

Kutsuplus – demand-responsive transport service from Helsinki



1. The Company

HSL (in Finnish) stands for Helsinki Regional Transport company. It is a joint authority, which includes the six municipalities in Helsinki capital region. The main function of HSL is to plan and organize public transport for 1.2 million people living in the region. It is also responsible for public transport development, marketing and information to passengers. Annually, HSL serves about 345 million journeys, which includes buses, trams, metro and Suomenlinna ferry, as well as the new Kutsuplus service. HSL has 360 employees.

HSL has undertaken a two-year trial project to launch & develop the new complementary service to public transportation – Kutsuplus, in consortium with AJELO.

AJELO is a technological spin-off from the research project initiated at Aalto University. It develops the trip-planning software and user interface for Kutsuplus service. AJELO is committed to promoting demand-responsive transport services all over the world. It positions itself as a company that offers “technology for transport revolution”.

2. Sustainability Innovation

Kutsuplus is a modern realization of the demand-responsive transport concept that has been around since 1970s. It literally translates from Finnish as “InvitationPlus”, referring to the possibility of getting the service on demand in Helsinki capital area.

Kutsuplus is an intelligent bus service, whose route is determined by the customers. In practice, it is a comfortable mini-bus vehicle that takes the customer from the bus stop nearest to his/her location, to the bus stop nearest to the destination point. The service can be booked online or via mobile phone. It is possible to decide whether you want the service in 5, 10 or up to 45 minutes. The main advantage is that Kutsuplus buses don't follow the routes of the regular buses, but take the customer to the destination via the shortest route. The mini-bus has nine passenger seats, so if there are other people traveling in the same direction at the

same time, they can share the ride. Mini-buses offer free Wi-Fi and extra leg space. It is possible to reserve the space for baby carriages or other equipment for free.

Kutsuplus is notably cheaper than a taxi service. Its pricing system is based on a flat rate of about 3,50 euros + additional fee per km of the trip. Kutsuplus has a flexible system of fares: “normal”, “economy” and “express”. The latter one is the most expensive because it can be ordered immediately, and offers the fastest connection through prioritizing. The “economy” fare is the slowest, and the “normal” fare is something in between.

Kutsuplus’ main goal is to complement existing public transport services by getting the car owners to switch at least part of their trips to Kutsuplus service. The service is supposed to lower the threshold for switching to public transport, because it doesn’t require the knowledge of the bus schedules, is not crowded and allows for traveling with bulky luggage/equipment. It also eliminates the need to look for parking spaces.

The service is popular for going downtown where little parking space is available. It is good for weekly grocery shopping trips to the supermarkets; hospital or health center visits for elderly or injured; as well as for regular hobby-related trips to sports centers. The safety of the service makes it popular among parents ordering the trips for their under-aged children to travel to visit their friends, or go to hobbies.

Sustainability benefits of Kutsuplus are related to reduced city traffic, subsequent decrease in CO2 emissions, more public space being available downtown due to reduced need for parking spaces. Psychologically, it encourages the use of public transport among children & youth by making it a normal practice from early childhood, and lowers the threshold for car owners to take more active use of all the different public transportation services.

3. Engagement of End Users and Other Stakeholders

Kutsuplus idea was first born within the Department of Computer Sciences at Aalto University. The resulting research project aimed to explore how a demand-responsive transport system could be developed, as well as business viability of such service. Although HSL joined the research project quite in the beginning, the whole idea was initiated and developed by the external stakeholder - Aalto University. All throughout the service development Aalto’s role continued to be significant, and it remained part of the consortium.

During the research project in 2007-2010, one of the key goals was to reveal the actual needs of urban travelers for using a car, so that later on Kutsuplus could respond to these needs. For these purposes, Aalto University organized ***focus group discussions*** with groups corresponding to the different segments of the population (children, work or family dependent, independent, etc.). In total, there were 10 semi-structured focus group discussions, where project researchers served as the moderators of discussion.

At the later stages of service development in the spring 2012, Aalto University in cooperation with AJELO and HSL, organized a ***mock-up testing*** for the service. The objectives of the mock-up were to test the usability of the service (customer journey and key touch points), the usefulness (suitability to users’ daily needs) and user experience (impressions & perceptions). The invitation to the testing was distributed through Aalto intranet, and 7 end users were

selected to participate in the test. Their main tasks included: ordering the service online while thinking/commenting the experience out loud, finding the correct bus stops, identifying the vehicle, taking the journey, and having an individual interview at the end of the trip.

Finally, before launching the service with the wider public, HSL and AJELO opened a **technical pilot testing** with “friendly users” in the autumn of 2012. This phase lasted for about 6 months with Kutsuplus service being open exclusively for Aalto University students & staff (invitation sent through intranet). Testing the service for a longer time gave the possibility to AJELO to eliminate different technical bugs, as well as test out various ideas related to pricing. Relying on feedback from “friendly users” was a smart way to improve the service without destroying its reputation during early stage-development, before the launch in spring 2013.

Kutsuplus is a young service, and requires a lot of inputs from end users for further development. Both HSL and AJELO are gathering **feedback** through a variety of channels:

- In the beginning of the trial period AJELO developers were using Kutsuplus almost on a daily basis in order to share the trips with “regular” users and discuss with them.
- Using Kutsuplus requires online registration, which also means that all registered users have the possibility of giving feedback electronically after each trip.
- The directory of registered users is a convenient way for HSL to gather feedback on specific issues via online survey.
- Passengers of Kutsuplus are encouraged to share their opinions with the drivers during the trip, while the drives are trained to collect such feedback. The mini-buses are equipped with online system, so that drivers could enter the feedback to the system right away. Passengers also have the possibility to rate the trip inside the bus.

4. Kutsuplus “venture” development inside a public entity

As reported by HSL, Kutsuplus two-year trial period has demonstrated that the technology is sound and working. The amount of Kutsuplus trips has been steadily rising: during the year 2013 the amount of trips was 14 371, while in 2014 it has amounted to 70 470 (www.hsl.fi). At the moment there are 21 604 registered Kutsuplus users.

Customer feedback has been very positive, and the interest towards new service is growing quickly. Functionality of the service still requires improvements, such as the integration of payment system to the regular travel cards of the capital region. At the moment the service is available only in a limited area within the Helsinki capital region.

Kutsuplus was designed as a service that only becomes profitable once it is scaled up. The current amount of vehicles, the existing area of operation and growing amount of users create a lock-in situation, where the demand is growing, yet the service is unable to meet the demand. At the same time investment decisions are still uncertain because despite the technical success of the service, it has not had the opportunity to prove itself profitable. Political decision-making process in a public entity like HSL is complex and slow, especially during the times of economic uncertainty. The investments required to purchase significantly more vehicles are high. Such challenges are typical for the public-private partnerships, but on the other hand these partnerships are often viable solutions when developing & promoting sustainability-related large-scale services and infrastructure related projects.