for help, reduce consumption.

Responsible:

OBOS (the largest Norwegian cooperative building association).

Short description:

App that makes it easier to ask your neighbour for help or to help your neighbour.

1. What are the key activities?

Through the app you can both ask for help and offer help, e.g. ask for or offer things and services for rent/loan (e.g. cargo bike, transport services, etc.). Requests are distributed to relevant neighbours who can answer you directly.

2. What are the key partnerships?

The app is developed and owned by OBOS, the users are private individuals.

3. What are the cost structure?

The app is free to use. The provider of the app does not require a share of the revenue generated by the usage of the app, e.g. revenue generated by renting out assets.

4. What are the benefits?

The benefits are reduced consumption, with all that implies (reduced spending, reduced emissions, etc.)

5. Is it a local, regional, national or international business model?

The business model is local.

6. Do you have concrete data related to the business model?

Yes.

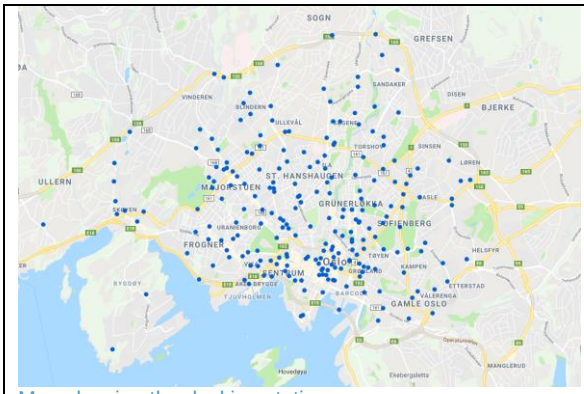
7. What is role of the mobility transport authority is this business model?

The mobility transport authority has no role in this business model. The app/platform is developed and owned by a privately owned business, and the users of the app are private individuals.

D) Good/bad practice presentation

Please, give a good and a bad example of a business model in sharing economy. Describe shortly the reasons for being a good/bad practice. You can include links and pictures (max 1 page).

Good practice
Name: Oslo bysykkel (Oslo City Bike)
Context: The most efficient way to get around Oslo is on a bike. City bikes are primarily used for short rides and as a supplement to public transport. In Oslo, there has been a scheme for bike sharing for 16 years. In 2016, a new system was introduced, and in the years to follow the scheme has been widely expanded. Now, the City Bike scheme contains 3000 bikes and 6000 locks divided on about 300 racks within Ring Road 3 in Oslo. In 2016, 2.150.646 trips were made with the Oslo City Bikes. In 2017, 2.653.477 trips were made. In April and June 2018, app. 1.200.000 trips have been made. City bikes in Oslo are more popular than ever.



Map showing the docking stations.

The municipality initiated tendering processes for contracts and set the standards (both physical and operational) for the systems.

The ambition was a "future-proof" scheme, a scheme that utilized new technology, a scheme that served as a supplement to the existing mobility services in the city and contributed to solving the increased transport needs due to population growth, among other things. The ambition was to make the worlds best bikesharing scheme.

Main authorities and stakeholders involved:

The city bike scheme in Oslo is a collaboration between the City of Oslo and Clear Channel Norway AS. The contract between the Oslo Municipality and Clear Channel Norway is running from 1 May 2015 to 30 April 2028.

The municipality makes public advertising space available and gets a city bike space in return. The scheme is owned, managed and developed by Urban Infrastructure Partner, a subcontractor of the contracting party Clear Channel Norway AS. ShareBike AS is the provider of the equipment and subcontractor to Urban Infrastructure Partner. Urban Infrastructure Partner is responsible for all financing, operation, and development of the service.

The scheme is financed by subscriptions, advertisements on the racks and sponsorship.

Web links:

www.oslobysykkel.no/en (EN)

Why is the practice considered as 'good'?

With an average of 9.8 trips per bike per day, Oslo City Bike is one of the most efficient city bike systems in the world.

By the end of the first season with the new scheme (2016), Oslo City Bike had achieved:

- 46.000 city bikers, a 60% increase from the previous system in 2015
- Over 2,000,000 trips, a 110% increase from the previous system in 2015

By the end of the second season with the new scheme (2017), Oslo City Bike had achieved:

- 77.000 city bikers, a further increase of 67% compared to 2016
- 4,700,000 total trips made since the new system launch in 2016

Basics of the scheme

Oslo City Bike is built around an award-winning app, which is the system interface used by 80% of the users. From the app, city bikers can register in minutes and then locate and unlock a bike with just one button.

