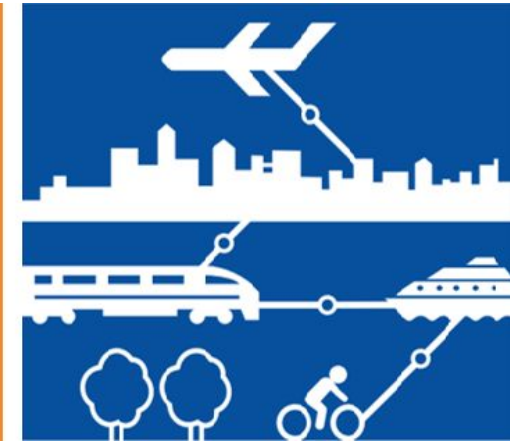


Last Mile

CO-CREATING SMART AND SMOOTH TRAVEL EXPERIENCES



International benchmarking study about additional services related to mobility services 31.5.2019



“Last Mile” Project

- The “Last Mile” project (“Perille asti” in Finnish) aims to improve the mobility of local residents and travelers in the Helsinki Region:
 - Jätkäsaari in Helsinki
 - Aviapolis and tourist destinations in Vantaa
 - Nuuksio and Rantaraitti in Espoo
- It is a joint project of the city of Vantaa, Espoo Marketing, Forum Virium Helsinki, Metropolia UAS, Aalto University, and Demos Helsinki
- “Last mile” is funded by European Regional Development Fund through the “Six City Strategy” during 2017-2019

Metropolia Project Team

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Introduction to research

- This international benchmarking research was done by the project team of Metropolia University of Applied Sciences 31.5.2019 as part of Last Mile project.
- The main objective of the research was to provide examples of additional services related to mobility services implemented or under development in cities internationally.
- In total of X cases from all over the world were presented with help of a “Case card”
- The template and content of the “Case card” as well as the main research questions are shown on the following slides.



Metropolia

Perille Asti **6Aika**



Uudenmaan liitto
Nylands förbund

Vipuvoimaa
EU:lta
2014–2020



Euroopan unioni
Euroopan aluekehitysrahasto

Introduction to research

- Cases were divided into 2 categories; parcel delivery and health & wellbeing.
- The purpose of the research was to provide ideas of possible new additional services related to mobility services that could be tested and piloted also in Finland e.g. as pilots of the Last Mile project.
- Each “Case Card” includes a short analysis and suggestions of how the idea of the case could be implemented in Espoo, Vantaa or Helsinki. A deeper business model analysis is not included.
- Summary and conclusions are presented for each of the categories on separate slides.



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Card Template

| Parcel delivery | |
|--|---------|
| City | Picture |
| Name of the area | |
| Name of the case | |
| <p>Description of best practices:</p> <ul style="list-style-type: none"> Type of service/package Purpose and type of approach Volume of users All-year-round or seasonal Funding model of the service (share of stakeholders in the project if known) | |
| Idea for the municipality | |
| | |
| Subcategory of Cases | |

| | | |
|---|---------------------|--|
| Customer | | |
| Market Place | | |
| B2B, B2C, B2E, B2G, B2M, C2B, C2C, G2B, G2C, G2E, G2G, P2P... | | |
| Mobility Systems | | |
| What technologies are required for the service to function | | |
| Transport Modes/ Mobility Services | | |
| What transport modes or services are used in the case | | |
| Needed Infrastructures | | |
| What infrastructures are required for the service to function | | |
| Stakeholders | | |
| Private | Public | |
| Private stakeholders | Public stakeholders | |
| | | Required indirect services in order for the service to run |
| | | |
| | | Supplementary Markets |
| | | |

Research questions

- 1. What kind of additional services related to mobility services are offered to customers and what is included in the service?**
 - Type of service/package
 - Purpose and type of approach
 - Customer segments
 - Volume users
 - All-year-round or seasonal
 - Funding model of the service (share of stakeholders in the project if known)

