

Business from technology

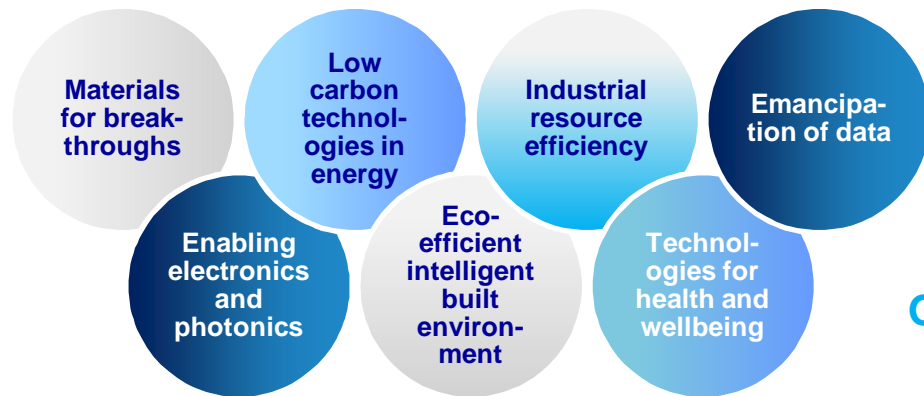


INSTRUMENTS FOR CREATING AN INNOVATION HOT SPOT

Prof. Tatu Koljonen
Vice President, Strategic Research
VTT Technical Research Centre of Finland

VTT's Vision paper

VTT's strategic research portfolio targets the vision



VTT's research portfolio is a strategic tool in implementing the vision



Exploiting Digitalisation - Globally strong source of growth

**ICT is the source of business disruptions
- and it changes our everyday life**

- ICT is the primary driver for 80 % innovations and 40 % productivity improvement
- Ubiquitous computing is a revolutionary paradigm changing our everyday life
- Digital convergence strong trend -all information will be digitized
- Emancipation of data creates a wide range of new businesses
- ICT enables services for society and economy creating a knowledge based society
- ICT is the nervous system of the whole society



ICT SOLUTIONS FROM VTT – FOUR AREAS OF MAJOR CONTRIBUTION

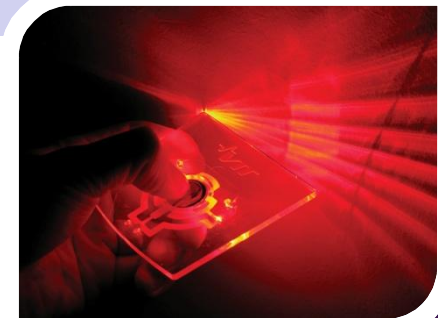
1. Leading edge ICT enablers from VTT vitalize the ICT business
2. Smart growth - totally new knowledge based businesses are evolving - VTT offers technology platforms
3. ICT-enabled sustainable growth, a strong cross disciplinary contribution from VTT
4. Inclusive growth - everybody is invited to enjoy the social benefits of digital world



1. Leading edge ICT enablers from VTT vitalize the ICT business

VTT offers leading edge ICT technology enablers which will boost competitiveness of businesses not only in ICT field but cross industries. The technological excellence in communications will be renewed by competence in cognitive communications while VTT's strong scientific and technological base will ensure foothold in the emerging ubiquitous computing / smart spaces applications. Competence in algorithms is the scientific base for competitiveness in modelling and simulation; data mining and context recognition.

- **Cognitive communication/radios** and cognitive processing. Optimisation of resource usage in general.
- Seamless and understandable interaction between real world (users) and digital world services in **Smart Spaces**.
- **Sensors and printed intelligence**
- **Simulation and modelling** are crucial for future manufacturing, energy and service businesses.
- Processing of information through **parallel computers**.
- **Benefiting from emancipated data**. Ontologies of the world. Storing the data. Keeping the data valid with respect the real world.



2. Smart growth - totally new knowledge based businesses are evolving - VTT offers technology platforms

Smart growth is characterised by ICT enabled innovations which substitute raw material and energy intensive consumption of the past with digital and immaterial growth. eServices, social media and service robots are the examples of this trend. Often, smart growth is based on open innovation and co-creation principles, where innovations are created in networks of companies and individuals, instead of traditional corporate-proprietary model.