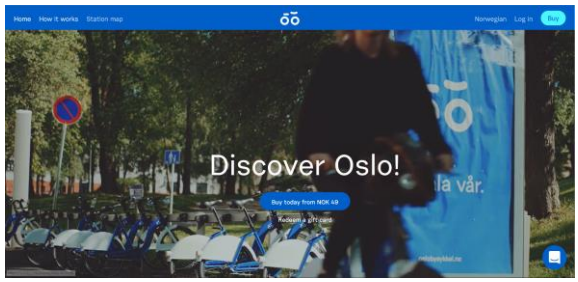
The app enables bi-directional communication. From the operators of the scheme, you get targeted information based on behaviour and patterns of use. E.g. if a station you use frequently temporary closes, you will be notified in the app. Customer service is easily accessible through the app.

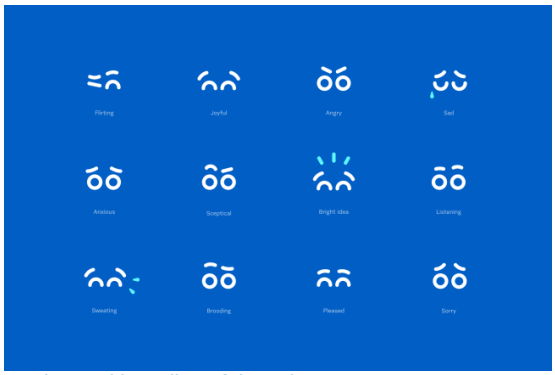
The docking stations also feature interactive screen displays for accessing the system.

Over 50 employees work to develop new technology, analyse data, engage in direct daily dialogue with users, provide maintenance and repairs, and rebalance the bikes using seven specially developed cars. The technology and operations of Oslo City Bike are based on optimization models that constantly work to maximize system utilization and city impact.

The City Bikes are available as long as there's no ice on the ground, normally from April to the start of December. The City Bikes are available from 06.00 to midnight. You can buy a day pass (5 EUR) or a seasonal pass (40 EUR). Oslo City Bike is also available for businesses. Subscriptions for employees can be bought, or single trips can be issued to visitors.

Oslo City Bike's primary goals
To improve urban mobility and provide an exceptional user experience. Satisfied users are vital to the promotion of bike sharing, and by making the system approachable, easy, and fun to use, Oslo City Bike makes mobility in Oslo better and more efficient. The scheme's award-winning designs and branding (which play an important role in the positioning and visualization of city bikes in Oslo's cityscape) along with innovative strategies for communication and engagement with users are fundamental elements to the successful operation of the system.





Design and branding of the scheme.

Some of the positive implications of the City Bike scheme are:

- City bike is an efficient and low-cost alternative to short trips with public transport or long walks. Bike rides leads to reduced congestion on public transport.
- City bikes serve areas where there is no public transport.
- Riding a City bike provides a sense of efficiency and makes the city more enjoyable.
- City bikes replace longer walks in the centre.
- The City Bike scheme contributes to building a "bicycle culture" in Oslo.

Data is offered as open APIs to anyone interested (users must register). This enables integration with other services, such as the travel planner app Ruter Reise.

In 2017, Oslo City Bike was awarded the DOGA Hedersmerket (honorary award from Design and Architecture Norway). According to the jury, the scheme shows how design and architecture can be an x-factor for innovation, value creation and sustainability.

E) Current experiences

1. Has your organization already been involved in the promotion of a sharing economy business model? Please explain.

   The Agency for Urban Environment is involved in promotion of the Oslo City Bike scheme.

   Akershus County Council partially funded the BygdeBike scheme in Ås.

2. Were you directly involved in the activities or did you engage an external expert?

   Directly involved.

3. What was the role of your organization? What stakeholders were involved?

   The role of the Agency for Urban Environment: See above (question 7, 16-22).

   The role of the Akershus County Council: the organisation was a project partner in the first phase of the project. Later, the project was transferred to the Norwegian University of Life Sciences.

4. Has an evaluation been conducted and set in relation to set goals and objectives?

   There was an evaluation of the BygdeBike scheme. The evaluation concluded that the scheme should be continued.

PORTO

A) Open questions on sharing economy in the transport sector

Shared Transport

1. Are there relevant policy documents or legislation that ensures or regulates shared transport in transport planning or management in general?

   There aren't any specific legislation that regulate the shared transport in the transport planning. The Institute for Transport and Mobility (IMT) launched a collection of technical / thematic brochures on the transport system and sustainable mobility solutions already tested and confirmed in Portugal and in several countries, accompanied by references for national and international cases of good practices and indications of sites related to interest, one of them is related to the shared transport. This documents have been used by the transport authorities as a reference document to the transport planning.

2. Have the region and/or the municipalities adopted a vision that includes shared use mobility and also defines mode-split goals?

   No.