Research questions

2. What is the operating model behind the service?

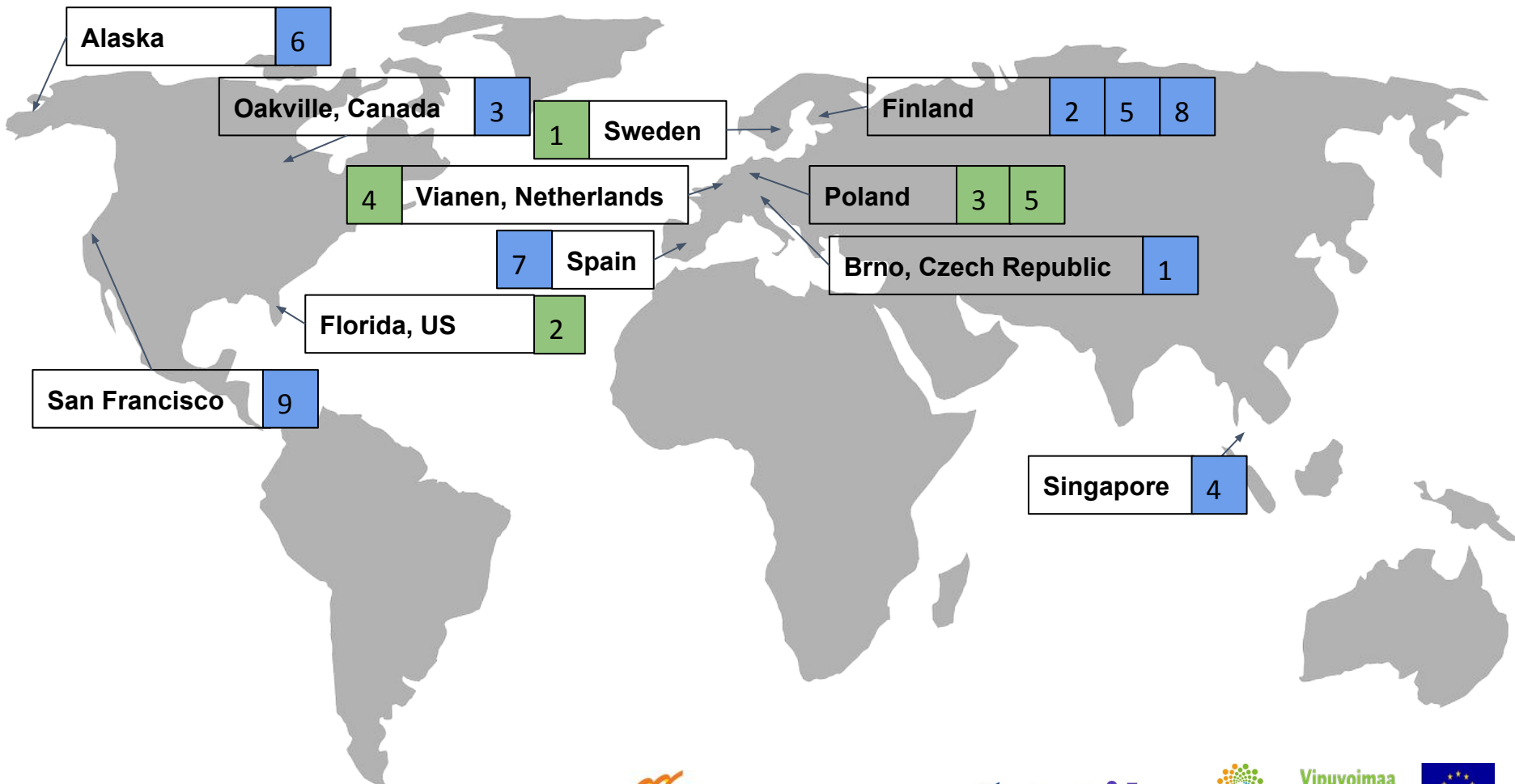
- Market place e.g. B2C, G2C, C2C etc.
- Transportation and mobility services used to provide the service
- Technologies required
- Infrastructure required
- Stakeholders (private companies, public organizations)
- Supplementary markets connected to the service

3. Is the service relevant for the Finnish environment and how it could be implemented?

Contents of the results

1. Cases included in the benchmarking
2. Categorization of the cases
3. Presentation of the cases in two categories
 - a. Parcel delivery
 - b. Health and wellbeing
4. Conclusions

Cases included in the benchmarking study



Categories of the cases

Parcel Delivery

Represents primarily additional services related to parcel businesses and package services.

Health and Wellbeing

Represents primarily additional services related to maintaining or improving wellbeing and making the traveling experience more enjoyable for passengers or travellers.



Parcel Delivery



Perille Asti **6 Aika**



Vipuvoimaa
EU:lta
2014–2020



List of cases related to parcel delivery

| | | |
|---|-----------------|---|
| 1 | Sendoo | App that connects package senders and drivers. |
| 2 | Hitch | Crowdsourced delivery marketplace that allows shippers to leverage available cargo space during a travelers' commute. |
| 3 | JadeZabioire.pl | App that connects drivers with people looking for a person that will deliver their package. |
| 4 | Trunks | A parcel delivery service connecting crowd sourced commuters and delivery drivers to fulfill and distribute package deliveries to the customer homes. |
| 5 | Poyade | App launched in 2016, which connects drivers with people looking for a person that will deliver their package. |