- eServices – digitalisation of services will be the single largest source of productivity
- Social media enhances the ways businesses and society understand, influence and interact with individuals
- Open innovation – research and development done *without* prior agreement will become more important, and so will IPR.
- Next generation of automation – automation, including robots, will spread from industry to care sector, homes and traffic.



3. ICT-enabled sustainable growth, a strong cross disciplinary contribution from VTT

ICT is instrumental for sustainable society. Only by involving latest ICT solutions to manufacturing, logistics and consumption of goods can we meet the challenges of climate change and scarce resources.

- Non-material consumption will become both source of economical revitalisation and important pillar of sustainable growth
- People empowerment encourages green and sustainable behaviour.
- Remote presence (teleconferencing of future) - substantial reducer of traffic pollution
- Smart grid - disruptive change in electric utility world
- Ecoefficient built environment
- Intelligent Transport Systems - improving the safety, efficiency and environmental friendliness of traffic and logistics.



4. Inclusive growth: everybody is invited to enjoy the social benefits of digital world- VTT offers system knowhow and infra technologies

The threat of digital divide can be avoided by ensuring general computer literacy which makes all citizens capable of using eGovernment and eServices and participating in new ways of working. Finland can take a pioneer role in this aspect because of good education system, homogenous and small population and citizens positive attitudes towards ICT.

- New ways of working - generation Y does not settle for traditional hierarchies and work values
- e-Government is needed when the productivity of public sector has to adjust to leaner budgets and decreasing personnel
- Real-time feedback loops, fluid society concepts describe the new way in which society in public and private sector will work
- Ambient assisted living, wellbeing tech become evermore important with ageing population
- Information security – could Finland become an information vault, "Switzerland of data"?
- Developing countries need to create infra, including ICT in order to improve the lives of their citizens.





