



Hanzehogeschool Groningen

Kenniscentrum
Ondernemerschap

Wireless Groningen @ Hanze University

Hugo Velthuisen
Professor "New Business & ICT"





Hanze University of Applied Science

- Wide range of Bachelor and Master studies:
 - International Business School
 - Finance, Marketing, Management, Law
 - ICT, Engineering
 - Architecture, Real Estate
 - Visual Arts, Music
 - Teaching
- 24.000+ students from 90 countries
- approx 2.600 employees
- Research clustered in 6 Knowledge Centres:
 - Centre for Entrepreneurship
 - Energy Knowledge Centre
 - Care
 - Work force
 - Regional development
 - Lifelong learning in the arts



Breaking the Chicken & Egg cycle

- Wireless Groningen used in the following ways
 - City wide (outdoor) access for all students and employees to Internet and Hanze network and applications
 - Platform for developing new communication tools for education and education-related processes
 - Platform for students developing prototypes of new services; hopefully leading to new business ideas
 - Environment for developing new business opportunities in collaboration with new and existing entrepreneurs in the region
- Projects leading to prototypes, Minors and Graduation projects
- Multidisciplinary teams from different schools
- Collaboration with Rijksuniversiteit Groningen:
 - RUG for theoretical foundation
 - Hanze for implementation
- Support from existing research programmes:
 - Hugo Velthuisen (professor New Business met ICT, Centre for Entrepreneurship)
 - Hans Appel (professor Multidisciplinary Informatics, Hanze Institute of Technology)
 - Others...

- Online class schedule and relevant information such as scores, cancellations, etc.
- Location finder: class rooms, available work rooms and work stations
- Collaborative cooperative school projects
- On line class participation, e.g. in case of sick students
- Finding teacher with appropriate knowledge for between classes Q&A
- Off line checking of past lessons
- In class participation of streamed events such as court room sessions and operations
- Automatic absentee registration

- Monitoring of mothers with Down Syndrome
- Monitoring outdoor movement of people with dementia or other mental disabilities
- Monitoring patients with chronic heart disease
- Mobile database Social Service
- Mobile game History of Groningen
- Outdoor teaching for primary schools
- Mobile payments (existing service in Groningen)
- City-wide sensor plug-in network

- Home inventory taking
- Taxi routing and monitoring
- Public Transport monitoring and traveller information
- Parking management
- Energy distribution and buffering
- Emission measurements
- Games for stimulating physical exercise
- Tourist information and guided tours
- Broadcasting cultural events

- Project currently being defined
- Premisse: Seeing is believing
- Provide an environment where:
 - People can see working examples
 - Play around with variations: availability of a range of building blocks
 - Experience first hand new services
 - Create prototypes of new services
- Collaboration with
 - ICT companies for uptake of promising new business ideas
 - Non-ICT companies as potential future customers and users

- Groningen Wireless low barrier to entry:
 - Open interfaces: accessible to students and entrepreneurs for implementing new services
 - Most costs already covered; low incremental costs
- But limited to City limits; future of technology for national and international distribution not clear
- Seeking collaboration with national mobile carriers to support successful implementations for (inter)national scalability and roaming