| |
|--------|
| Sweden |
| Sendoo |

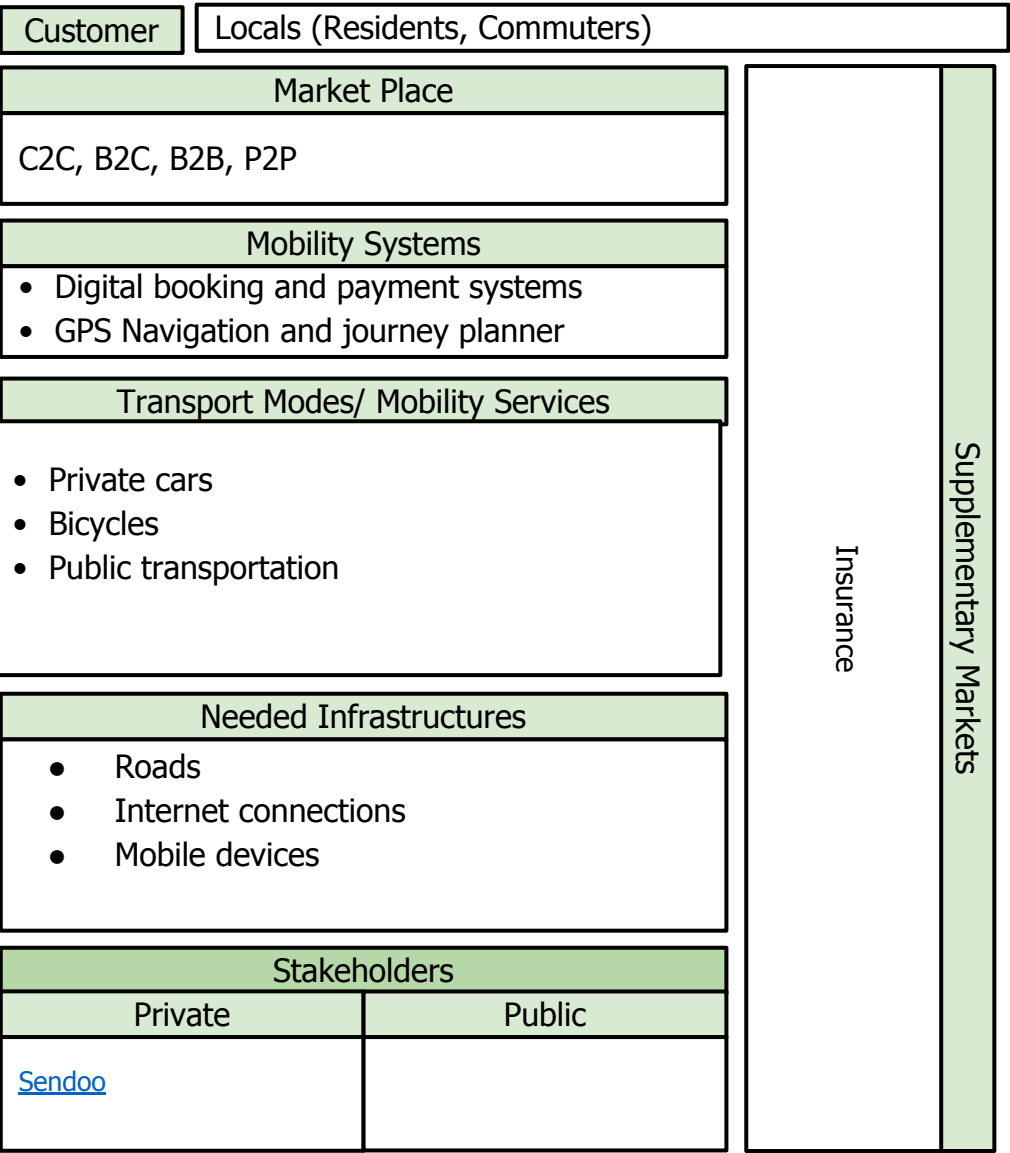


Sendoo is a phone app that connects package senders and drivers together. Drivers would drive the routes anyway, so transporting packages will bring them extra income and packet recipients receive their packages quickly and cheaply. The app shows the cost of sending the package immediately, for example, the price depends on the size of the package and the length of the trip. The app also Works all year round.

Idea for the municipality

The idea would surely work in Finland, because there are long distances and the current packet traffic is fairly slow.

| | |
|----------|-----------------|
| Category | Parcel delivery |
|----------|-----------------|



Tampa
 Florida, US
 Hitch



Hitch Crowdsourced Delivery is a crowdsourced delivery marketplace that allows shippers to leverage available cargo space during a traveler's commute. The App is designed to connect travelers with shippers. Travelers input their travel information for the day (to and from locations), after that they see a listing of available items to be delivered. Shippers input their item data (item information, description, image), pick-up and delivery location. After that the item will appear on the hitch map available for the traveler to deliver. The service works all year round.

