FinEst Smart Mobility

Smart approach to Helsinki Airport from Estonia (WP 5, Pilot D)

This Report is part of the FinEst Smart Mobility -project. The objectives are sustainable intelligent transport solutions and cooperative mobility planning to solve cross-border mobility dilemmas.

# About the Project FinEst Smart Mobility

Ferry connection between Helsinki and Tallinn has over 8 million annual passengers. The connection between Helsinki West Harbor and Tallinn Old City Harbor is one of the busiest in the world. Already existing traffic creates substantial congestion, noise and other negative externalities at both ports and cities.

FinEst Smart Mobility project aims to tackle this ever-increasing challenge through intelligent traffic solutions. This project provides a more fluent integration of different transport modes for this inter-city and cross-border traffic with piloting and planning of ICT-driven solutions. As one outcome, transportation time for both passengers and cargo will be reduced. The better flow of people and goods result in less CO2 emission and noise in the port area, as well as in the cities. Through cross-border approach, improved end-to-end and user-centric experiences will be ensured and a better cross-border mobility planning achieved. The pilots will carry on until early 2019, focusing on creating a more sustainable and a less congested traffic, while improving the user experience for the passengers. Project is funded through Interreg Central Baltic programme with total budget of 1.8 million euros (http://centralbaltic.eu/).

Website of the Project Finest Smart Mobility: http://www.finestlink.fi/en/finest-smart-mobility/

Project partners are: City of Helsinki, City of Tallinn, ITL Digital Lab, City of Vantaa, Estonian road administration, Forum Virium Helsinki LTD and Helsinki Region Transport Authority. City of Vantaa thanks warmly other partners of the project for a pleasant cooperation towards more sustainable transport solutions.

Smart approach from Estonia to Helsinki Airport, Aviapolis.
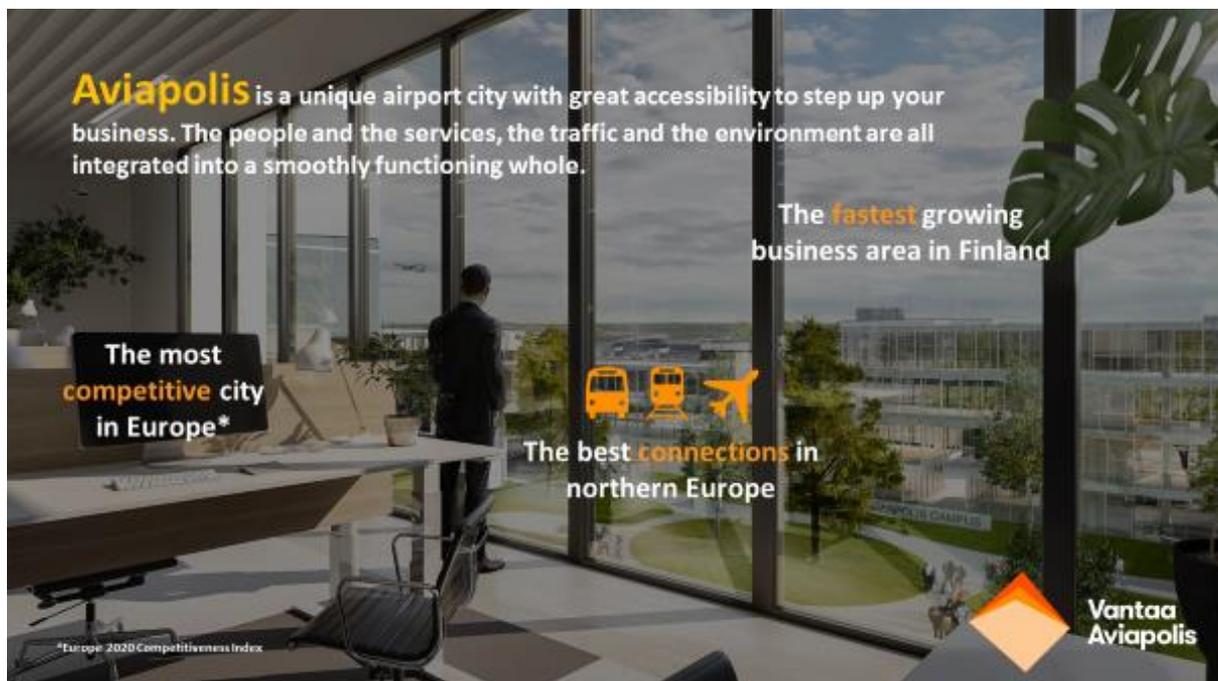
WP 5 Smart approach to Helsinki Airport from Estonia (Pilot D)

