

NorthRULL

Northern Rural-Urban Living Lab
Panlab workshop 21.3.2007

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University of Oulu



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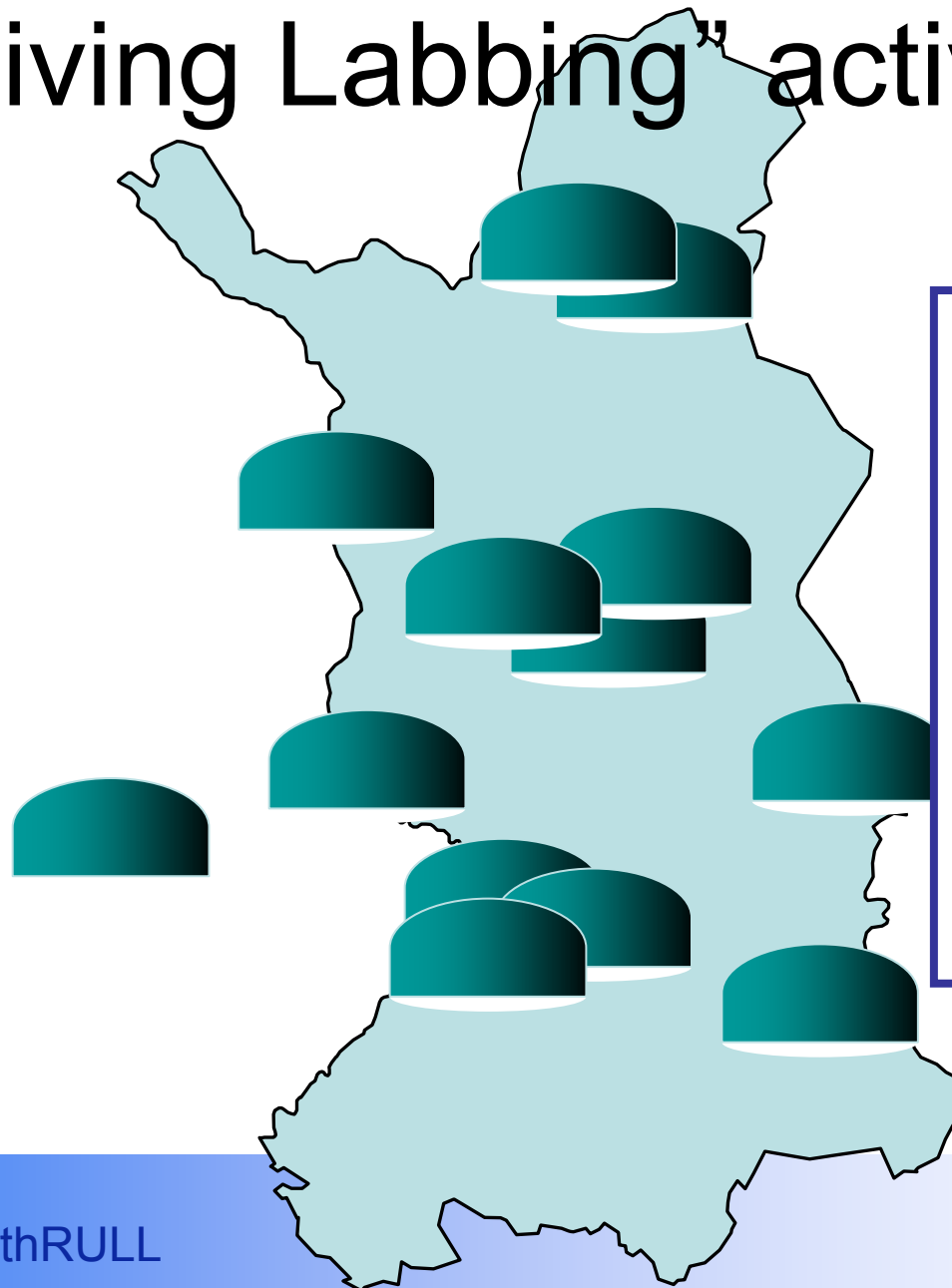
Contributing organisations

