

# ITRACT



## Improving Transport and Accessibility through new Communication Technologies

NEWSLETTER,

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### REGION OOST GRONINGEN

The first Business Innovation Workshop (BIW) in ITRACT was performed in Oost Groningen September 17, 2013. Attending the workshop were representatives from the Municipality Oldambt, Viktoria Swedish ICT, University of Groningen, Groningen Internet Exchange, OV-bureau Groningen Drenthe, Hanze University Groningen and VEJ Germany.



As an event it was a huge success, resulting in seven hours of joint working on business model canvases for the prototypes 'Step by Step' and 'Tell us'. The dialogue was good and constructive and in addition to the canvases, tentative guidelines for the OV-bureau to proceed were generated (implementation guidelines).

Following the design and method of the first workshop, the next BIW will take place in Germany 29th of October.

### REGION VÄRMLAND

#### INFORMATION ARCHITECTURE (KARLSTAD UNIVERSITY)

Our efforts to develop the ITRACT information architecture continues, that is developing technical solutions that allow gathering information in a scalable way and orchestrate the different information sources. Recently, we have made major changes in the information architecture as a result of our previous findings. The previous platform has been replaced with an OpenStack local cloud solution including a MySQL server, Content management system (Wordpress), Memcached server and all other applications for public transport. This is now up and running on public IP address ([www.itract.cs.kau.se](http://www.itract.cs.kau.se)) for testing purposes, as well as an

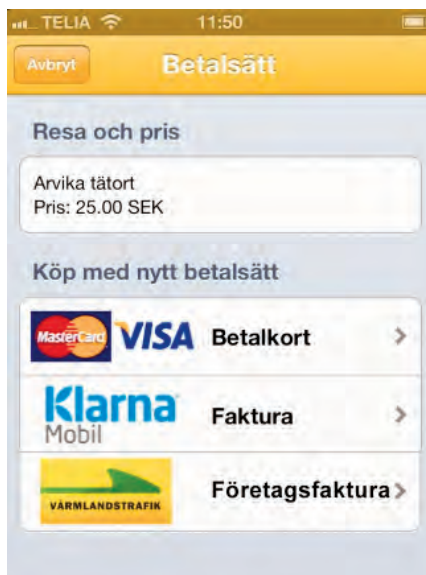
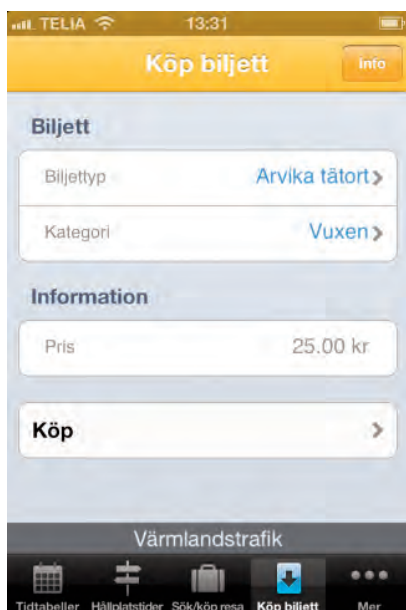


updated Subscriber/Publisher system integrated with GTFS real time data. We hope that these major changes have solved the earlier encountered performance issues and we now meet performance requirements of web services. We have also developed an API that can now be used by application developers to implement new services based on the ITRACT information infrastructure.

In July, Andreas Arvidsson joined our development team. He is focusing on developing a front-end gateway called ITRACT Proxy with support for multimodal planning. This will enable multi modal trip planning from one region to another.

### MOBILE API FOR PAYMENT OF BUSINESS TRAVEL (VÄRMLANDSTRAFIK)

Together with professional developers, Värmlandstrafik develops two new IT-services. The first is a mobile app "Payment of Business Travel", and the second is "Order on demand trip" on mobile app and through our travel planner on the homepage. The pictures below show some different step in the service "Payment of Business Travel".



Buy ticket -> Select the payment  
Business invoice is sent  
The employee get ticket  
method -> to company -> on their mobile!



### Dirk Strijker (University of Groningen) addresses problems with rural broadband on 'Nieuwsuur'

On July 11th 2013, professor Dirk Strijker was interviewed by 'Nieuwsuur' (the Dutch ten o'clock news and debate show) on the poor quality of broadband internet in rural areas. Recent research by Koen Salemink (RUG-FRW) and Dirk Strijker (RUG-FRW) showed that 45% of people living in Dutch rural areas are underserved by Internet providers. In total, over half a million people in the Netherlands are deprived of up to date broadband internet.

This has profound consequences for future rural development. One of the consequences is that service providers in rural areas, such as public transport organisations, will experience difficulties in deploying ICT which require bandwidth. In some deprived areas, even the slightest amount of bandwidth can not be guaranteed. Dirk Strijker: "If we don't act now, rural areas will experience massive out-migration because of the lack of digital connectivity. Internet is a utility, also in rural areas. In fact, because of the remoteness of rural areas, they could potentially benefit most from digital connectivity and service provision. Unfortunately, rural areas have the least opportunity to do so up to now." Within the Evaluation and Strategy Development workpackage of ITRACT, the University of Groningen will address the problem of poor digital connectivity in rural areas throughout the North Sea Region.

"To accomplish any territorial cohesion, there should be equal opportunities to proactively use the information highway."