Background:

Vantaa is the location of Helsinki Airport. The local authority, City of Vantaa has strong understanding of future needs concerning connectivity and transport interoperability solutions, to which Finest Smart Mobility project links to. In this project city of Vantaa is responsible for the pilot D: Smart traffic solution pilot in order to increase modal split of public transport for travelers from Estonia to Helsinki Airport with ferry connection. The focus is to improve linkage of mobility network between sea, air and public transport with smart mobility solutions. Integration of cross-border public transport and ferry options will lead to increased and easier use of public transport for various passenger groups.

Picture 1. Location of Vantaa in Helsinki Metropolitan Area.

The inbound and outbound traffic in Jätkäsaari port is substantially more congested compared to other city regions. The ferry lines attract a great number of passengers using different means of transport – annually more than 1.3 million private vehicles that utilize the ferry connection go through city centers many of whom are destined to Helsinki Airport. Reasons for travelling from Estonia to Finland seems to be more likely for leisure, 80 % of all traffic. The remainder 20 % has been divided into work, visit and other travelling.

Due to the great number of the passengers the user-friendliness of public transport modes can face some challenges. Often trams heading towards and from ports are filled to the absolute maximum which creates strain to user-friendliness. In peak hours private cars stand in the congested traffic considerable time resulting in not so sustainable mobility.
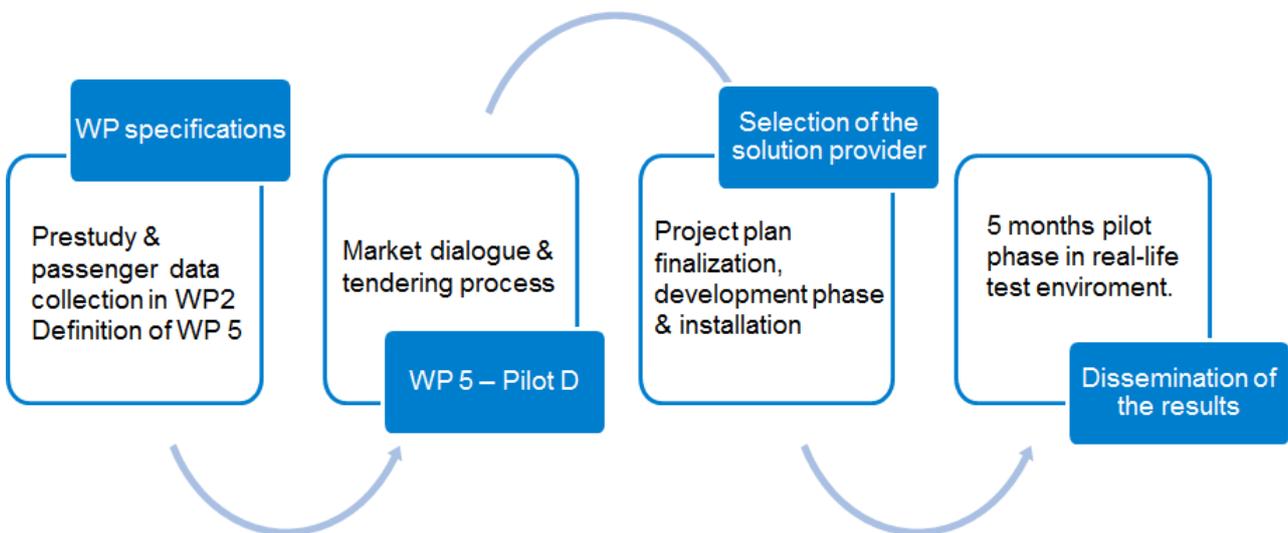
Objectives of the WP 5 (Pilot D):

This work package supports the FinEst Smart Mobility -project which aims to tackle negative externalities caused by current traffic at both ports and cities through intelligent traffic solutions. The work package provides more fluent integration of different transport modes of this inter-city and cross-border traffic with piloting and planning ICT-driven solutions. As an outcome transportation time for both passengers and cargo will be reduced. The better flow of people and good results in less CO_2 emission and noise in the port area as well as in the cities. Through cross-border approach end-to-end and user-centric experience are better cross-border mobility planning achieved.