Idea for the municipality

This idea could also work in Finland, specially in big cities like Helsinki and Tampere. People are moving constantly and there is a huge possibility that someone is heading to the same direction as your item to be delivered.

Category

Parcel delivery

| | | |
|---|-------------------------------|--------|
| Customer | Locals (Residents, Commuters) | |
| Market Place | | |
| C2C, B2C, B2B, P2P | | |
| Mobility Systems | | |
| <ul style="list-style-type: none"> Digital booking and payment systems GPS Navigation and journey planner | | |
| Transport Modes/ Mobility Services | | |
| <ul style="list-style-type: none"> Private cars Bicycles Public transportation | | |
| Needed Infrastructures | | |
| <ul style="list-style-type: none"> Roads Internet connections Mobile devices | | |
| Stakeholders | | |
| | Private | Public |
| | Hitch | |

Supplementary Markets

Parcel delivery

| |
|----------------|
| Bielsko Biala |
| Poland |
| JadeZabiore.pl |



JadeZabiore.pl is a Polish start-up, launched in 2014, which connects drivers with people looking for a person that will deliver their package. You only have to post an ad on jadezabiore.pl and a person who will be able to take the package will answer you. The Service is available for private drivers in Poland and outside the country, but also it is available for courier companies who may have some extra spaces in their car. The service works all year round.

Idea for the municipality

JadeZabiore.pl is a platform that will be found useful in Helsinki area. Commuters could take the packages on their way and deliver them in faster and more sustainable way.

Category

Parcel delivery

| | | |
|---|--|--------|
| Customer | Locals (Residents, Commuters) | |
| Market Place | | |
| C2C, B2C, B2B, P2P | | |
| Mobility Systems | | |
| <ul style="list-style-type: none"> • Digital booking and payment systems • GPS Navigation | | |
| Transport Modes/ Mobility Services | | |
| <ul style="list-style-type: none"> • Private cars / Delivery vehicles • Bicycles • Public transportation | | |
| Needed Infrastructures | | |
| <ul style="list-style-type: none"> • Roads • Internet connections • Mobile devices | | |
| Stakeholders | | |
| | Private | Public |
| | JadceZabiore | |

Supplementary Markets

<https://jadezabiore.pl/en>



Perille Asti 6 Aika



Vipuvoimaa
EU:lta
2014–2020



Parcel delivery

| |
|-------------|
| Vianen |
| Netherlands |
| Trunkrs |



Trunkrs is a parcel delivery service connecting crowd sourced commuters and delivery drivers to fulfill and distribute package deliveries to the customer homes same day and at reduced costs. Packages and parcels ordered are first delivered to transfer hubs, from here Trunkrs registered commuters and drives can pick them up and deliver to customers door and earn a fee per package. The service works all year round.

Idea for the municipality

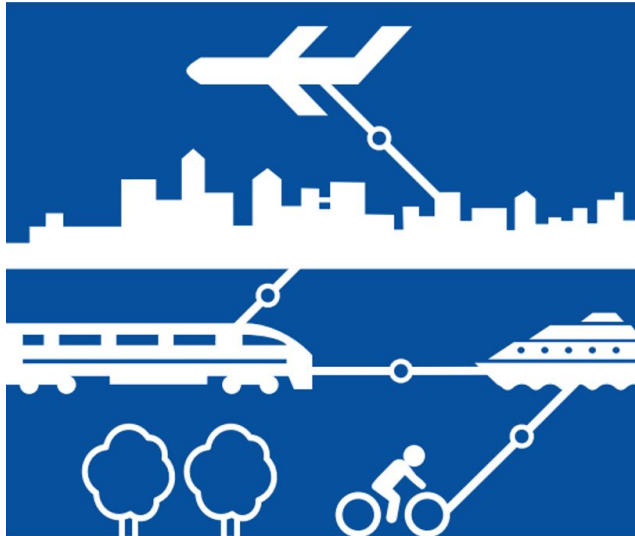
The last mile delivery service would work well in Helsinki and the surrounding suburbs, with commuters combining their daily commute via all transport modes to delivering packages to surrounding suburbs.