eit

Knowledge &
Innovation
Community

EIT ICT Labs





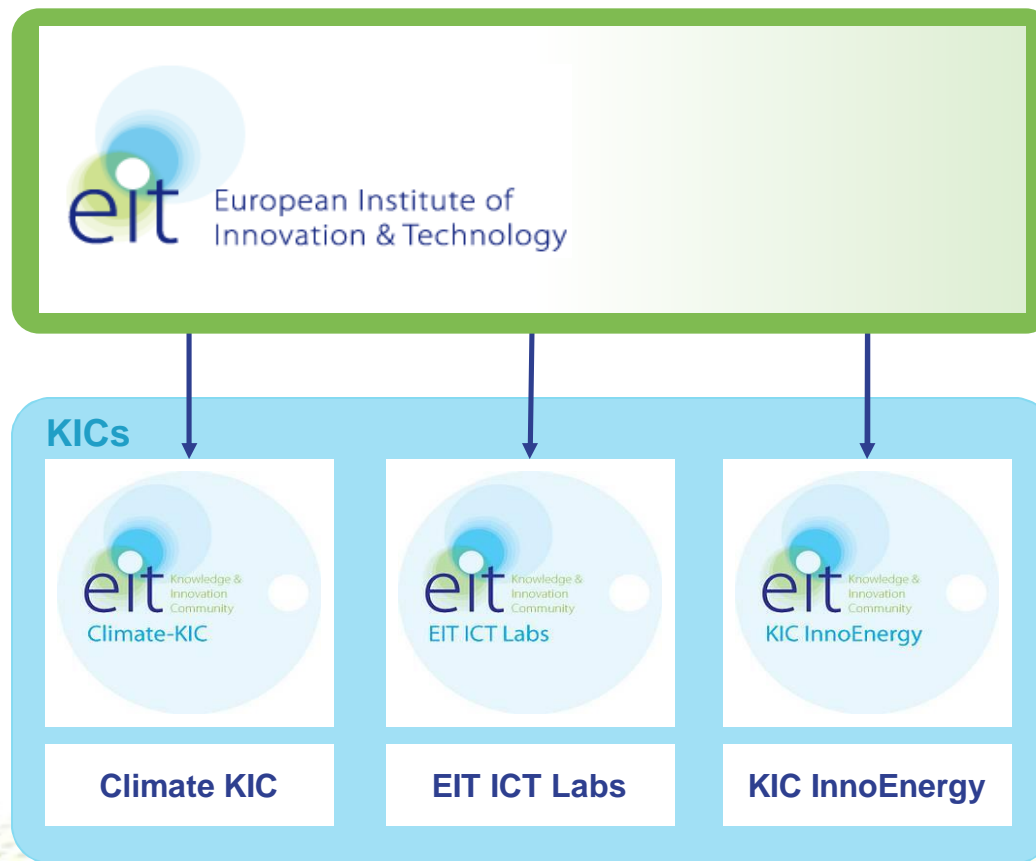
EIT ICT Labs

Boosting ICT Innovation in Europe



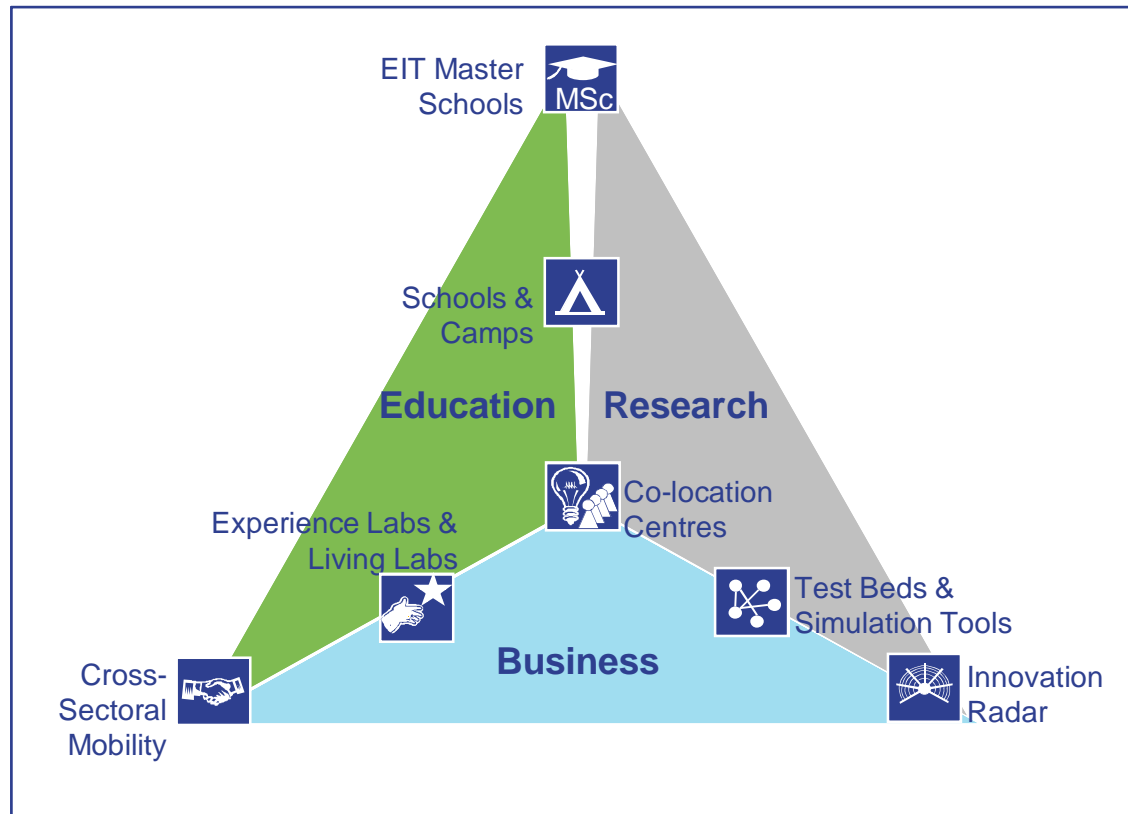


EIT ICT Labs is a Knowledge and Innovation Community of the European Institute of Innovation & Technology





Our strategy integrates all dimensions of the Knowledge Triangle





EIT ICT Labs Introduction

Profile

- EIT ICT Labs is the **catalyst for significant ICT innovation**, enhancing the quality of life for everyone.
- By **integrating Education, Research and Business** EIT ICT Labs empowers top talents to lead Europe into a new ICT age.