In this work package the objective was to find a service that can better the mobility flows from Estonia to Aviapolis region / Helsinki Airport (later Aviapolis area) prioritizing sustainable mobility choices. The goal is to explore options that would help to promote public transport, reduce travel time, increase the use of railway connection, and bring in new innovative services and service models for the travellers. These could also integrate other value-added services to the travel chain and thus increase the attractiveness of the Aviapolis area services as part of the travel chain. The main target of the tender is to lessen the congestion and better the mobility chain from Estonia to Aviapolis region by prioritizing for both sustainable and public transport modes.

The piloting activities:

All the activities conducted in this work package are described in this chapter. The process is described in picture 2:

Picture 2 The process in WP 5 Pilot D

WP Specifications and definition

The work was started in WP2 with first plan specifications. In WP2 the purpose, goals, objectives of the pilot project were defined. Also requirement definition (passenger data collection, identification of user groups and demand analysis) were done in WP2.

The objective and the innovation challenge for the pilot D for FinEst Smart Mobility project was to develop a vertically integrated solution to increase interoperability between different transport modes and providers; e.g. local public transportation, long-distance public transportation, taxis, ride and vehicle sharing, cycling, walking and private vehicles. Service can be for instance programs, applications, services, systems, equipment, combination of these or something else entirely that betters the flow of traffic and increases customer experience. Some hypothetical examples of the anticipated services could include, among others: innovative information services on travel chain and related services; shared use transport services connecting to public transport to increase the number of persons per vehicle; and new innovative mobility-as-a-service services targeted for this use case. Services that focus only on luggage bag drop function for air travelers and that do not provide clear economic long-term sustainability without public subvention were limited out of the scope of the WP.

This phase was conducted in close co-operation with other project partners. The meetings and interviews with other partners in WP (including HSL) offered valuable information for the planning of the work package. Especially HSL shared their expertise on subject and their current development plans.

Pre-study of the potential user groups

The potential user groups were defined in WP 2 and previous studies. From the user profiles in FinEst Smart Mobility – User requirements study the main target was the group of Travellers going to the Helsinki Airport: "Flying for business" and "Price-conscious explorer". In addition the user group of "Families travelling with kids" was selected according to the study results from ERDF (European Regional Development Fund) project "Last Mile". Study was conducted in West Harbour by the students of Metropolia University of Applied Sciences.

Target group is primarily Estonian travellers going to the Helsinki Airport area, Aviapolis in Vantaa.
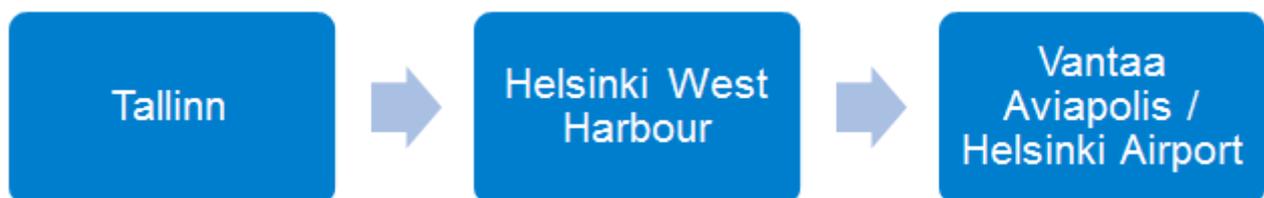
Picture 3: The targeted route of passengers

Preliminary pilot plan

Definition of the WP included also a preliminary pilot plan. Service process was divided to the following phases:

1) Project plan finalization and recruiting pilot users (1 months)

2) Installation phase (2 months)

3) Piloting phase (5 months)

4) Reporting phase (final date 31.12.2018)

Market dialogue and tendering process

In the procurement process to goal was to explore various options that would help us promote public transport, reduce travel time, increase the use of railway connection, and bring in new innovative services and service models for the travellers. These could also integrate other value-added services to the travel chain and thus increase the attractiveness of the Aviapolis area services as part of the travel chain.

