Minutes

Date	12.09.2016
Time	11.00-16.00
Location	Ruter's customer centre, Jernbanetorget 1, meeting room Bjørvika
Attending	*Responsible:* Ruter AS

Observers: Flytoget, Skånetrafikken, Østfold Kollektivtrafikk, Oslo Bymiljøetat, Kollektivtrafikkforeningen, Sporveien, Statens Vegvesen, NSB, Kolombus, Brakar

Suppliers: See list below.

Presentations also received from the following suppliers not being present: Altran, Sopra Steria

Supplier conference regarding new technology platforms for fare collection, payment and other on board customer experiences

Agenda

Subject	Presenter	
Welcome	Ruter	Terje Storhaug
Ruter, information and ambitions	Ruter	Endre Angelvik, Claes Kanold
Supplier presentations	FourC	Tor Rune Skoglund, Frank Gynnild
	Init	Jussi Lakso
	GoAppified	Søren Jensen
	Netclearance	David Fernandez
	Scheidt-Bachmann	Per Norling, Manfred Troll
	Microsoft	Pauline Bergan
	Tickey	Dimiter Demitrov, Konstantin Nikolov
	Jiffiapp	Andres Birnbaum, Andres Osula
	Blueaccess	Niklas Magnusson, Jarl Klang
	Unacast	Birte Steen
	Xerox	Atif Maooied
	Estimote	Marta Kosmala
	Next Signal AS	Lars-Cyril Blystad, Einar Myrvang
	Kapsch	Clemens Aschl, Amir Rozenzweig
	Affecto	Bjørn I. Johansen, Espen Jørgensen
	FluxLoop	Ulrik Prøitz
	Payex	Trond Wanvik Buan, Arne Bjørgo
	Fara	Arild Sundal, Dag Arne Jerstad
	Cubic	Jonathan Williams
Open dialogue, Q&A		
Summary and wrap up		

Background information: aim of the conference
As Ruter continue to examine innovative, customer-oriented, cost efficient ways of arranging fare collection, payment and (anonymous) passenger data collection for public transport, insight and input from the market is expected help fuel further development. This supplier conference was arranged as a measure of gaining increased understanding of technologies enabling the desired development, and what to expect from the market.

Target audience were technology and middleware manufacturers and providers able to support the direction in which Ruter seeks to move, enabling hands free (automatic) customer-oriented checkin/check-out / "be-in/be-out"-solutions, payment, fare collection and (anonymous) passenger data collection based on
- Absence of physical barriers (i.e. gates)
- As little physical hardware as possible
- As little decentralised business logic as possible
- Centralised services based on Ruter's own backend (no proprietary services)
- Proximity based technologies, e.g. Bluetooth beacons, Wi-Fi-aware and similar

Furthermore, organizations in other industries having experience using close proximity technology and other relevant technology platforms were also invited to participate and elaborate on their experiences.

The complete original invitation can be found at www.kollektivanbud.no.

Welcome and practical information
Terje Storhaug gave practical information as well as an introduction on purpose and expected outcome of the conference. Since Ruter is operating within the boundaries of Norwegian laws for procurement within the public administration, there are certain limitations to market dialogue, which is why this model has been chosen.

Introduction and information about Ruter – *presentation from Endre Angelvik, CIO of Ruter*
Endre elaborated on Ruter, its partners in public transport in Oslo and Akershus and the role of public transport in the region. Furthermore, Ruter's long-term goals (M2020), and how Ruter needs to develop going forward in order to achieve these goals were described. Digitalisation and individualisation were mentioned as key drivers for mobility in the future.

One of the key messages was that Ruter needs to adapt to the pace of ever changing customer needs, and that flexibility will be key to achieve just that. Ruter is in need of technology that enables them to move forward in the same pace as the customers are.

Ambitions and ongoing projects – *presentation from Claes Kanold, process leader Sales channels and payment solutions at Ruter*
Claes further elaborated on Ruter's ambitions and the desired way forward. As background information for the supplier presentations, Claes also gave some perspectives on the pilot Ruter has been running using beacons and a pilot app for automatic registration of travels.