- University of Lapland
- University of Oulu
- University of Luleå
- Regional Councils of Lapland, Northern Ostrobothnia, Mid-Ostrobothnia
- Kemi-Tornio University of Applied Sciences
- Oulu University of Applied Sciences
- Kajaani University of Applied Sciences
- Rovaniemi University of Applied Sciences
- Rovaniemi Regional Development Agency Ltd.
- Oulu Innovation Ltd.
- Lapland Centre of Expertise for the Experience Industry
- City of Rovaniemi
- Naturpolis Ltd
- Regional Centre of North-East Finland



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"Living Labbing" activities



Projects where some aspects of Living Labare included:

- User research
- On top of the emerging/ current technologies
- Context driven design
- Rapid implementation for extra-ordinary conditions
- Evolving testing-business
- Cross-border initiatives
- actors, competence, operational models for REAL Living Lab

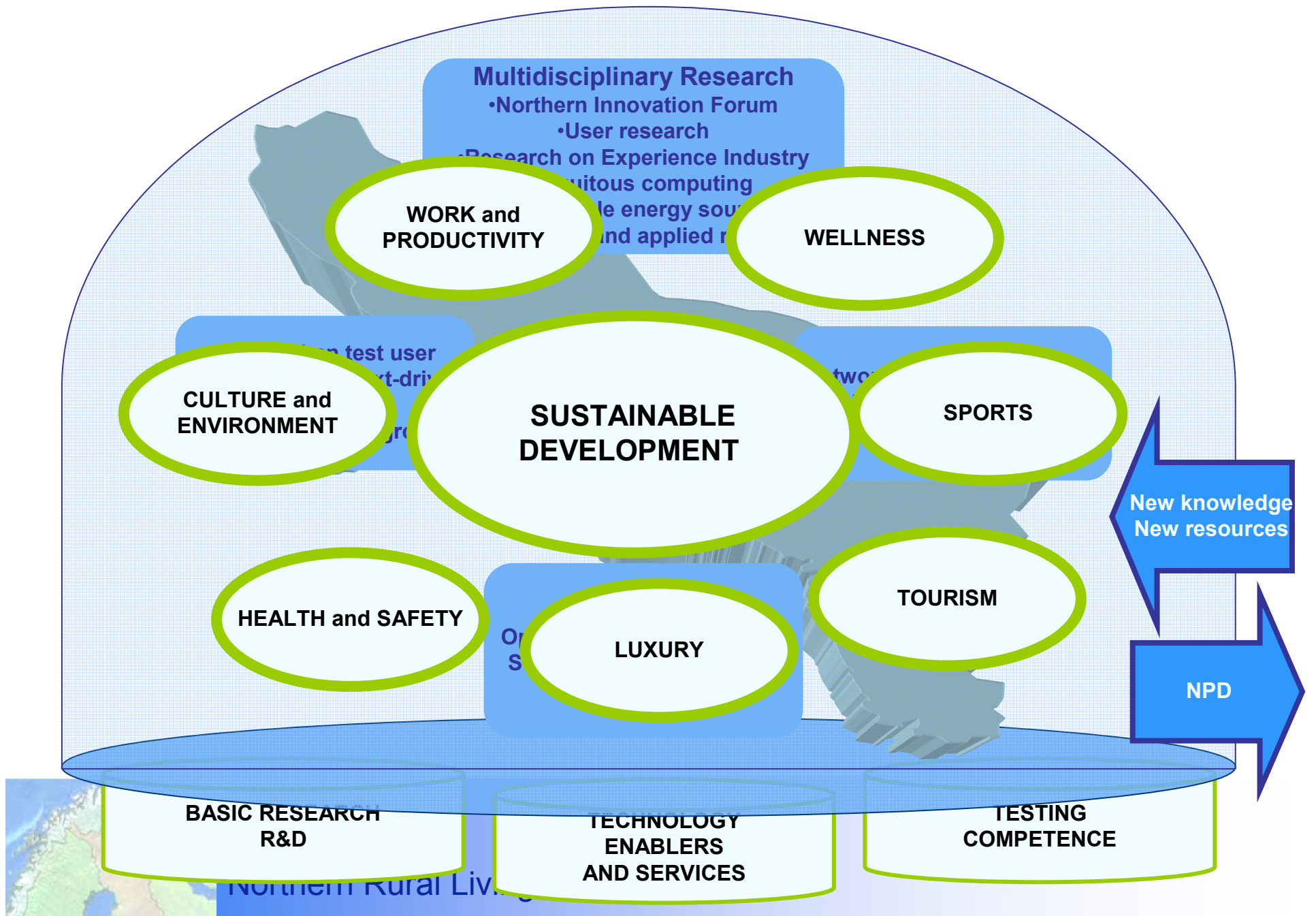


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Aims of NorthRULL

- Ensurance of the vitality of northern rural areas through development of an open innovation model in reciprocal cooperation with the urban centres
- Study and enablement of the key factors of sustainable development (everyday life and culture, services; innovation processes; business, internationalisation)
- Creation of an open innovation environment offering relative benefits / unexpected advantages for new ventures in rural areas, based on local strengths
- Implementation of long-term research with multi-disciplinary approach to user, context, experience and innovation, supporting the above objectives
- Dissemination of results





Examples..



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NorthRULL – Rovaniemi, Unique environment:

- Strengths: Northern top know-how and networking of professionals e.g. from University of Lapland, the Rovaniemi Polytechnic, ICT and tourism companies of the region, Aurora Borealis Technology center and Lapland Centre of Expertise for Experience industry:
 - Usability, functionality and usage experiences of services and products as part of the whole service business idea.
 - Development of new business models for services.
 - User research in pilot marketing areas in order to find out the needs and the attitudes of the user.
- Tests and development of services and products takes place in real conditions with real end users, the focal point being tourism and experience production services.
- Testing environments in several Fields; Healthcare, Cold Climate Technology, Experience Industry



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Aurora Borealis Testing Lab

- Products and services for tourism developed with the Testing Lab :
 - Hiker's Helper
 - Aurora Borealis Alarm System
 - Safe Safari
 - Pyhä – Ruka in your pocket
 - Santa's Eve Mobile Game



Aurora Borealis Alarm System



A new type of customer-oriented service concept developed for domestic and foreign travelers. The travelers can receive real-time information to their cell phones through the world's first mobile Northern Lights Alarm System as soon as Northern Lights are clearly visible at their destination.