3. Is there a strategy to integrate shared-use transportation modes into mobility planning? For instance, that encourage the integration of public transport, bike sharing, ridesharing, car sharing, and moto sharing around bus stops.

   There isn't any specify strategy, but several municipalities are planning to integrate the bike sharing with public transport by define some spaces near the station for the bike station.

4. What municipal/regional measures do you have in terms of land use planning to encourage shared transports?

   We don't have any specific measures, but some of ours municipalities have been made some projects to encourage share transports.

5. Which forms of the sharing economy in mobility do exist in your metropolitan region?

   Ride sharing, car sharing and bike sharing.

6. What do you think are the main challenges related to the sharing economy? What are the strategies for improvement?

- The main challenges will be the regulation that is necessary to not allow the international monopolies to control the information and the price of the city mobility.

Collaborative platforms

7. What collaborative platforms in field of mobility are currently operating in your metropolitan region?

Type	Platform Name	Web link	Small description	Geographic regions of operation	Supply-side participants
Ride sharing	Boleia.net	https://www.boleia.net/	Boleia.net is an online platform that allows drivers to offer their seats free to passengers in exchange for a share of travel costs so that it is cheaper and enjoyable for both. They have also a solution for companies / entities, which allows its employees to know who lives / works in the same area and who is available to share a car, in particular to go to work.	Portugal	Drivers, i.e., individuals with cars
Ride Sharing	Via Verde Boleias	https://boleias.viaverde.pt/BoleiasWeb/	Using the platform the users can share their travel by car, and, with this sharing, reduce their costs, especially in tolls and fuel. This service is also a which is intended for companies, universities and / or other institutions that wish to make this service available to its members.	Portugal	Drivers, i.e., individuals with cars
Car sharing	www.bookingdrive.com	Bookingdrive	The bookingdrive.com platform is an online private car rental service that allows owners to earn extra income at the end of the month by renting their vehicle. With this car rental service without driver, bookingdrive.com gives	Portugal	Car-owners

			owners the possibility of making their vehicles more profitable when they do not use them.		
	Uber	https://www.uber.com/pt-PT/	Uber's mission is to bring transportation — for everyone, everywhere. Uber was founded in 2009 to solve an important problem: how do you get a ride at the push of a button? More than five billion trips later, they've started tackling even greater challenges: making transportation safer with self-driving cars, delivering food quickly and affordably with Uber Eats, and reducing congestion in cities by getting more people into fewer cars.	International	Drivers, i.e., individuals with cars (owners)
Car sharing	Cabify		Cabify is one of the biggest transport network companies in the Spanish and Portuguese speaking world. Cabify is a platform that connects people with private cars and drivers to make getting around cities easier, safer and more enjoyable.	International	Drivers (Car-owners)

Crowdsourcing

1. The transport authorities in your region have contracted third-party commercial providers to have access to crowdsourced data? For instance traffic speed and vehicle-count information. If yes, please explain.

   No.

2. In your region there are internet-based social networks to obtain public feedback regarding the conditions of the transportation system? And regarding the performance of the transport authorities?

   No.

3. Do you have any specific platforms to produce crowdsourced transportation data?

   No

4. Do you use another way of obtaining crowdsourced transportation data? With what aiming?

   No.

B) Regulations in sharing economy

1. Are there any specific regulations that defines when a person offering services is on an occasional basis and when become a service provider acting in a professional capacity?

   There isn't any specific regulation that defines exactly what is occasional service or professional, but we have a financial level from which we should pay taxes that allow to differentiate the professional service from the occasional.

2. Are there specific requirements to service providers in the field of mobility? (For instance: type of vehicles, insurance obligations, specific training ...)

   In August 2018 was publish a legislation Law 45/2018 for **individual and paid passenger transport in vehicles decharacterized from an electronic platform** that impose some conditions to access the activity, to be a driver, the vehicles that are used and the licence for the electronic platforms.

   However this legislation is not apply to the carpooling (non-profit vehicle sharing) or carsharing (renting of vehicles without driver of short duration with characteristics of sharing)

3. Are the collaborative platforms subject to sector-specific rules applicable to the underlying services (e.g. authorization and licensing in transportation service)?

   The Law 45/2018 describe above made some conditions for the electronic plataforms that thru their business model made the intermediation service between operators and users adhering to the platform of **individual and paid passenger transport in vehicles decharacterized**. The access to the activity of the platform operator requires licensing, platforms are subject to audits by the National Data Protection Commission and are obliged to record and respect the time of service of drivers, namely controlling the time of service and rest.

4. Is there any legislation that ensures that tax rules (VAT, personal income, corporate income) apply to the collaborative platforms?