Vision

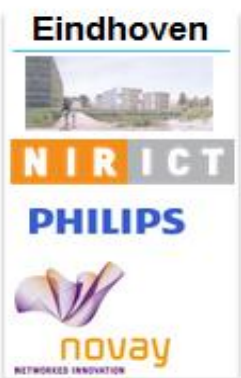
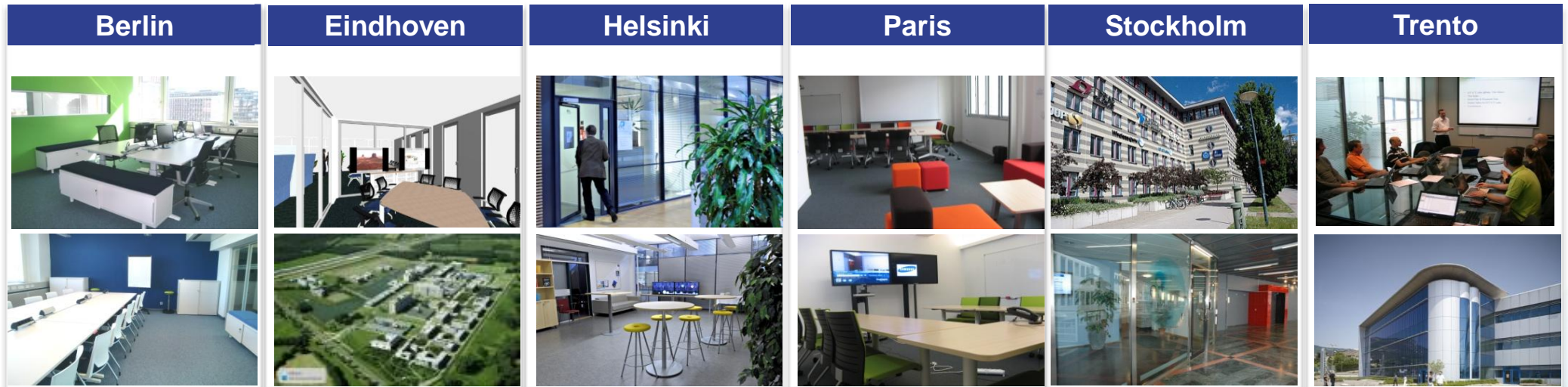
- “ICT innovation is our key enabler to enhance the quality of life for everyone.”

Mission

- “Turn Europe into a global leader in ICT Innovation.”



Our Co-location Centres in six countries





Helsinki Node: Core Partners



Node Steering Committee

Heikki Mannila, Aalto University

Heikki Saikkonen, Aalto University

Tatu Koljonen, VTT (chair)

Jorma Lammasniemi, VTT, EIT Governing Board member

Hannu Kauppinen, Nokia

Jyri Huopaniemi, Nokia



In June 2012 the Co-Location Centre will be relocated to a new building on Otaniemi Campus: Open Innovation House

Setting

- EIT ICT Labs will use two lower floors of a four floor building
- 1st floor is open, co-located and flexible space
- 1000-1500 m² of allocated office space for EIT ICT Labs in the 2nd floor
- Co-location with Helsinki Institute for Information Technology
- Nokia Research Center in 3rd&4th floors

Facilities

- “Open Source Café” downstairs
- Flexible office space & furniture for approx 60 people
- Lecture space for seminars, meetings, workshops
- Several small meeting spaces, videoconferencing facilities, etc.
- Homebase for EIT master students
- Doctoral Training Centre