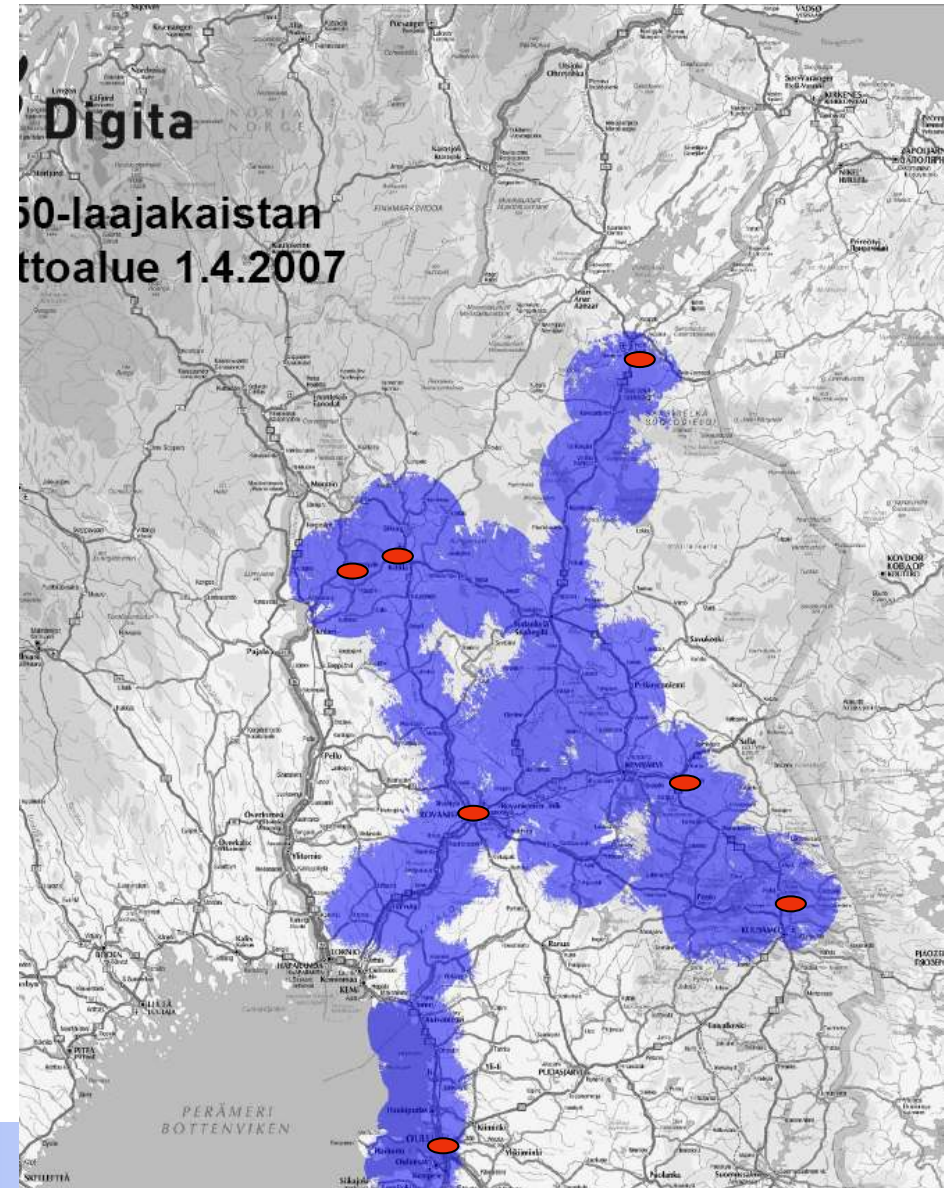


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Flash-OFDM 450 Wireless Net Coverage in Northern Finland as 1.4.2007 (Digita @450)

Real Wireless Broadband Enabler for Mobile Users In Urban-Rural context

1.1.2007 broadband reaches 97% of populace in Lapland



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Ubicom development in Oulu

- Background in developing new innovative applications for mobile users and testing them in real-life environment
- Preparing an UBI research program that aims to create a ubicomp knowledge cluster of critical mass
- The research program combines
 - High-class basic research creating new technology and knowledge
 - LivingLab research evaluating prototypes in real-life settings
 - Building open infrastructure (e.g. sensor network)
 - Stimulating SME's to use new technology
- The next slides present our background shortly;



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Example UBI infrastructure: panOULU

- panOULU agreement combines multiple organizations' WLAN zones into a single open network
- panOULU subscription offered by telcos allows organizations to provide open panOULU visitor network in their premises to guests and visitors
- panOULU is now one of world's largest open and free city WLAN networks
- City of Oulu's COMPETENCE Oulu 400 program expands the network by 400 AP's
- Also valuable R&D resource
- More information: <http://www.panoulu.net>



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Example UBI service: Physical browsing / Tourist Information

- Services related to various locations are marked on a map with visual symbol containing RFID tags
- By touching a symbol the user can view information about the related service on the mobile phone's display
- User's time and location are used automatically to provide relevant bus timetables, maps, and routes
- Advantages
 - Real time information is delivered directly to the user's mobile phone
 - Information corresponds to the user's situation more accurately



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Example UBI service: Mobile Fair Diary

- Hybrid interface comprising of
 - Mobile phone application
 - For collecting context-aware notes
 - Website
 - For browsing, organizing and sharing the notes and related online information
- Combines physical browsing and mobile weblogging
- Great success in Asuntomessut 2005
 - Houses and indoor objects were marked with 2D visual codes
 - Each user took almost 100 notes (mostly photos) on average
- Spin-off company Brieftec Ltd. has commercialized the service



VIDEO
4 min, web

VIDEO
4 min, disk



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Thank You!

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