Category

Parcel delivery

| | | |
|---|-------------------------------|--------|
| Customer | Locals (Residents, Commuters) | |
| Market Place | | |
| C2C, B2C, B2B, P2P | | |
| Mobility Systems | | |
| <ul style="list-style-type: none"> Digital booking and payment systems GPS Navigation | | |
| Transport Modes/ Mobility Services | | |
| <ul style="list-style-type: none"> Private cars / Delivery vehicles Bicycles Public transportation | | |
| Needed Infrastructures | | |
| <ul style="list-style-type: none"> Roads Internet connections Mobile devices | | |
| Stakeholders | | |
| | Private | Public |
| | Trunks | |

Supplementary Markets



Health and Wellbeing

List of cases related to health and wellbeing

| | | |
|---|---------------------|--|
| 1 | BD public transport | A moving library, which gives people the ability to read books while moving from place A to B |
| 2 | Route Pepper | Electric bicycle tour with audio navigation |
| 3 | Oakville Transit | A rack in front of a bus that enables people to travel with their bike. |
| 4 | Transtar Travel | Company that provides first class solutions for customers in coach travel |
| 5 | VR | Finland's train company VR offers cooperation organizations the opportunity to rent private train cabins and organize events during the journey. |
| 6 | Alaska Railroad | Alaska railroads offers every year a variety of special events in the trains. |
| 7 | Iberia | Iberia plans to expand its in-flight entertainment to include VR and 3D content on board in collaboration with Inflight VR |
| 8 | CitiCap | The project CitiCap will develop new transport services for citizens while creating incentives for sustainable mobility. |
| 9 | Cabin Technologies | Cabin offers a bus with sleeping possibilities on the route San Francisco to Los Angeles. |

Brno

Czech Republic

BD public transport



Library tram is a moving library, which gives people the ability to read books even on the go while getting somewhere. The tram travels a route of 35 miles to spread peoples interest towards city libraries. The library tram has about 1 000 riders a day. The Jiří Mahen Library in Brno has been awarded first place in the 12th IFLA international marketing award in 2014. The project was executed with BD Public transportation company and an advertising agency.

Idea for the municipality

The library tram would be a great addition to Finland as it makes reading and lending books more convenient for everyone. The library tram is a model that brings together all ages of people and is a great way to see the city while reading a book.


Category

Transportation

| | | |
|---|--|--|
| Customer | Residents, Tourists | |
| Market Place | | |
| G2C | | |
| Mobility Systems | | |
| <ul style="list-style-type: none"> Tram | | |
| Transport Modes/ Mobility Services | | |
| <ul style="list-style-type: none"> Tram lines Trams Books lending systems | | |
| Needed Infrastructures | | |
| <ul style="list-style-type: none"> Tram lines Tram station Tram infrastructure | | |
| Stakeholders | | |
| Private | Public | |
| | Brno's DP Public Transport Jiří Mahen Library | |

Bookstores
Supplementary Markets

<https://www.kjm.cz/tramvaj>

| | |
|---|--|
| 2 | Health and wellbeing |
| Helsinki |  |
| Jätkäsaari | |
| Route Pepper | |
| <p>The electric bicycle tours with audio navigation produced by Vapaus Bikes and Route Pepper is a city tour service where customers can enjoy Helsinki city's landmarks while cycling through the city. There are multiple language choices and customers can simply rent an electric bicycle and go on a tour with it.</p> <p>The service started 17. Of July 2018 and was a pilot that lasted the summer 2018.</p> | |
| Idea for the municipality | |
| <p>This idea could be taken out of Helsinki and add it to other cities or natural parks etc that have roads available for biking. This could attract residents and tourists in other cities as well to rent a bike and enjoy the views while listening to the audio navigation.</p> | |
| Category | Transportation |

| | | |
|---|--|--------|
| Customer | Residents, Tourist | |
| Market Place | | |
| B2C | | |
| Mobility Systems | | |
| <ul style="list-style-type: none"> • Electric bikes | | |
| Transport Modes/ Mobility Services | | |
| <ul style="list-style-type: none"> • Electric bicycles • Audio systems | | |
| Needed Infrastructures | | |
| <ul style="list-style-type: none"> • Roads that support bicycling • bicycle racks | | |
| Stakeholders | | |
| | Private | Public |
| | Vapaus Bikes Route Pepper | |

Road quality services

Supplementary Markets

<https://forumvirium.fi/en/smart-mobility-services-being-tested-in-jatkasaari/>

Oakville

Canada

Oakville Transit



Oakville has started to offer bicycle racks on their public buses. These racks make it easier for the passengers to travel one part of the trip by bus and other by bike. Having the bike on the bus makes it easier to reach the final destination and pedal the "Last Mile" by bike. The transportation of the bike is included in the price of the bus ticket. These bicycle racks are in use throughout the year in Oakville.

Idea for the municipality


The bicycle racks for on public buses can help a lot of people in their everyday life. The opportunity to travel one part of the trip by bus and the other by bike opens many doors for bikers. For example one could take a bus to Nuukio and use the bike in the park. The bicycle racks also help commuters to reach the "last mile" while going to work.