The process included a competitive dialogue phase after that the procurement in the pilot was defined in detail. In competitive dialogue organization is able to conduct dialogue with bidders directly with the aim of developing one or more suitable alternative solutions to meet its requirements. The dialogue has an option of reducing the number of solutions (and therefore bidders) after a successful stage.

Competitive dialogue

The invitation to the competitive dialogue was released in November 2017. Tender material was published both in Finnish and in English to attract also international service providers. The invitation was targeted for companies providing ICT solutions, mobile journey planner applications, ticketing and information systems and Mobility as a Service operators. The invitation was disseminated in the channels of the project partners.

In total five companies applied to the competitive dialogue phase. All the solutions were selected to the next stage on the basis of applying the stated award criteria.

Submitting final tenders

Requirements for the service, its form, results or quality were subject to change during the negotiation period with the selected tenderers and were finalized before the final call for tender was sent. (Final call for tender in attachment A 1.

The final call for tender included the requirement to provide information about the below mentioned topics. Additionally, the tender should include a concise and concrete description of the service and how it works with the larger total mobility system and what outcome it will have in such mobility system. Tenders were asked to describe what new ICT technologies they would use in their pilot and where, what new service models would they use in their pilot, the innovative use of older ICT technologies and where would they go beyond current market state-of-the-art technology.

Concept plan included the following topics:

1. General description of the service
2. Project management and execution
3. Targeted users
4. Value for the users
5. Ecosystem and integrations
6. Scalability of the service

The awarding criteria

Award criteria template for evaluation is described in attachment A2. Starting point for the award criteria was the objectives of the project. (Annex_6_Award_criteria_D4_FINAL) Evaluation was mainly made per the contribution to the mobility targets and the quality of the concept plan.

A Contribution to expected mobility outcomes 0-20 points (weight 20 %)
B Concept plan 0-80 points (weight 80 %)

Selection of the solution provider

The tenders were awarded by the criteria and the selected service provider was Kyyti Group Oy. The evaluation is in attachment A3. The evaluation jury was the steering group of the WP.

The selected solution:

Kyyti MaaS platform with integrated on-demand ride sharing technology powers mobility operators. Kyyti integrates all mobility modes to one platform: urban transit, intercity buses, trains, car rental & sharing; payments & ticketing. Kyyti on-demand ride sharing is based on automated fleet management and dynamic pricing ensuring efficiency in capacity usage. It also creates new capabilities to transit networks and fleet operators and the application makes different mobility services easy to find, compare, book and pay.

Kyyti optimizes transportation systems with actual mobility data. The mobility data modeling and simulation capabilities reveal how people move:

- For every individual & by all travel modes
- Modeling individual traveler preferences
- With unlimited geographical granularity
- Sensitive to pricing changes

The application includes language options: Finnish, English, Russian, Swedish, German and Estonian.

In the picture below is the MaaS solution described.
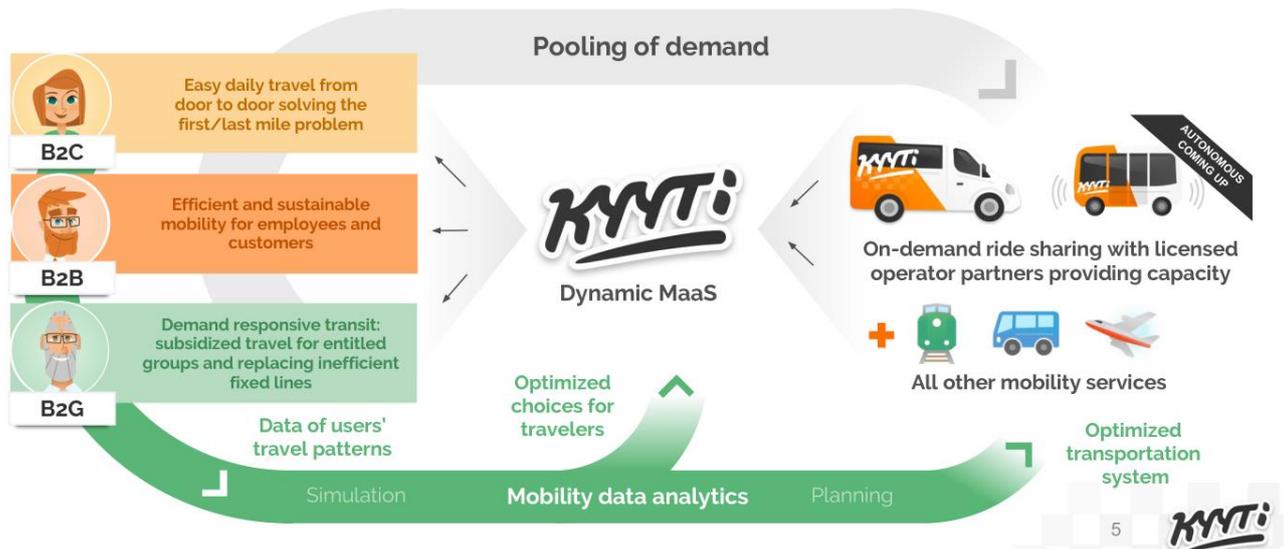
Picture 4. Kyyti enables dynamic MaaS and pools demand across segments through advanced analytics