The video of 'Nieuwsuur' and an article about can be found at: <http://nieuwsuur.nl/onderwerp/528319-platteland-digitaal-achterlijk-gehouden.html> (only in Dutch).

## Region Rogaland

A Business Innovation Workshop was planned to November 5th, but was postponed due to sickness of core people.

But, the realtime APP gains momentum as many users mails a posi-

tive feedback.

Below are pictures from the promotional campaign that basically tells users that with the realtime (sanntid) APP they can get a better life as users of public transport.

Realtime information are now available as APP on the iPhone/iPad and Android mobile devices, at the home computer: <http://sis.kolumbus.no/minskjerm>, at the bus stop, and on the bus itself. So everyone that wants it can get updated information on when to expect the busses to arrive.

Recently we had the change to wintertime and a parallel change in many bus routes with new bus stops etc. And this was implemented with only minor problems.



<http://itract-project.eu>

you can use it to transfer to all buses in the zone in which you travel for as long as your ticket is valid.

When using Billett, you can buy adult-, child- and senior tickets. If you wish to travel across several zones in one day, you may also buy Day Passes from Billett. A Day Pass is valid until 24.00hr on the same day you start using it. You can also buy tickets for the night bus, as long as your destination is within the same zone as your place of departure.

You buy your ticket before you board the bus. It is your responsibility to keep a valid ticket and to have enough battery on your phone at all times when you using one of Kolumbus' buses. There are two ways in which you can pay:

- With a mobile account, which you top up using a VISA/Mastercard, or via your net bank.
- With a bank card (VISA/Mastercard)

Multiple users can use the same mobile account and pay for the tickets via the same account. You can top up directly in the app using a VISA/MasterCard, via [www.kolumbus.no](http://www.kolumbus.no) or through your net bank. The mobile account must



## The BILLETT APP

Billett is a free app that is developed to make your journey easier and was introduced in September 2013 for public use. You can use the app to buy single bus tickets on all of Kolumbus' buses when travelling within one zone. The ticket is valid for 90 minutes after purchase, and



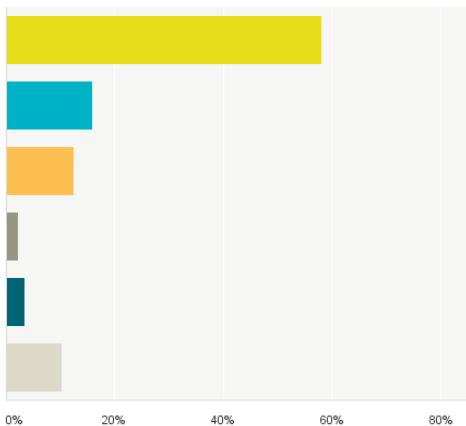
## The Interreg IVB North Sea Region Programme

Investing in the future by working together for a sustainable and competitive region



not be mistaken for being Travel money, which is a product/amount, held on your Kolumbus card. In order for your payments to be executed with the same bankcard every time you top up, you only need to fill in the card information the very first time you use the app. The information will not be saved in the app or by Kolumbus. Nets, our chosen provider of the payment service, will save the card information according to the card companies guidelines.

The graph below shows data from the questionnaire in September 2013 on who liked the payment APP. Top green is liked very much to dark blue which is did not like. Grey at the bottom is "not relevant".



## Jade University and its Living Labs

Currently some of the applications, which have been created by the Jade University, are in a piloting phase and are tested under real life conditions.

In the photo you see the monitor at the entrance of our university that shows the next busses, which will arrive. The students really appreci-

ate this possibility to inform themselves. The local press also wrote an article about this new result of the project. There will be more monitors at a shopping mall and it is possible e.g. for shop owners to give some additional service to their customers by providing such a monitor in their business.

A device for low cost real time tracking has also been installed in a real bus and is currently tested by the bus company (see screenshot).

The real life tests for our monthly tickets app are finished and show that the app is quite usable for the people who control the validity of the tickets.

Also in real life are tested the applications that show the bus stops and additional information at the homepage of the Wilhelmshavener Stadtwerke.

All the results of this real life piloting are monitored in the documents that are part of the organizational model for piloting that has been created by the Jade University.



## Karlstad University: WP4 backend

The backend gets more and more stable. We have defined an API, that application developers can use to build applications upon. A preliminary documentation can be found on our ITRACT server: <http://itract.cs.kau.se> under the link documentations. The API is supposed to be stable so WP5 app developers can use it to build apps. For example, in Wilhelmshaven, there is a student who is trying to use our backend API to implement an application on top of it.

As part of our efforts in WP5, we at KAU have developed some demo applications in order to test backend that can be counted as an app, but that I think do not qualify for large user trials. For example, the ITRACT Webapp <http://itract.cs.kau.se:8081/proxy/>

allows you to plan a trip between any cities and shows you the real time bus and train positions, given the data is in the backend.

A more sophisticated planner you can find under <http://itract.cs.kau.se:8081/open-tripplanner-webapp/#/>

Again, if you want your region included so that these apps can be used for your region, the only necessary thing to do is to provide us with with the necessary bus/train data in the form of static GTFS feeds or GTFS RT feeds for bus/train realtime positions. In addition, we can display alerts or changes in trips if you provide us with GTFS RT feeds for this.