   Not any specify legislation. Just the exception for the electronic platform of **individual and paid passenger transport in vehicles decharacterized** that not allow the electronic platform received more than 25% of pay value for the trip**.**

C) Transport business model in sharing economy

Self-evaluation of the local/regional transport business model in sharing economy.
In order to better understand different kinds of business models, try to choose three different business models from the ones that you fill in the table in question 7 and answered the following questions for each one:

Name of the business model: Bookingdrive.com
Goals: Decrease personal car ownership, reduce vehicle distance travelled and improve urban land use and development.
Responsible: It's a private Start Up lead by Jorge Forte.

Short description: Bookingdrive.com is a marketplace for carsharing and car rental services.
Whether people will save money with carsharing is highly dependent on the usage. For some people carsharing will be the cheapest option, for others it will be car rental.
Carsharing it's a way for car owners to earn extra income at the end of the month by renting their car. It's a possibility to make private cars more profitable when owners are not using them

What are the key activities?
Online marketplace for car rental services.

1. What are the key partnerships?

Fidelidade – insurance company
Centauro
Confiauto
Cooltra
Drive&Go
Guerin
Hertz
Sixt
Sadorent
Private owners

2. What are the cost structure?

+/- 4000EUR/month excluding banking fees on sales. Namely, human resources, maintenance of technology platform, software and facilities.

3. What are the benefits?

Carsharing is designed for users in support of community transit and environmental goals. It provides access to vehicles for all constituencies and decreases dependence on fossil fuels while reducing the emission of greenhouse gases.

4. Is it a local, regional, national or international business model?

National business model targeting international markets.

5. Do you have concrete data related to the business model?

No.

6. What is role of the mobility transport authority is this business model?

None.

Name of the business model: Via Verde Boleias
Goals:
Reduce carbon emissions from travel, improve access to cheaper transport solutions, and increase public and road safety.
Responsible: Brisa
The largest private operator of transport infrastructures in Portugal
Short description:
Via Verde Boleias is an online platform to share travel costs. Through a website or mobile application, drivers post the places available in their car, indicating the route and price per place. Passengers search for travel by entering the date and starting point and arrival. From the list of search results, the most convenient alternative is chosen according to the time, price and preferences indicated in the profile. The *Via Verde Boleias* can be used to make sporadic trips or for daily use, for short trips or long trips.
This service has a group concept available, which allows you to create communities, with similar interests of trips to the same destination. You can create Public Groups or Private Groups. The Public Groups aim to organize the sharing of trips for large events depending on the type of trip and the type of client involved. This sharing allows users to reduce the cost and time associated with their daily commutes by lowering the carbon footprint, reducing parking needs and incurring expenses, while enhancing the spirit and culture of sharing within the organization.

1. What are the key activities?

- On line platform to share trips: public or in private groups.

2. What are the key partnerships?

- Via Verde
- Galp

3. What are the cost structure?

4. What are the benefits?

Ridesharing solutions such as Via Verde Vans have significant environmental benefits, allowing a user to significantly reduce (up to 75%) the carbon emissions emitted with their journeys.
From the social point of view, this solution also brings benefits. In addition to improving access to cheaper transport alternatives, it is found that it encourages drivers to behave more responsibly, thus improving road safety.

5. Is it a local, regional, national or international business model?

National.

6. Do you have concrete data related to the business model?

No.

7. What is role of the mobility transport authority is this business model?

In this moment none.

D) Good/bad practice presentation

Please, give a good and a bad example of a business model in sharing economy. Describe shortly the reasons for being a good/bad practice. You can include links and pictures (max 1 page).

We decided to choose the good practice after the workshop.

Good practice	**Bad practice**
Name:	Name:
Context:	Context:
Main authorities and stakeholders involved:	Main authorities and stakeholders involved:
Web links:	Web links:
Why is the practice considered as 'good'?	Why is the practice considered as 'bad'?

E) Current experiences

8. Has your organization already been involved in the promotion of a sharing economy business model? Please explain.

   Not really. But we made a viability study to implement a bike sharing system in the metropolitan region of Porto.

9. Were you directly involved in the activities or did you engage an external expert?

   We engage an external expert to make the study.

10. What was the role of your organization? What stakeholders were involved?

    The role of AMP was to coordinate the study. We involved the municipalities of the metropolitan region.

11. Has an evaluation been conducted and set in relation to set goals and objectives?

    Not really.

ROMA

A) Open questions on sharing economy in the transport sector

Shared Transport

1. Are there relevant policy documents or legislation that ensures or regulates shared transport in transport planning or management in general?

   There are two laws that regulate the mobility management:
   - Interministerial Decree of Sustainable Mobility – 27.03.1998
   - Ministerial Decree on Mobility Management – 20.12.2000, to promote, assist, coordinate and monitoring sustainable mobility.