Pilot preparations: project plan finalization

The work started with steering group meeting. The pilot project plan was finalized according to the discussion in the steering group meeting.

Project plan was divided into the following phases: 1) Project plan finalization and recruiting plan for the pilot users, 2) Installation phase, 3) Piloting phase and 4) Reporting phase

The detailed project plan is in attachment B9.

Development phase:
The development phase included the actions presented in following table.

Development phase / co-creation actions / Pilot preparation phase			
Action	**Channel**	**Timetable**	**Target - Results**
Meetings with the stakeholders	Personal & telco meetings with Finavia, Port of Helsinki, Port of Tallinn, City of Tallinn, Eckerö and Tallink Silja, HSL	Q2/2018	To gather information and opinions from all relevant parties and develop in cooperation travel chain between Tallinn - West Harbor - Helsinki Airport to reach the goals.
Interviews with the potential user groups	Invitation sent to the Kyyti Group mailing list, Kyyti Facebook page and Friends of Kyyti Facebook group. Finavia and Eckerö facebook. http://www.kyyti.com/ports.html	Q2/2018	Reached existing Kyyti customers, Kyyti Facebook followers and Friends of Kyyti Facebook Group Followers. Summary of the results in the attachment B1.
Dissemination of the invitation to the interview	All project partners inc. Port of Helsinki, Finavia, HSL, Eesti Maantea, Forum Virium Helsinki, City of Vantaa	Q2/2018	Cooperation with other partners in WP to disseminate the invitation the interview. Dissemination in development phase achieved successfully.
Co-creation and development with users	Half day event in Hotel Clarion next to West Harbour	3.7.2018	Demo day with Taxi operator and potential users. Usable information from the test users and taxi operator to the FinEst project to develop it further. Extremely important information as a customer experience point of view as well as operator. Summary of the results in the attachment B1.

Co-creation and development with users	In West Harbour terminal and ferry (Tallink & Eckerö)	10.7.2018	FacetoFace interviews about user experiences and mobility services. Summary of the results in the attachment B1.
Technical development of the solution - multimodality	Building the journey planner functionalities including public transport, walking and cycling routes into the Kyyti App using Digitransit API	Q3/2018	Routeplanner is integrated to Kyyti app using Digitransit API. Includes walking, cycling, public transport (HSL) and Kyyti service. Screenshot as attachment B2. Travel chain integration was delayed due to disruptions in the content of Digitransit route planner (all long distance routes except for VR rail schedules were removed from Digitransit on 1.7.). This change resulted in a direction shift in our roadmap and we are currently building industrial co-operative approach for improving national routeplanner coverage to benefit the whole ecosystem.
Technical development of the solution - multimodality	Discussions with Finavia and Fleetrange	Q2/2018 Q3/2018	Flight schedule and mostly-real time arrival/departure information APIs from Finavia were reviewed. Ferry schedule and port terminal data was reviewed from Fleetrange. For wide utilization purposes, it would be helpful to standardize these plus train and other major route services real time data to common API and formats, yet to be developed. We considered during the project to produce this standardization API but due to lack of clarity of Digitransit's future, this was not completed. The work will resume as Digitransit ecosystem future direction has been clarified.
Technical development of the solution - multimodality	Discussions with HSL	18.6.2018, ongoing	The HSL OpenMaas API for HSL ticket sales has been investigated. Significant technical compatibility issues were identified and communicated to HSL, who have so far revised the API to v3, which we have evaluated and found technically feasible. Major commercial issues remain outstanding and are being negotiated with HSL. Kyyti should have paid to HSL the same price as customers are paying to HSL. This means that Kyyti would have needed to add its expenses to the ticket price making it

| | | | less attractive than buying the ticket directly from HSL.