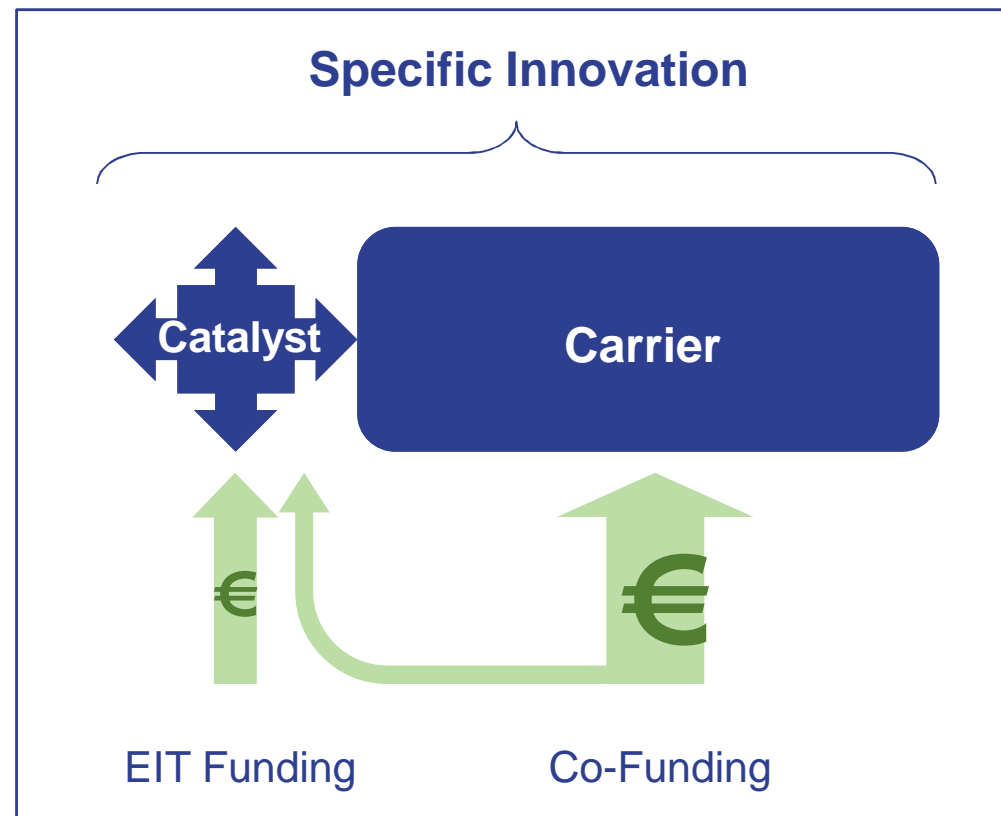
Visualisation Open Innovation House



Construction Site December 2010 with Node Director and KIC CEO



The Catalyst-Carrier model is key in our approach



Education

Research

Business

Thematic



New Business Creation



The Entrepreneurship Support System supports ICT start-ups in several ways



EIT ICT Labs Start-Up Support

Help entrepreneurs active within the thematic action lines to **extend their business to other nodes** and grow internationally

Create an entrepreneurial mindset by providing a program where promising entrepreneurs are coached and mentored by experienced business developers

Provide support in **capturing new business opportunities** and reduce time to market

Support start-ups to the fastest way to find the **right funding** from pre-seed to the growth phase



In its first year of operation EIT ICT Labs already delivered four new start-ups



Innorange offers innovative solutions for people flow management



Founders: Jukka Honkola (VP, Products), Samuli Silanto (CEO)

- Founded in February 2011 by **two Nokia employees**, now working full time for Innorange
 - Innorange offers devices and value adding services to observe and actively guide **people flow in physical spaces**.
- ▶ **Observing** movements of people etc. in specific environments
 - ▶ **Offering sensor networks** for collection of raw data
 - ▶ **Consultation** for generating useful information from collected data



Green Communications creates on demand networks with a substantial energy saving



Prof. Guy Pujolle
Co-founder Green Communications



Prof. Khaldoun Al Agha
Co-founder Green Communications



- Green Communications is a **spin off company** from two of **EIT ICT Labs' Core Partners** in the Paris Node:
 - Paris XI University
 - UPMC
- The company sells **low cost networks** with quality of service and significant energy saving