   Among the current planning tools, there are the General Traffic Master Plan of Rome (2015) and decision on priority actions for the improvement of the public transport network and the Roma Capitale road network

2. Have the region and/or the municipalities adopted a vision that includes shared use mobility and also defines mode-split goals?

Yes, the regional transport plan has a vision for the future of public transport related to both learning from and operating in partnership with new mobility options like Transport Network Companies (TNC). Public transport has to implement the types of convenience features found in sharing mobility and other transport alternatives and integrate multiple transit modes to deliver full first–-last mile mobility.
The municipalities have to approve or finalize programming tools (e.g. SUMP to be approved within 8/19 from cities >100.000 inh. and General Traffic Master Plan) including shared use mobility.

3. Is there a strategy to integrate shared-use transportation modes into mobility planning? For instance, that encourage the integration of public transport, bike sharing, ridesharing, car sharing around bus stops.

The traditional modes of public transport from the train to the bus should accelerate the process of integration enabled by multimodal journey-planner applications, the emerging diffusion of mobility as a service (MaaS) platforms, and, more generally, the general tendency to conceive mobility as an integrated and multimodal service. The goal is to become competitive with the door-to-door movement offered by the private car by offering a single seamless travel solution consisting of several legs, each on a different mode, with a single interface (one-stop shop) for purchase, payment, information flow, and feedback collection.
The public transport companies and agencies have to make efforts to improve service and adopt mobile technology, whether through partnering with Transport Network Companies (TNC) to subsidize rides or connect passenger-to-transport options or by launching their own micro-transport systems that adopt on-demand routing. TNCs can be good partners by providing data, promoting their services in a way that complements the efforts of transit agencies, and working together with cities on efforts to increase mobility, reduce traffic congestion, mitigate carbon emissions, and increase access to underserved communities.

Business initiatives that demonstrably serve the public good should also be encouraged. Once an agreement is reached with a public transport company or agency, carsharing users will have the option to book and display transport tickets with the app, allowing for seamless transfers from carsharing to public transport services for convenient multimodal journeys.
Overregulation, underregulation, and poor quality of public transport services are potential barriers to a future that considers sharing options. The government departments have to work cooperatively with private business and be able to regulate the transport system with a holistic vision.
The Regional Plan also provides public transport agencies and other public entities with guidelines for engaging with TNC services. In metropolitan areas with integrated rail, light rail, bus rapid, intermodal centre and feeder services, that move large numbers of people efficiently and effectively, these guidelines include:
• Designating curb space or other specific locations for TNC pickup/dropoff to minimize conflict near stops, stations, or intermodal centres.
• Pursuing cost savings through public-private partnerships on late-night, call-and-ride, and other special services for low demand, as for the disabled and elderly.
• Exploring first-mile/last-mile partnership services with TNCs to increase the utility of public transport in lower-density areas, to encourage area residents to leave their cars at home and choose other forms of transportation. Components of such efforts can include carpooling/guaranteed-ride-home programs, parking policy changes, and other transport demand management strategies, such as congestion and pollution charges in the urban centre.
• Partnering with TNCs to provide alternatives to unproductive routes or to provide service across greater time spans or low-demand areas.
Such guidelines can be adapted to medium and small urban areas in regions where demand for public transport is low.
The idea behind the guidelines is that local authorities and transport agencies should focus their efforts on the overall transport system, but concentrate their resources on key services and routes, fare integration, co-marketing, and other strategies that encourage multimodal lifestyles and support a variety of private providers that, with appropriate regulations, can operate in the public interest. These developments toward shared mobility should also bring about a shift from individual vehicle ownership to the use of public transport. But most infrastructures were built to meet the needs of individual vehicles, which sit idle about 95% of the time and need parking space. When the shift becomes evident, the local authorities will have to rethink the cities, changing the use of the infrastructures in favour of public transport, taking advantage of the reduced parking to reassign the space to pedestrians and bicycles. The goal is to increase accessibility, reduce traffic congestion, mitigate carbon emissions, and increase access to underserved communities. In this framework the business initiatives that demonstrably serve the public good should also be encouraged. The strategy is much more articulated and complex then just carsharing around the bus.

The Regional Energy Plan (REP) is a complex document which includes strategic objectives and scenarios related to the energy sector. In particular there is a paragraph dedicated to alternative (cycling) and shared mobility, with particular reference to the intermodality not only relating to urban territory but also to the territory of the metropolitan area. In particular, the development of alternative forms to the use of private cars to and from the exchange stations is encouraged.

4. What municipal/regional measures do you have in terms of land use planning to encourage shared transports?

At Regional level there are the approved Regional Air Quality Plan and the currently working document for the Regional Plan for Mobility, Transport and Logistics (RPMTL).