Therefore, the HSL ticket integration as well as Kyyti + HSL travel chain could not be implemented during the project. |
|---|---|---|---|
| Technical development of the solution - on demand ride service | * Developing the on-demand ride service functionalities of the application both for the end-users and the drivers

* The specification of the on-demand ride service (incl. service areas, pricing, flexibility) | Q3/2018 | Kyyti ride service was launched 21.9.2018. Service area includes West Harbour and the Airport. Ride sharing service is available from West Harbour to Airport. Screenshot and service area in attachment B3. |
| Technical development of the solution - crossborder functionalities | Translation bought from Transfluent. | 9/2018 | Kyyti app was translated into Estonian language. Available in the version launched 21.9.2018. Screenshot as attachment B4. |

Marketing plan of the piloted solution

Marketing plan for the piloting phase			
Action	**Channel**	**Timetable**	**Target - Results**
Dissemination of the marketing material in digital channels (english, estonian, finnish)	Eckerö Line Eesti Facebook and webpages
City of Vantaa newsletters, webpages, social media channels Finavia webpages, social media,
Port of Helsinki webpages	9/2018	Visibility of the Kyyti service and reachability of users through digital channels. Targeted personnel and consumers successfully in different digital channels.
Attachment B5 part of the published materials and supplied material to Eckerö, Finavia and Port of Helsinki.

Marketing in the terminals All the materials in Finnish and English Tallinn Terminals A&D displays in Estonian and in English Roll up, brochures, digital marketing in displays Promo organized by Event Marketing Agency 17.10.-20.10.2018	West harbor terminal, Helsinki Tallin Terminals A&D	10/2018	The goal was to reach different groups of passengers when leaving from West Harbor to Tallinn and returning from there. Achieved app downloads and publicized the Kyyti service for both domestic and foreign passengers. Visibility of the service with different marketing materials, promo and encouraging using the service from West Harbor to the Helsinki-Vantaa airport with a discount code. Report as attachment B5.
Dissemination of the marketing material in print, article in Finnish	Baltic Guide magazine	10/2018	An article about the Kyyti service and the FinEst Smart Mobility -project in the Baltic Guide magazine, so that we reached different customer groups in traditional print as well in Finland and Tallinn. The article was also published on the Baltic Guide's website. Article in attachment B7.
Campaign FinEst, Cheaper Rides, 1 €	Kyyti App, Kyyti Facebook, Facebook Event, Instagram, Friends of Kyyti -group	11/2018	We set up a campaign for cheaper rides and sent info to the customers by in-app messages and spread the message in social media. Campaign concerned rides order from/to West Harbor. We targeted to get customers from West Harbor to the Airport. Advertisement of the campaign in attachment B8. Vehicle capacity was also bought on an hourly basis in order to ensure the availability of the service.

Evaluation of the pilot

The target of the pilot was to decrease the use of private car traffic from and to West Harbor, especially between West Harbor and the Airport. The tools to achieve this was to offer an affordable shared taxi service and public transport route information and ticket sales through Kyyti app.

Shared taxi service (Kyyti Kimppa) was launched to public 21.9.2018 successfully. Public transport, walking and cycling route planner was introduced already before. The users could thus find both Kyyti shared taxi, HSL public transport, walking and cycling routes from and to the West Harbor with Kyyti app.

Without this project Kyyti would not have launched the service in Helsinki at this point. The project gave Kyyti the opportunity to test the service in Helsinki and to evaluate the potential of targeting ferry passengers. The project enabled Kyyti to better ensure fleet capacity for a chosen period by compensating the drivers for the hours reserved for the use of the pilot. Also the project allowed a stronger marketing input that otherwise possible. The Estonian translation of the Kyyti app was also done for the purposes of this project only.

During the pilot (from 21st September to 12th December) in Helsinki region there we altogether **148 Kyyti trips with 251 passengers** of which:

- 3 trips to West Harbor
- 2 trips from West Harbor
- 2 trips to the Airport

As can be seen, the service did not attract users travelling between West Harbor and the airport. Trips from/to West Harbor were not popular either.