Supplier presentations
Each of the participating suppliers held a presentation of about seven minutes, answering/discussing the focus area questions that had been published before the conference:
- Does the vendor have experience with applying new technology platforms (e.g. Bluetooth beacons, Wi-Fi aware and similar) in similar pilots as Ruter or for other areas

of application/in other industries, and what experiences are relevant for Ruter? What technologies are available today or in the near future that can enable Ruter's needs?

- How are precision levels of positioning services expected to mature and what possibilities arise as a result of the development?
- How should an in-vehicle infrastructure consisting new technology (e.g. Bluetooth beacons, Wi-Fi-aware and similar) be set up in order to prepare for efficient administration, monitoring and maintenance?

The supplier presentations are publicly available at www.kollektivanbud.no.

Open dialogue and Q&A's
After the supplier presentations, an open dialogue with questions and answers was facilitated. The table below summarizes the questions and answers given by Ruter.

#	Querist	Question	Answer
1	Cubic	What process does Ruter expect to follow from the conference?	Will be answered towards the end of the conference (see final part of meeting minutes).
2	FluxLoop	How has the ongoing pilot been organised and with what partners? How will Ruter eventually team up with partners for any further work?	Existing app developers has been used for necessary development in the pilot phase. However, as there are some limitations concerning what can be done within the existing framework agreements, this will be evaluated continuously. How Ruter proceed further on depends on lessens learned during the pilot phase, and conferences like this is important for having input from the market.
3	Payex	Does Ruter have a role in the privatisation of the railway the coming years?	Ruter is one of the largest clients of the railway system, i.e. the service providers and the infrastructure. Except for that, Ruter does not have any role in this process.
4	Kapsch	First steps towards the next generation ticketing is already made: What timeline does Ruter look at concerning the next generation ticketing platform? What are the ambitions?	Work towards the next generation ticketing has already started, but there is no desire to state any specific deadline for this work. Ruter does not want to risk being in a position were a new system already is old fashioned when being implemented, and therefore aims to move towards the next generation platform as part of a continuous development and not as a "big bang" implementation.

Ruter is already having multiple card based infrastructure systems that are being maintained and paid for, and wants to replace most of this as quickly as possible. |
| 5 | Xerox | How does Ruter concern interoptability with other operators in Norway or Oslo? What about having one solution for all PTA's? | There are defined minimum requirement levels for interoptability between systems. Beyond that: suppliers would basically need to sell their solution individually to all counties. |
| 6 | Cubic | What about social inclusion and the requirement to sell tickets to | Part of Ruter's responsibility and role is to facilitate for everyone to be able to use public transport. That also applies to next generation |

#	Querist	Question	Answer
		anyone who even does not have a smartphone?	ticketing solutions, and there will be made assessments on how to best take care of those who still does not own smartphones etc. It may also actually be better to use paper tickets in a transition period for a minor share of the customers, rather than developing/ maintaining expensive transition solutions. Furthermore, it should be considered that the pace of change in the technical development favours the desired development of Ruter.
7	GoAppified	Ruter want new solution to be based on own backend – can you tell more about that?	The backend landscape is under development, and Ruter does not know exactly how it will look. In some areas, Ruter will prefer to buy solutions if they are mature enough to be procured in the market. In other areas were phase of change and need for flexibility is higher, other solutions will be considered.
8	Jiffi	What about opening up the market for retail sales of Ruter's tickets?	This is a strategic matter. Shall convenience stores be allowed to sell tickets in their apps? Should Ruter's tickets be sold through any other app? There are many viable scenarios here, and it is not impossible that there will be changes in this area in the future.
9	Xerox	Why do Ruter want to operate its own backend? Should Ruter not consider buying the entire solution as a service?	This is still an open question: what pieces can the market supply, and what pieces do Ruter need to develop in order to be agile?

Summary and information regarding further process

Terje Storhaug informed about the way forward: This supplier conference will not necessarily lead to a procurement process. Ruter will decide, within a few days, whether to publish additional questions to the suppliers participating at the conference. Any questions will eventually be published within a weeks time (19th September). Suppliers who eventually submit written feedback to these questions will be given the opportunity to meet Ruter for one on one-meetings that eventually will be held during week 41.

Final remarks

Ruter wants to thank all parties involved at the conference for their participation and for the insight delivered.

The conference finished at 15.00.