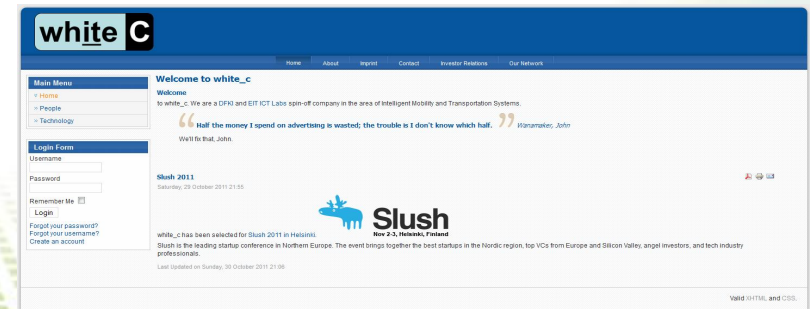


PluriCast

- The **company PluriCast** is a recent spin-off of KTH – founded by a group of professors and researchers
- The Technology has been prototyped within **COSEM** - a carrier project funded by Vinnova, Wireless@KTH, Ericsson and TeliaSonera
- A U.S. and Patent Cooperation Treaty (PCT) has been submitted for international IP protection



Prof. Zary Segall
Co-founder PluriCast



Education

Research

Business

Thematic



Smart Spaces - ICT enabled solutions for every-day life



Smart Energy Systems – smart energy management, green ICT



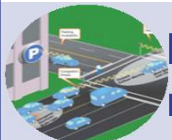
Health and Well-being - ICT enabled services supporting a sustainable healthy lifestyle



Digital Cities of the Future - ICT enabled solutions for security, pollution, transportation, and resource management (e.g. water).



Future Media and Content Delivery – cost-effective content delivery and storage

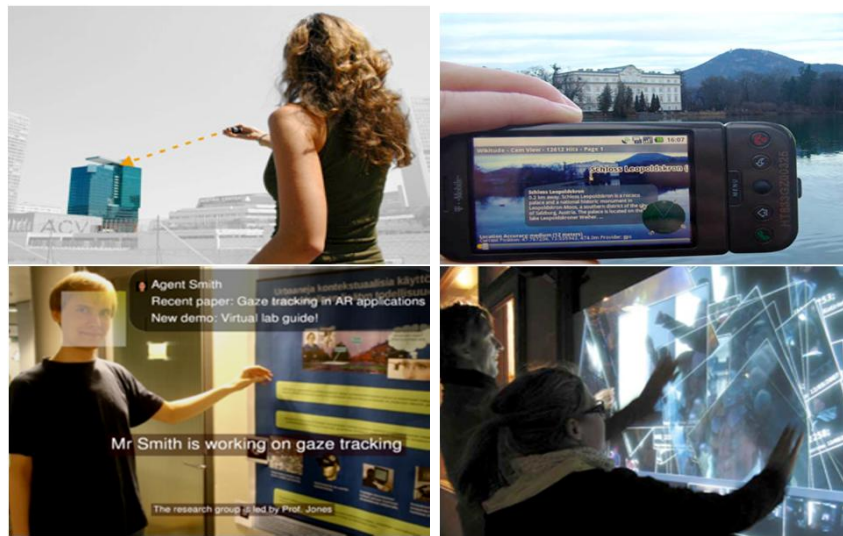


Intelligent Mobility & Transportation Systems – sustainable technologies for future mobility

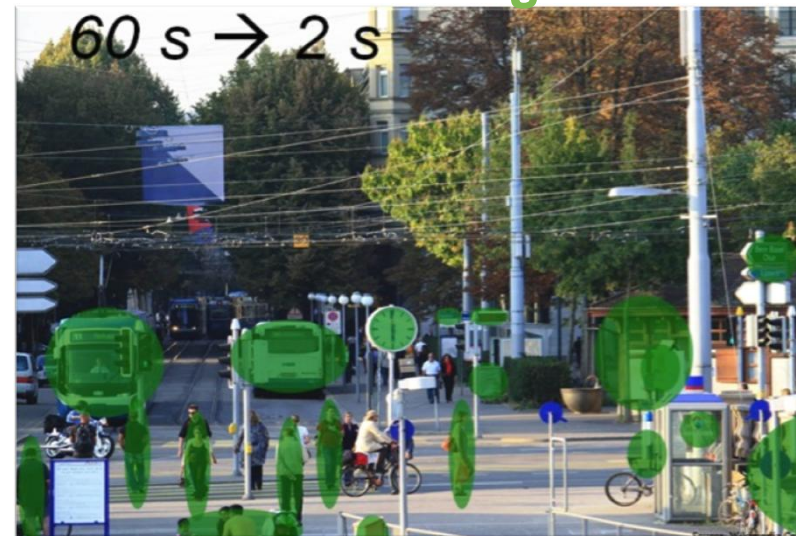


Smart Spaces addresses the challenges of intelligent environments

Cyber Physical Interaction



Near Real-Time Event Handling





Example Result Product X-ray



Product X-ray

- Provide information about products in stores:
→ Move mobile device around box and receive a 3D view of its content