Despite of the low demand, the general feedback of the Kyyti app and Kyyti shared taxi service has been good. The main negative feedback is that the availability of Kyyti ride service is poor. Customers who managed to get a ride were very satisfied though.

Port of Helsinki didn't make any changes to the arrangements after the taxi reform 2018. In the future, there may not be any huge changes either, though at times there has been discussions on focusing some of the services. Overall, concerning the mobility options and applications, it looks like pre-ordering the taxi or ride services isn't yet so popular as assumed.

Kyyti app as a consumer brand continues to exist and offer services in Helsinki region as well as in other city regions (at the moment in Jyväskylä, Lahti and Hämeenlinna) after the pilot. Kyyti app will concentrate on Finnish market. Kyyti Group is offering its technology platform white-labeled and as a service to international clients (e.g. PostAuto's Kollibri app and service in Switzerland).

Key learnings from the pilot:

- **The ferry passengers don't have an *urgent* need for alternative mobility solutions.** Raising interest for shared taxi thus requires more marketing effort or making private car use less attractive through e.g. higher pricing or restricting the access by car. On the other hand, the location of the West Harbor is just not ideal to ferries serving such high volumes of freight and private vehicle traffic as they now generate. As the pilot did not include all the necessary elements and the new market situation made it difficult to reach users, it is too early to evaluate the full potential of the service for improving the experience ferry passengers and decreasing the private car traffic volumes.

- **The benefit of 25-50 % shorter travel time of shared taxi compared to public transport could have been emphasised more.** Smooth and affordable rides were emphasised but the travel time benefits could have been emphasised more.

- **Terminal focused marketing was not sufficient; the message should have been disseminated at the tram stops and taxilines**. Even though substantial marketing efforts were made during the pilot, is was very difficult to get new users. The habits of ferry travellers change slowly. When leaving from terminals there are usually enough taxi supply and it is very simple to go to the taxi line. Marketing and overall visibility in the taxi line and at tram stops could have had an influence when a big mass of people move directly from harbor. While they are waiting a transportation, we could have offered an alternative way to travel, from door to door, by Kyyti.

- **Car users should have been reached already before they choose to take the car to the ferry or terminal.** Or if reached in the terminal or ferry it takes some time when they make the ferry trip again. However, there is a need for cooperation with ferry companies to disseminate the information about the new service option already when the customer orders the ferry trip. On the other hand, ferries have huge car decks and they have an interest in selling this capacity rather than decreasing the volumes of cars transported.

- **The opening of the taxi market has resulted in fierce competition** as there are suddenly several taxi alternatives and apps available. This situation would have required even more marketing than was done in this pilot. The competition is not only about the demand but also about the supply - meaning drivers. All the new taxi services such as Uber, Taxify, Yango, Fixutaxi and Menevä are paying extra to drivers to attract them to log in to their driver app. Kyyti also paid to the drivers on an hourly basis regardless of the number of trips driven during three days' campaign in the end of November. Still, this did not yet result in significant volumes.

- **The role of the local public transport authority** and a feasible ticket sales API is crucial. Feasibility means both technical feasibility and fair commercial terms. HSL Open Maas API did not meet these conditions during this project. Kyyti had several discussions with HSL about improving the API and commercial terms but without success. Kyyti should have paid to HSL the same price as customers are paying to HSL. This means that Kyyti would have needed to add its expenses to the ticket price making it less attractive than buying the ticket directly from HSL.

- **A national public transport route database and routeplanner** is a crucial infrastructure needed to boost digital mobility service markets. The ending of Digitransit maintenance for all public transport data was a drawback to the Kyyti service. The public sector should have a role in maintaining the national route database both for public and private public transport services. It is not reasonable

that all the digital mobility services should develop and maintain their own route databases and routeplanners. The MaaS mobility market will not grow and scale rapidly without a national route data infrastructure. That should be considered as a public infrastructure service because a competitive market for routeplanner data service is not easily borne and the result is most probably a natural monopoly. In Finland there has been only two national route data services: Digitransit and Google, and now there is only Google. Developing a similar service from scratch with a national coverage and with a feasible business model will not happen in a year or two. This means that digital mobility services looking for nationally scalable solutions will have a hard time entering the market. In Finland they are now all forced to find alternative solutions for a routeplanner, which requires substantial development effort and time. The routeplanner solution needs to be defined before Kyyti can develop a standardized way to integrate ferry and flight real-time schedules. The original project plan did not include the renewal of Kyyti's routeplanner.

