Groningen as a smart city

The E-government Academy's report on Wireless Services

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Introduction

On 16 April 2009 the E-government Academy on Wireless Services was held in Martiniplaza Groningen. In this Academy the focus was on a wireless network for Groningen and the opportunities this creates for the provision of services.

This conference was part of the European project *Smart Cities*, which aims at the development and improvement of electronic provision of services to citizens, organisations, institutions and entrepreneurs.

In *Smart Cities* Groningen works together with partners from various European countries, who are all faced with challenges similar to those of Groningen and are willing to exchange knowledge and expertise.

At this conference presentations were given by - among others - municipal officials of Groningen, Groningen Police, the Antenna Bureau and the German partner Bremerhaven. All these presentations have been summarised in this report.

At the end of the conference there was a discussion on a number of propositions put to a panel, consisting of the presenters. The audience were invited to join in. The propositions have been included in this report.

Opening

The E-government Academy was opened by the mayor of Groningen, Mr J.Wallage, who briefly sketched the establishment of 'Draadloos Groningen' (Wireless Groningen) and elaborated on the development potential created by a wireless network.

The university of Groningen took the first step towards 'Draadloos Groningen' in trying to create a wireless network for its students. This inspired the municipality to try and do likewise. The Hanze University joined in as well, so now "Wireless Groningen is cooperation between strategic partners", Mr Wallage said.

'Draadloos Groningen' will turn the whole city into an ICT-city. A wireless network will promote employment and entrepreneurship and enable the municipal services to improve the provision of services to citizens.

Mr Wallage expresses his satisfaction about the fact that Groningen as a 'living lab' will be able to share its knowledge and expertise with the other participants, thus possibly rising from the 15th position to one in the top ten in the ranking of 'smartest' European cities.

Wireless Groningen

Robert Janz, head of the foundation 'Draadloos Groningen' (Wireless Groningen) reported that on April 15, 2009 an agreement was signed by his foundation and 'Unwired', the investment company that will realize the wireless network. In projects of this kind the main task of public organisations is to ensure public support and to invest in innovation.

Similar initiatives for wireless networks in the USA have not been successful so far, as they were assigned specific functions. Because of this possibilities for further development were limited and benefits did not offset costs.

Janz then mentioned the possibilities of a wireless network for the provision of services to citizens:

- Internet service (internet is not free and is still supplied by various providers.)
- Providing information (by the municipality and other organizations in the city)
- Improved security
- Better health care
- Tele-monitoring of subterranean (garbage) containers

Besides, the wireless network offers plenty of opportunities for public organizations in Groningen, such as:

- camera surveillance
- vehicle information systems
- monitoring of traffic lights
- mobile support during festivals

Groningen has chosen for WiFi-technology, because of its wide availability and the large number of WiFi-ready devices such as notebooks and mobile phones.

The municipality of Groningen will fine-tune the Service Level Agreement with the provider(s), set up a monitor system and build ten 'show case' projects before October 2009. In October the wireless network will be operational in the city-centre and on the Zernike campus.

Health Care

John van Meurs, project manager for the University of Groningen, said that health care was the "killer application" for the wireless network.

Because of the location of academic hospitals in the Netherlands, many people in the northern provinces live as far as 100 km from the UMCG (University Medical Center Groningen) in the city center, which for some of them is their last hope as far as health care is concerned. This fact and the number of institutions offering health-related training led to research into the use of Telecare.

In Koala, a case developed by the university of Groningen, people get Telecare via their television set and an easy-to-operate camcorder, so as to have 24-hour monitoring by a health center (important for eg. pregnant women and cardiac patients) and in this way receive individualized care.

A wireless network may facilitate the installation of equipment in patients' homes and provide health care institutions with the most recent information on for example the need for an ambulance, which can improve the patient's quality of life.

Telecare will benefit from E-government en local initiatives for tele-services . It remains to be seen how well Telecare can integrate with other services and what will be the costs.

Education

In 'Draadloos Groningen' (Wireless Groningen) the university of Groningen and the Hanze university have combined forces to achieve maximum result, the former concentrating on the theoretical aspect, the latter on practical implementation.