Education

Research

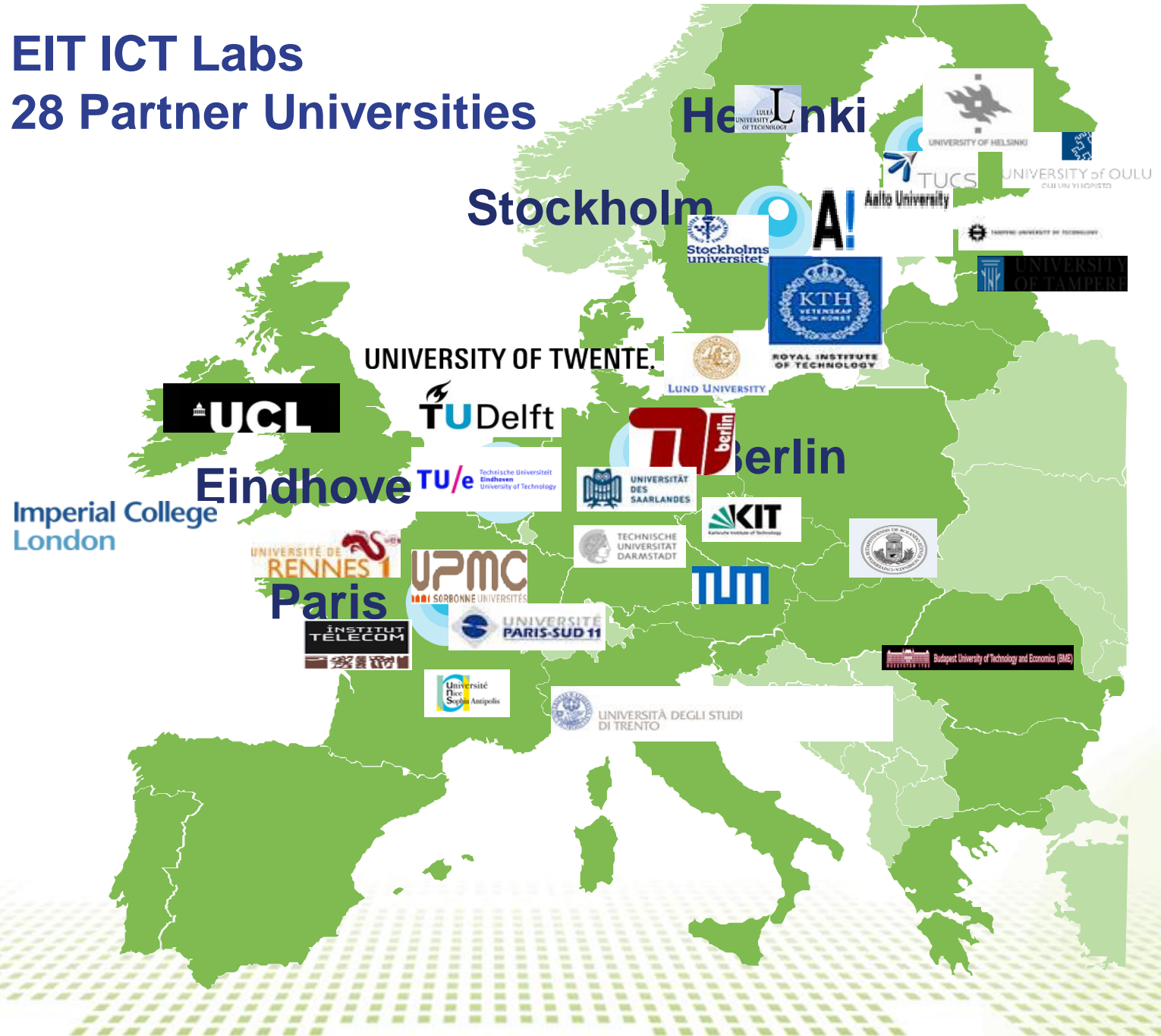
Business

Thematic

EIT ICT Labs Master School



EIT ICT Labs 28 Partner Universities





Combining cross-node technical and entrepreneurial education with strong industry collaboration