Category

Transportation


| | | |
|--|--------------------------------|--|
| Customer | Commuters, tourists, residents | |
| Market Place | | |
| G2C | | |
| Mobility Systems | | |
| <ul style="list-style-type: none"> public busses | | |
| Transport Modes/ Mobility Services | | |
| <ul style="list-style-type: none"> Public Busses Bicycle racks | | |
| Needed Infrastructures | | |
| <ul style="list-style-type: none"> Roads Bus stations / stops | | |
| Stakeholders | | |
| Private | Public | |
| | The city of Oakville | |

Supplementary Markets

| | |
|---|---|
| 4 | Health and wellbeing |
| | |
| Singapore |  |
| Transtar Travel | |
| <p>Transtar Travel is a company that is specialised in coach travel and tours. They have routes from Singapore to major cities in Malaysia. The company strives to provide first-class and creative solutions for customers and make the travel more enjoyable. Each seat has a built-in massager and its own 10 inch monitor with over 100 English and Asian movies. There is also a attendant on board serving snacks, drinks and newspapers.</p> | |
| Idea for the municipality | |
| <p>Luxury busses would be a great addition for finnish travellers and for the tourists. As distance in Finland from south to north border is over 1100 km, travelling can take long time. By making the travel experience more comfortable, it's easier to lure travellers to visit lapland for example. Traveling by bus is also more eco friendly option compared to flying.</p> | |
| Category | Transportation |

| | | |
|---|---------------------|--------|
| Customer | Residents, Tourists | |
| Market Place | | |
| B2C | | |
| Mobility Systems | | |
| <ul style="list-style-type: none"> Private busses | | |
| Transport Modes/ Mobility Services | | |
| <ul style="list-style-type: none"> Busses special seats 10 inch monitors | | |
| Needed Infrastructures | | |
| <ul style="list-style-type: none"> Roads Bus stations | | |
| Stakeholders | | |
| | Private | Public |
| | Transtar Travel | |
| Supplementary Markets | | |

<http://www.transtar.travel/coach/>

| | |
|--|--|
| 5 | Health and wellbeing |
| Helsinki |  |
| Finland | |
| VR | |
| <p>VR has several different event trains that are executed with other companies or organizations. For example a trip called Kaamos organized by Kyski and Polkujuoksujuna organized by NUTS. Kaamos is a train trip with reserved private train cabins for students. Alcohol and partying are allowed in these cabins. There is also a DJ that performs in the train. In Polkujuoksujuna the idea is similar but people travel together for a sport event. There are cabins reserved for only people associated with NUTS. It is also possible to receive race materials in the train and there is a after race party in train on the way back from the event.</p> | |
| Idea for the municipality | |
| <p>By organizing more event trains to different kind of events, it's possible to lure people into traveling by train and not by flying or by car. Train is a more eco friendly option and by making the traveling experience memorable, people could enjoy the trip itself and choose the train as the the way of travel.</p> | |
| Category | Transportation |

| | | |
|--|---|--------------------|
| Customer | Students, travellers | |
| Market Place | | |
| B2C, G2C | | |
| Mobility Systems | | |
| <ul style="list-style-type: none"> Train | | |
| Transport Modes/ Mobility Services | | |
| <ul style="list-style-type: none"> Private cabins | | |
| Needed Infrastructures | | |
| <ul style="list-style-type: none"> Railways train stations | | |
| Stakeholders | | |
| | Private | Public |
| | Kyski NUTS | VR |
| Supplementary Markets | | |



Alaska
Alaska railroad

Alaska railroads offers every year a variety of special event trains. Depending on the event, there can be for example music performers performing during the trip or magicians doing magic tricks. Event trains make the travel it self a great memory for the whole family. There are trips that suits for everyone, some for families and some only for adult travellers. The great variety of travelling options make it easy for everyone to find a trip that they could enjoy.


Idea for the municipality

There are few event trains already in use in Finland but increasing the variety of the trips can lure people to travel by train instead of a car or a plane. By offering options for families, adults, student and elderly everyone can enjoy the trip itself and choose a more eco friendly way to travel.

Category Transportation

| | | |
|--|---|--|
| Customer | Travellers, Families, elderly, students | |
| Market Place | | |
| G2C | | |
| Mobility Systems | | |
| <ul style="list-style-type: none"> Train | | |
| Transport Modes/ Mobility Services | | |
| <ul style="list-style-type: none"> Performers private cabins | | |
| Needed Infrastructures | | |
| <ul style="list-style-type: none"> Railways train stations | | |
| Stakeholders | | |
| Private | Public | |
| | Alaska railroad | |