The RPMTL aims at transport-oriented development around rail stations. This can be an opportunity to develop last-mile transport based on sharing mobility.
The measures adopted are mainly municipal. In the past Lazio Region took part to SocialCar. Socialcar was a Horizon european project that aims to incorporate carpooling into existing mobility systems; by means of powerful planning algorithms and big data integration from public transport to match travel requests with the integrated public-private transport supply, complemented by a reputation-based mechanism. With all software modules integrated, SocialCar has been tested in 10 European sites, including the Lazio Region.

5. What measures do you have or are being developed to integrate new shared mobility transports with PT? (ex. common payment system, intermodal car, information system, …)

There are no measures of this type implemented in the region or metropolitan areas, except for parking places reserved for carsharing at Rome's main airport and station.
Lazio Region is evaluating the possibility of expanding the mobility information system (together with Astral-Infomobilità) with data on the sharing mobility companies operating in the territory. In the last few months Lazio Region has started a first contact meeting with operators of the sector.

6. Which forms of the sharing economy in mobility do exist in your metropolitan region?

Several companies are active in bikesharing, scootersharing, carsharing, and ridesharing.

7. What do you think are the main challenges related to the sharing economy? What are the strategies for improvement?

The main challenges are the traditional non-scheduled services of taxi and car-and-driver hire (C&DH).

The sector is governed by a 25-year old law (Law No. 21 of 15 January 1992) and requires comprehensive reform. In this respect, the Italian Competition Authority (ICA) has sent a complaint to the Italian Parliament and the Government to report and emphasize the need to bring legislation into line with market evolution.

The ICA considers that the path to be pursued for the reform of the sector should first streamline existing rules and regulations. To this end, greater flexibility should be ensured for individual holders of a taxi license and, at the same time, the provisions that limit the activity of C&DH operators on a regional basis should be eliminated. These reforms would ensure full equivalence of operators with a taxi licence and those with C&DH authorization on the supply side and would facilitate the development of more innovative and beneficial forms of consumer service, such as Uber black.

The reform should also cover the services that connect non-professional drivers and end users via digital platforms, such as the Uber Pop service. Such regulation – taking into account the need to balance the safeguarding of competition with such other legitimate interests as road safety and passenger safety – should be as non-invasive as possible, limited to requiring the platforms to be publicly registered and the identification of a number of requirements and obligations, including tax-related ones, for both drivers and platforms.

It is clear that these measures would result in an immediate extension of the offer of non-scheduled mobility services to the benefit of end consumers. The prospect of success of such a reform in the pro-competition sense is, however, linked to the adoption of appropriate measures to limit as far as possible the social impact of opening the market. For the benefit of the taxi drivers in service when the new legislation goes into effect, the ICA suggests some compensation possibly from a fund financed by the new operators and by the higher revenue deriving from changes to taxation.

Collaborative platforms

1. What collaborative platforms in field of mobility are currently operating in your metropolitan region?

Type	Platform Name	Web link	Small description	Geographic regions of operation	Supply-side participants
Ride sharing	BlaBlaCar	BlaBlaCar.it	Long-distance carpooling platform that connects car drivers with empty seats to passengers looking for a ride.	World	Individuals with cars (owners)
Car sharing	car2go Enjoy Sharengo National Cons.	https://www.car2go.com/IT/en/rom/ https://enjoy.eni.com/it/roma/home https://site.sharengo.it https://romamobilita.it/it/carsharing	The service is free-floating for the first three. The area is urban Rome, Sharengo has only electric vehicles. The total no. of vehicles is 2188 with 534 electric (24%). Each vehicle has 3.4 users/day with 8 km/user.	World Italy Italy Italy	The same companies
Bike sharing	Obike	https://www.o.bike/it	Free-floating service in a limited centrally located area of Rome. 1200 bicycles.		
Other:	Cooltra Zig-zag Mytaxi	www.cooltra.com/Roma https://www.zigzagsharing.com/it https://it.mytaxi.com/	Free-floating 240 electric scooter Free-floating 160 scooter 2000 taxis, 1/3 of the taxi fleet in Rome. The concept is based on a direct connection between driver and passenger to offer both sides a modern alternative to conventional booking processes. MyTaxi withholds 7% from the taxi driver on each trip, without registration fees or monthly or annual charges. There are initiatives to attract customers and taxi drivers, e.g., a welcome coupon and a discount campaign to/from airports. The customer pays less, MyTaxi reimburses the driver the amount of the discount.	International Italy International	Taxi drivers

Crowdsourcing

1. The transport authorities in your region have contracted third-party commercial providers to have access to crowdsourced data? For instance traffic speed and vehicle-count information. If yes, please explain.

The providers are requested to give only standard basic information (numbers of clients/rentals).

2. In your region there are internet-based social networks to obtain public feedback regarding the conditions of the transportation system? And regarding the performance of the transport authorities?