Unique features of the EIT ICT Labs Master School

First rate **technical education** at top technical universities with a **standardised business minor**

Strong industrial presence with guaranteed high standard **industrial internships** in our partner companies

Flexible combination of organizational and geographical **mobility**

Generating entrepreneurial students with a broad **European perspective**

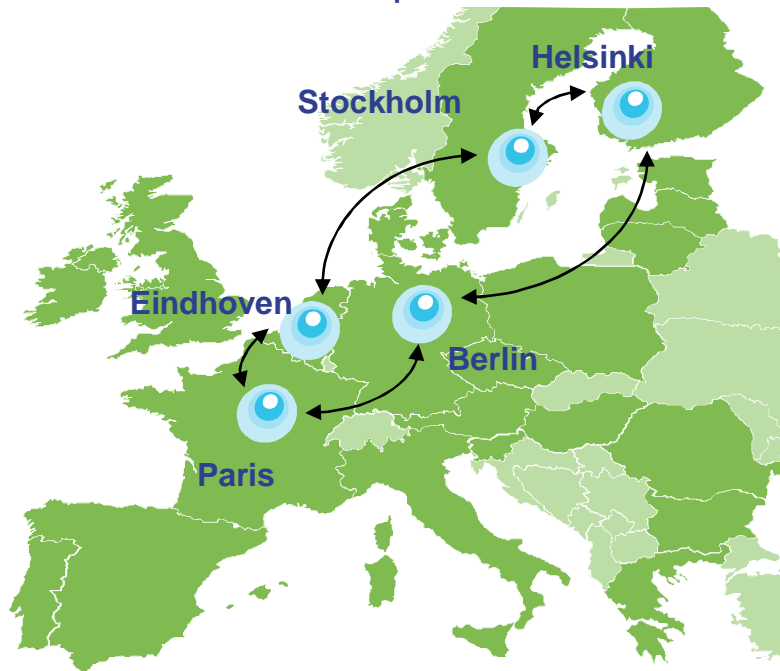
A screenshot of the EIT ICT Labs Master School website. The header includes the EIT ICT Labs logo, a search bar, and navigation links for HOME, MASTER'S PROGRAMME, COMMUNITY, and ABOUT. The main banner features a woman's portrait and the text 'Empower Top Talents to Lead Europe into a New ICT Age'. Below the banner is a large digital clock showing 'APPLICATION CLOSES IN: 27 DAYS, 13 HOURS, 31 MINUTES, 20 SECONDS' with an 'APPLY HERE' button. The page also includes a sidebar with navigation links, a 'News' section with RSS feed, and an 'Events' section with RSS feed. The footer contains 'Application & Admission' and 'Track-Finder' buttons.



Alignment with European innovation programs is crucial to the success of EIT ICT Labs

Keywords:

- Co-funding
- Earmarking
- Joint Exploitation



Education and Culture DG



European Commission
Information Society and Media





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Knowledge & Innovation Community

Turn Europe into a global leader in ICT Innovation



Speeding up Innovation



Thematic Action Lines



Startup wins coaching

What is the EIT ICT Labs all about?
An interview with the CEO Prof. Dr. Willem Jonker.

[more videos](#)

Apply now for Master's programmes 2012!



EIT ICT Labs welcome Trento as the sixth Node



Events

[view all](#) [RSS](#)

20.02 2012	TRENTO NODE WINTER CAMP
TODAY	
19.01 2012	TECHNOLOGIES OPEN MARKET
16.01 2012	ENGINEERING AND TRENTO RISE INAUGURATE ESTRO LAB IN TRENTO
19.12 2011	SMART MATCH MAKING IN DIGITAL CITIES WORKSHOP
16.12 2011	OPEN INNOVATION WORKSHOP FOR THE INTELLIGENT MOBILITY

News

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