Supplementary Markets

| | |
|--|---|
| 7 | Health and wellbeing |
| |  |
| Spain | |
| Iberia | |
| <p>Iberia plans to expand its in-flight entertainment to include VR and 3D content on board in collaboration with Inflight VR. The new service will debut on iberia routes between Madrid and New York and Tel Aviv. The second-generation Pico devices will be available for rent during flights. They will enable viewers to experience three-dimensional content in games, films, city travelogues, and documentaries. Passenger can for example walk around the city they will be visiting prior arrival or play a variety of different kind of games to amuse themselves during the travel.</p> | |
| Idea for the municipality | |
| <p>Virtual reality will be a new way to get different experiences even during transportation. For example in Finland, Finnair could add this kind of additional service to their flights. Even though this example is about airplanes, VR could be also used when traveling by train or a bus, that are more eco friendly ways to travel.</p> | |
| Category | Transportation |

| | | |
|--|---|--------|
| Customer | Travellers | |
| Market Place | | |
| B2C | | |
| Mobility Systems | | |
| <ul style="list-style-type: none"> Airplane | | |
| Transport Modes/ Mobility Services | | |
| <ul style="list-style-type: none"> VR glasses VR content | | |
| Needed Infrastructures | | |
| <ul style="list-style-type: none"> Airplanes Airports | | |
| Stakeholders | | |
| | Private | Public |
| | Iberia InFlight VR | |
| Supplementary Markets | | |

Lahti
 Finland
 CitiCAP-Citizens' cap and trade



The aim of the project is to test residents' personal carbon trading scheme for mobility, to build a new model for a sustainable urban mobility program, to create a light information platform for mobility information and to build a smart cycle path. The project CitiCap will develop new transport services for citizens while creating incentives for sustainable mobility. Citizens will benefit from reducing their on emissions from mobility for example they can receive various benefits in traffic environment. Lahti will be the first city in the world to test personal carbon trading scheme for mobility.

Idea for the municipality

By implementing the project to other cities in Finland, it's possible to gather more data from different kind of cities. The project could also be a helpful tool to create more sustainable mobility services in the Helsinki metropolitan area and to make the citizens more aware of their own carbon footprint.

Subcategory of Cases

| | | |
|--|---|--|
| Customer | Citizens | |
| Market Place | | |
| G2C, G2B, B2C, B2G | | |
| Mobility Systems | | |
| <ul style="list-style-type: none"> platform for mobility information | | |
| Transport Modes/ Mobility Services | | |
| <ul style="list-style-type: none"> Public transportation | | |
| Needed Infrastructures | | |
| <ul style="list-style-type: none"> Smart cycle path | | |
| Stakeholders | | |
| Private | Public | |
| Infotripla , Mattersoft , Moprim , Future Dialog , Good Sign | The city of Lahti , LUT , LAMK , LADEC Ltd | |