Yes. There are several operated by public and private companies with their specific IT systems.

3. Do you have any specific platforms to produce crowdsourced transportation data?

Yes. There are some international platforms operating in the region, e.g., Waze and TomTom.
ASTRAL Infomobility provides real-time information on mobility and viability, made available by the information sources present in the region, for all transport systems, in order to provide the citizen with accurate and complete information on the road network and public transport services and to help him in his movements. The service is an example of institutional collaboration between various subjects involved in the provision of information assistance services to users of networks and transport services of the Lazio Region. This collaboration also manifests itself in terms of automatic interconnection of the various sources with the Regional Infomobility Center. The multi-modal nature of the new service, together with the high technological content and the capillarity of the sources, are the strong points of the initiative. For the first time, the Lazio Region has an instrument able to respond to the need for information from users of roads and highways, railways, extra-urban buses, ports and airports, in all the provinces of the Region, in everyday movements, wherever they occur and regardless of the means of transport used. The complex set of collected data is processed by the Operations Center to produce specific information contents disseminated through the following social media: facebook, twitter, youtube.

4. Do you use another way of obtaining crowdsourced transportation data? With what aiming?

No.

B) Regulations in sharing economy

1. Are there any specific regulations that define when a person offering services is on an occasional basis and when become a service provider acting in a professional capacity?

To operate in carsharing, companies are obliged to make a specific request to the municipalities, providing much information about company size and activity structures.

2. Are there specific requirements to service providers in the field of mobility? (For instance: type of vehicles, insurance obligations, specific training ...)

Yes. There are such requirements; each city has its own.

3. Are the collaborative platforms subject to sector-specific rules applicable to the underlying services (e.g. authorization and licensing in transportation service)?

Yes, from the local authorities.

4. Is there any legislation that ensures that tax rules (VAT, personal income, corporate income) apply to the the collaborative platforms?

No specific legislation.

C) Transport business model in sharing economy

Self-evaluation of the local/regional transport business model in sharing economy.

Name of the business model: Enjoy vehicle sharing
Goals: Be the first national player (achieved)
Responsible: General Manager Giuseppe Macchia
Short description: Enjoy is ENI's vehicle sharing service, launched in Milan in December 2013.
Today the service is available in:

- Milan. with a fleet of 1000 Fiat 500 and 20 Fiat Doblò for freight;
- Rome. with a fleet of 870 Fiat 500 and 20 Fiat Doblò;
- Turin. with a fleet of 300 Fiat 500 and 20 Fiat Doblò;
- Florence. with a fleet of 100 Fiat 500;
- Catania. with a fleet of 110 Fiat 500.

It is based on the "free floating" model: pickup and release of the vehicle in any parking space within the service coverage area (easily recognizable by the user via app/car screen device).
The free-floating model is flexible, immediate, transparent, and safe. These are its main features:

- Ease of locating vehicles with smartphone or website;
- Renting vehicles in advance (within 90 minutes from use: the first 15 minutes are free and the remaining 75 minutes at a fee of €0.10/min);
- Renting vehicles without reservation: if a vehicle is free, the user can pick it up and start the rental immediately;

Open-ended rentals, i.e., without advance commitment to a specific release time; once released, vehicles are available for other users;

- Parking free of charge in any authorized parking spaces (including the yellow residents-only spaces and blue pay-parking spaces), and access to LTZ/Area C (Limited Traffic Zone of city centres);
- Paid Enjoy parking in strategic areas (train station and airports);
- Self-refueling free of charge at authorized ENI stations using the app (customers receive a €5 voucher for their own use).

Customer relations are automated: the customer interface consists mainly of the website and the mobile application, which provide all the necessary means for customers to help themselves on a self-service basis; a 24-hour operating call centre provides customer assistance. Enjoy does not charge registration or fixed annual fees. Rental fees are the main revenue stream.

Enjoy pays the municipalities annual fees in order to operate and benefit from specific terms agreed with them, such as parking the cars in any standard paid parking spot and circulating in LTZs.

1. What are the key activities?

The core activity is the offer of short-period car rentals. The backbone activities are user registration, reservations management, billing operations, fleet management, vehicle maintenance, and customer service. The key resources comprise the vehicle fleet, the integrated information systems developed to manage the fleet and the rentals, the websites and smartphones applications, which are the main customer channels, and the service and management teams.

5. What are the key partnerships?

In addition to ENI, Enjoy's main partners are Trenitalia, the main Italian train operator (the companies have agreements for the integration of services and collaboration), FCA (Fiat Chrysler Automobiles), an Italian car manufacturer (supplier of the Fiat 500 fleet: the cars are red and carry the Enjoy logo on the doors), and CartaSi, a credit card company with which Enjoy has specific agreements for the payment system and services. The partnership with Trenitalia is strategic for Enjoy's focus on corporate clients, an important customer segment. Both companies benefit from cross-marketing, as each company announces the partner services in its customer channels. The company has also established partnerships with other suppliers , e.g. a vehicle cleaning company and a supplier of uniforms for the service team.