- **A deeper cooperation with the ferry companies** is crucial in reaching Estonian Ferry travellers especially travelling with their cars. Tallink did not respond to cooperation suggestions. Eckerö Line was very positive and disseminated the information on its social media channels but could not advertise Kyyti service for its customers in its online ferry ticket services or on board during the ferry trip. This would have been the ultimate channel to reach Estonian travellers as the customers would have had time to get to know the service and book the Kyyti in advance. The reason for not doing so, was the fear that Eckerö line would be responsible for possible failures in Kyyti service, as the new act for travel packages state. In other words, the new legislation has made it risky for mobility services providers to cooperate and promote each others services. Regulation aiming to lower the risk of the customer has ended up in reduced willingness to offer information on connecting transport services. The practice of the legislation is not yet clear, everybody is waiting for a precedent.

- **Ferry companies could maybe rather promote ride services of their own.** Tallink has their own Tallink Takso service and mobile app in Tallinn. The provider of the service - Talixo - is coming to Helsinki as well, and Tallink might perhaps be considering launching its own service in Helsinki as well? A future strategy for Kyyti could be to launch branded ride services for ferry companies. Then Kyyti would only offer the technology and a sales channel, and the ferry company would be provider of the ride service and clearly take all the responsibilities that follow. This could first be offered for group traveller packages.

- **Finnish Ministry of Transport and Communications and Estonian/Tallinn companies would have been good pilot user groups as employers**. But in this project the employers were not chosen as primary target group. That might have been a better strategy though, because in order to reach users in short time period, pilots need dedicated user groups which can be controlled and large employers can offer that. Kyyti actually implemented a pilot in December for the employers of City of Helsinki and that process was proven quite efficient.

- **It would have been better to focus more strictly on one target group only.** The car users are already such a challenging group that all efforts should have been put to that group only. Now the message was too general trying to cover both public transport users and car users. The most efficient way of reaching pilot users would have been to approach one or two employers and their employees who usually take the car to the ferry and drive to the airport. This should have been

required already when tendering the pilot: only one clearly defined target group who is committed to testing the service already from the beginning.

- **To reach the Estonian passengers it would be useful that the service includes also the Tallinn public transport and taxi services.** Travelling between Tallinn and Helsinki is not so frequent that the passenger would mind downloading an app for connecting trips in Helsinki just for that purpose. But if the app would also serve the passengers everyday travel in Tallinn/Estonia, it would more probably be used in Helsinki as well. The integration of Tallinn transport services were however not included into this project and the API for Tallinn public transport ticketing is not even open and available.

Evaluation of the mobility target set for the pilot:

Expected result	Expected influence and change	Result
1. Shorter travel time from Tallinn old harbor to Aviapolis / Helsinki-Vantaa airport without a car	Shared taxi from door-to-door is 5 % faster than walking + tram + train travel chain.	There are not enough trips orders made to evaluate the empirical result, but journey planner estimate calculated 31 - 46 min for shared taxi and one our to public transport chain. This would mean that the shared taxi would be 25 - 50 % faster than public transport.
2. Information about travel chain is better available when making the choice for travel mode	One app gives information about all available options: public transport, shared taxi, walking, cycling. App is used for pre-ordering rides when booking the ferry trips. User know how to find the data.	App offered route alternatives for public transport and shared taxi; for shorter trips walking and cycling as well.
3. Defined pilot users has used the service and public transport or shared taxi instead to their own car.	At least 50 persons have tried the app and shared taxi service instead of their own cars when travelling between West Harbor and the Airport. In addition 500 persons have used the journey planner and bought either HSL ticket or shared taxi ride in Helsinki in general. 10 % of the shared taxi users and 5 % of the public transport users would use the service in the future instead of car	There are too few trips made in order to evaluate the result.
4. Improved user experience of the end user, reduction of travel chain pain points	Travelling from West Harbor to the airport especially with luggage becomes easier with door-to-door service. Pre-ordering shared taxi is possible without worrying about the ferry or flight being late. In-app payments and company billing saves users time .	There are too few trips made in order to evaluate the result.