The main target of the Hanze university is for every student to have access to the wireless network and subsequently develop new communication methods for education. This having been achieved the Hanze university wants to develop prototypes of new services to generate new business. According to Mr Velthuijsen of the Hanze University, working in multi-disciplinary teams is vital for building good services.

The wireless network can be useful for students in providing an online curriculum, automatic absentee registration or online classroom participation for example.
Mr Velthuijsen also elaborated on the development of prototypes, for example the monitoring of patients with chronic heart failure or mothers with Down Syndrome.

According to the Hanze university it is important that people are able to see and experience how things work. Therefore the Wireless Service Creation Lab should create an environment where people can see how things work in practice and where various possibilities are tried out.

People will have easy access to 'Draadloos Groningen' and the Hanze University is also considering the mainstreaming of the Groningen pilots and innovations to a wider area.

Police

Criminals make more and more sophisticated use of ICT. Elle de Jonge of Groningen regional police demonstrated how the police in Groningen are coping with this development.

After a successful pilot in a district of the city, Groningen police now hope that the wireless network will make a citywide introduction of pda's (portable digital agendas) for police members possible.

Mr De Jonge also showed us the so-called *blue light car,* which can switch between the various networks and profits from the wireless network by using its data for the scanning of license plates and determining the location of a suspect.

He considers the rapid exchange of relevant information as the greatest advantage of the wireless network, even though there are currently some problems regarding privacy. In future Mr De Jonge expects information from a place where police assistance is required to be directly passed on to a police car. This is called 'autonomous alerting'.

Public Transport Bremerhaven

In Bremerhaven bus and ferry are the most common means of public transport, the bus being by far the most important of the two with more than 13 million passengers and 8 million kilometers per year.

Mr Ströhlein said that in the last few years Bremerhaven has invested a lot in mobile portals and information terminals to improve information-provision in rural areas. They want to develop a system of information with buses functioning as data-providers. Buses will send and receive data while passing wireless local area networks (wlan) at bus stops. Subsequently this information is provided to people on the bus. In this way people in rural areas will have access to information via a wireless network without such a network covering the whole area, like in Groningen. For Bremerhaven connection-speed, data-transmission and infrastructure are the main challenges for the near future.

Municipal Services

Program manager Barend Vissers explained why the municipality of Groningen has chosen to invest in 'Draadloos Groningen' (Wireless Groningen). Reasons were its large student population, image- building, economical perspective and initiatives from the central government.

The provision of services will improve as a result of new developments such as location-based services. This wireless project is not intended for home-users, however.

According to the municipality of Groningen there are four groups in particular who will greatly benefit from the wireless network

- 'ambulant' workers (eg. tax inspector)
- mobile users
- semi-fixed locations (eg. festivals)

- people who move or relocate their activities

For municipal applications such as access to files, camera surveillance, city tours or parking management to work well there are certain conditions. For employees the safety of the network weighs heavily, whereas citizens and business people are mainly interested in the internet service, with broadband being vital for video service.

By means of 'Draadloos Groningen' citizens can be better advised and informed about the municipality's resolutions, which may well contribute to their becoming more politically involved.

Tourism

'Draadloos Groningen'(Wireless Groningen) asked Mr Eijkelenboom, head of *Eijk Innovations* to develop some business models for tourists. His models were based on 3 central questions:

- How can a wireless network attract more visitors?
- How can we make them stay longer?
- How can we get them to spend more?

The models should serve for a longer period of time and fit into the targets of 'Draadloos Groningen'.

First Mr Eijkelenboom outlined the various target groups, those who supply services (hotels, police) as well as those that receive them. (tourists, businessmen)

He then distinguished recent trends in the tourist sector. Tourists nowadays want to have immediate information, "right here, right now", act as individuals rather than as groups and use internet and GPS more and more often. They also expect high quality service.

A workshop with the various stakeholders plainly showed the wireless network to have great advantages (more tourists can be welcomed and accommodated and the supply of information will be greatly improved).