It is vital for the company to establish partnerships with the local governments of the cities where it operates in order to align the services with local regulations and establish agreements regarding operating conditions, the use of public space and parking, taxation, and other benefits.

6. What is the cost structure?

The cost structure is characterized by a high portion of fixed costs, related to the fleet acquisition and the development of complex information systems to operate the business. Other common costs are related to maintenance, cleaning and refueling or recharging the vehicles, the management of the fleet (including vehicle repositioning), municipal taxes included in the agreements for the service authorization and the use of public facilities, and personnel costs. Enjoy has no station-based operators and thus saves on infrastructure costs, nor does it install proprietary parking spots in locations with lower availability of public parking spots.

7. What are the benefits?

Enjoy is a private company, so one benefit is profit. But it also produces external benefits inherent to the car-sharing concept, offering a mobility alternative with low environmental impact, complementary to the available public and private transport modes, and economically efficient when compared with car ownership.

8. Is it a local, regional, national or international business model?

National

9. Do you have concrete data related to the business model?

N.A.

10. What is role of the mobility transport authority in this business model?

The authority gives favorable local regulations and grants operational conditions regarding the use of public spaces and parking, taxation, and other benefits.

The business model of Enjoy - Summary

<table>
<tr>
<td rowspan="2">Key Partnerships

• ENI
• Trenitalia (Italian train operator)
• FCA (vehicle supplier)
• CartaSi (credit card company)
• Other commercial companies and suppliers
• Local municipalities
• Insurance companies</td>
<td>Key Activities

• Car rentals
• Vehicles maintenance
• Fleet management
• Customer service
• Marketing and establishing new partnerships</td>
<td rowspan="2">Value Proposition

• Free floating car sharing rentals
• Fiat 500 fleet (design appeal, iconic car, four sits)
• Flexible, environmental friendly and economical mobility service
• Integration with train services</td>
<td>Customer Relationships

• Automated services through the website and application interfaces</td>
<td rowspan="2">Customer Segments

• Private users
- Occasional users
- Frequent users
• Corporate clients
- Trenitalia loyalty program clients, including corporations</td>
</tr>
<tr>
<td>Key Resources

• Vehicle fleet
• Service team
• Integrated system, website and application</td>
<td>Channels

• Website
• Smartphone Application
• Customer service call center
• Co-marketing with Trenitalia</td>
</tr>
<tr>
<td colspan="3">Cost Structure

• Vehicle fleet acquisition
• Maintenance, fueling and cleaning vehicles
• Personnel costs and customer services
• Insurance contracts
• Municipality taxes
• Other expenses related to improper use of the service</td>
<td colspan="2">Revenues

• All-inclusive rental fees (per minute, hour or daily rate)
• Extra fees per kilometre (above the included mileage per trip)
• Cross-selling (Trenitalia partnership)</td>
</tr>
</table>

D) Good/bad practice presentation

Please, give a good and a bad example of a business model in sharing economy. Describe shortly the reasons for being a good/bad practice. You can include links and pictures (max 1 page).

Good practice	**Bad practice**
Name: Enjoy carsharing	Name:
Context: Rome	Context:
Main authorities and stakeholders involved: Rome municipality, ENI, Trenitalia, FCA, CartaSi, insurance companies, suppliers.	

Web links: www.enjoy.com	Web links:
Why is the practice considered as 'good'? Based on free floating and free parking, it is simple, flexible, efficient, and excellent value for money. Other positive factors are accessibility, practicality, and environmentally friendly characteristics of the service. The vehicles are allowed to circulate in the LTZ (limited traffic zone) in the city centres and can be parked free in regular paid public parking and residential parking. Customer relations are automated with a user-friendly interface. The customer interface consists mainly of the website and mobile application, which provide all the necessary means for customers to help themselves on a self-service basis; a 24-hour operating call centre is also available for customer assistance.	Why is the practice considered as 'bad'?

E) Current experiences

16. Has your organization already been involved in the promotion of a sharing economy business model? Please explain.

    The Centre for Transport and Logistics (CTL) has not been involved: the main experience was in the Lazio Regional Plan for Mobility, Transport, and Logistics
17. Were you directly involved in the activities or did you engage an external expert?

    CTL is normally engaged as consultant.
18. What was the role of your organization? What stakeholders were involved?

    CTL is a research centre at the Sapienza University in Rome
19. Has an evaluation been conducted and set in relation to set goals and objectives?

    No