bicycle maintenance services, cheaper public transport for citizens

Supplementary Markets

San Francisco
Route S.F-LA
Cabin Technologies

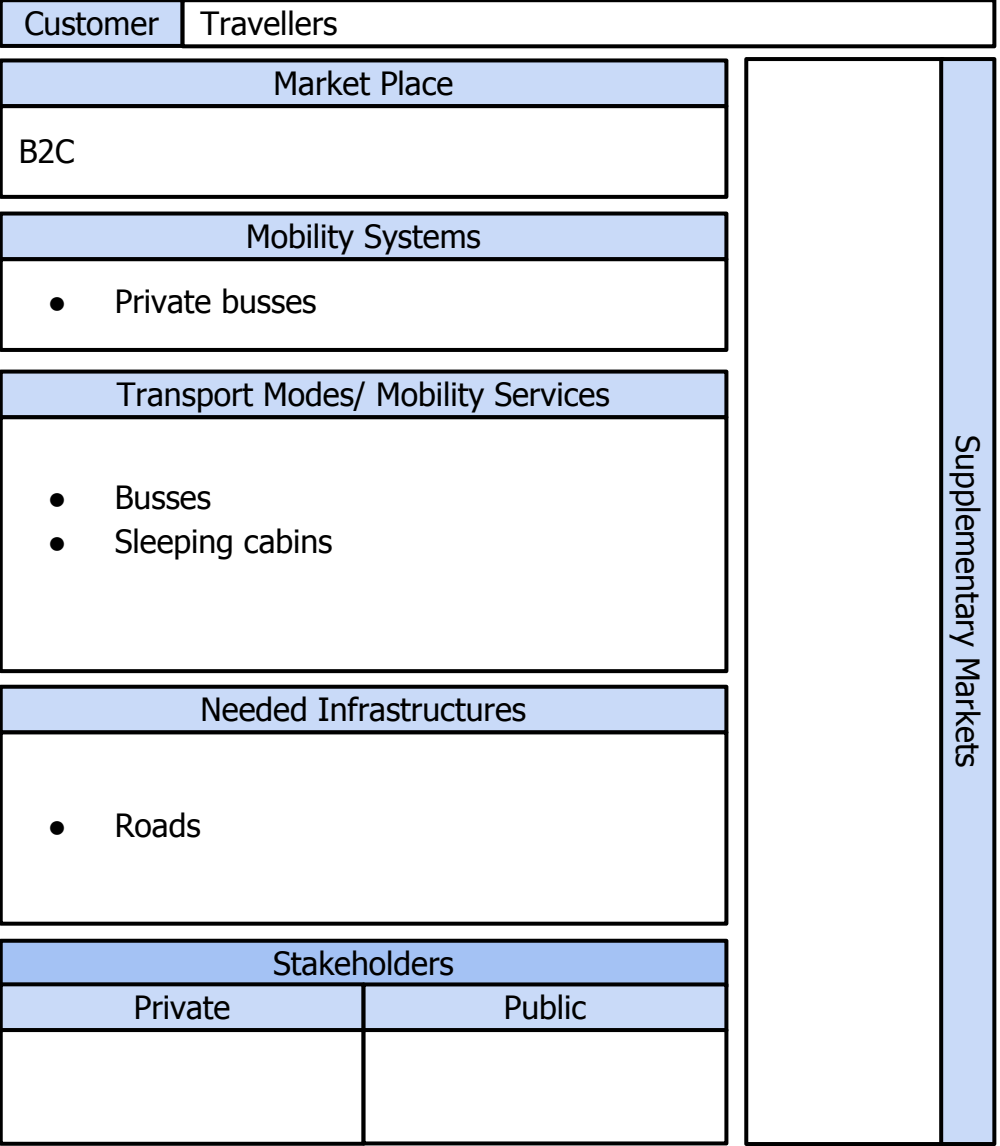
cabin

Cabin offers a bus with sleeping possibilities on the route San Francisco to Los Angeles. The bus includes 21 sleeping cabins, a pillow, free wi-fi and lounge. "We created Cabin to change the way we travel with unbelievably comfortable overnight vehicles that maximize every waking and sleeping moment." they tell in their web page.

Idea for the municipality

In Finland we already have sleeping train cabins, but not busses. There is a lot of possibilities to expand the sleeping opportunities also in the busses, considering that the distances are long in Finland.

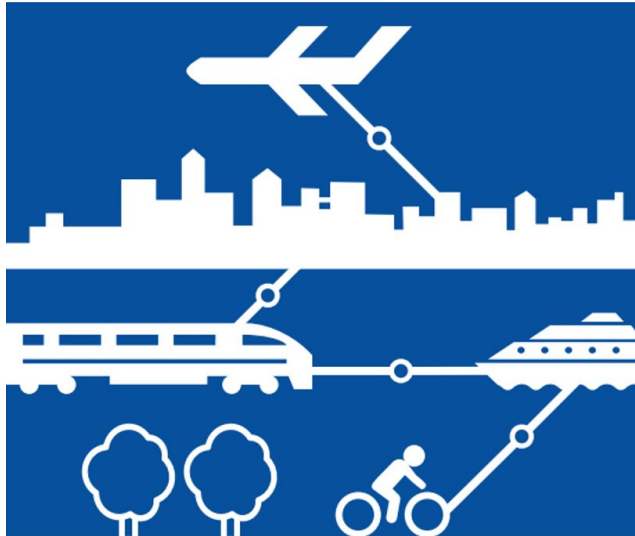
Subcategory of Cases



Supplementary Markets

<https://www.ridecabin.com/our-story>





Conclusions

Conclusions related to parcel delivery

Every company in this category is related strongly to business, where local people deliver packages from sender to receiver while at the same time doing their normal daily commute. These companies are “matchmakers”. They handle the connections between senders, drivers and receivers.

Since many companies with the same business idea were found during benchmark, this kind of service can be considered as an emerging trend. These services can change last-mile deliveries in the cities, because they reduce the need for traditional parcel services and thus it lowers the carbon footprint of transport in city areas.

The downside of these services is that they can easily turn into full-time jobs for the drivers, when the original idea of the service is lost and city traffic actually increases.

Answer to this could be to utilize more public transportation for parcel delivery and many companies have already started this. For example in Frankfurt, the distribution of [parcels by tram](#) has been piloted.

Conclusions related to wellbeing

All the cases in this category are related strongly on how to make travelling more amusing and enjoyable for both tourists and locals. There is a clear focus on wanting the customers to enjoy their trip rather than just get them from point A to B. Also the aim is to increase the use of more eco-friendly ways of travelling like trains or buses, instead of a private car or an airplane.

Making the trip more enjoyable, whether by amusing the passengers with various types of shows or using the latest technology, is a clear trend. New technologies like VR (virtual reality) provide tools for this.

Mobility services should include more holistic experience instead of just the transportation. All the cases referred to in this benchmarking study were G2C or B2C, so it is also important that Finnish companies and government are aware of this change to be a part of this development.