Mr Eijkelenboom sees the wireless network as a great opportunity for tourism and events organised in Groningen and introduces the idea of a Digital Tourist Pass (DTP) which will give access to public transport and sights and enable tourists to make reservations.

Dealing with fear of WiFi-radiation

Mr Brink, head of the Antenna Bureau based his presentation on the following question: "How do you deal with people who think that wireless networks make you ill?"

To answer that question one should be aware of the following facts:

- There are no wireless networks in cities without antennas
- There are no wireless cities without electro-magnetic fields
- Electromagnetic fields can cause environmental warming
- The European Union advises a maximum of 61 v/m
- WiFi < 1 v/m

These facts seem to suggest that people needn't be afraid of wireless networks. Science supports this. Among the population there is fear of this new technology, however, originating from observations (more and more antennas) and initiatives to have these antennas removed.

The municipality should take this fear serious, since this discussion on health will not spontaneously disappear and may lead to the formation of pressure groups and involvement of the media. Eventually the municipality will be heavily criticized if it does not react.

In this process it is better to assume and keep control. It is important to be well-informed, to know the pressure groups, to know who informs mayor and aldermen, who is responsible for pr, who devises the plans for target groups and plans of communication.

In communication one should realize that people with strong convictions cannot be convinced by means of information. Here a dialogue is called for and there should be room and sympathy for emotions. Refer to the opinions of experts rather than enter into scientific debates.

People without strong convictions may be convinced. It is crucial to focus on advantages and people should be given a say as to where they would like the antennas to be placed.

When dealing with such processes it is important for the municipality to focus on transparency of information and the advantages of a wireless network.

Propositions

Building an open WiFi city network to provide public services is the icing on the cake. Local authorities should get their services and underlying business processes right first.

An open WiFi network is only relevant in a highly built-upon area with highly educated citizens and innovative business. Building an open WiFi network in a rural area is a fundamentally different ballgame.

Internet should be as easily available as drinking water and local authorities have a leading role to play here.

Current wireless technology is ready to be deployed to cities. The legal context is probably not.

An open WiFi network is great for the well-educated young generation. But what about the non-literate, non connected, lower-income people?

The Groningen Formula:
(institutional co-operation and trust) + (strong IT partner) + (innovation system in development of new services) + (government done its e-homework) + (political support) = success

What is for you the absolute wireless Internet killer application?

Press

Wireless Groningen!

Groningen testbed for ICT

De Meern, 15 April 2009 /EZPress/

In this article the journalist announces the signing of the contract between a number of Groningen organisations and Unwired Holding CV after a successful pilot, thus marking the second stage in the project Wireless Groningen. This is a unique project, because it will result in one of the first city wide wireless networks in the world and besides, it is a joint project of a number of organisations, which all expect to benefit from the new network.

The Agreement (Akkoord) of Groningen is a collaboration of the municipality of Groningen, the Hanze University, the University of Groningen en the University Medical Center Groningen. They operate as equal partners.

Source: Alcadis IP Solutions

Original (full) article (in Dutch): EZPress® News Distribution B.V. www.ezpress.eu

Groningen, Netherlands deploys municipal wireless network

April 15, 2009 at 9:33 AM by Esme Vos

In this article Esme Vos reports the signing of an agreement between the foundation *Draadloos Groningen* (Wireless Groningen), which represents various organisations in the city of Groningen and Unwired Holding CV to deploy and manage a citywide wireless broadband network. The city expects to be unwired by 2010.
In this article a parallel is drawn with Minneapolis where they work with the same business model.
For more information: http://www.muniwireless.com/

Interesting links

http://www.antennebureau.nl

http://www.smartcities.info/groningen

http://www.smartcities.info/bremerhaven

http://www.smartcities.info/abstract-study-%E2%80%98wireless-services-groningen-municipality%E2%80%99

http://www.smartcities.info/wireless-groningen-signs-contract-unwired-holding

http://www.koalaweb.nl/

http://www.rug.nl/corporate/index

http://www.hanzehogeschool.nl/default.htm

http://www.umcg.nl/azg/nl/

http://www.politie.nl/GRONINGEN/

http://www.groningen.nl

http://www.draadloosgroningen.nl