Finnish perspective in ITS

WiSafeCar – Final Event 25th January 2012

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Presentation content

1. EU background
2. ITS Actions in Finland – National Strategy
3. VTT Intrans-innovation Programme
4. Research, development and innovation
5. Concluding remarks
The Common Strategic Framework (CSF)
Three distinct but overlapping strategic objectives

- Creating industrial leadership and competitive frameworks
  - Leadership in enabling technologies, i.e. ICT
  - Access to risk finance
  - Integrating research, education & innovation (EIT)
  - Innovation in SMEs

- Raising and spreading levels of excellence in the science base
  - Frontier research (ERC), FET Flagships
  - Skills and career development (Marie Curie actions)
  - Priority research infrastructures

- Tackling major societal challenges
  - Health, demographics and wellbeing
  - Food security and sustainable bio-resources
  - Secure, clean and efficient energy
  - Smart, green and integrated transport
  - Resource Efficiency and Climate Challenge
  - Secure and inclusive societies

International cooperation
European research area
Common rules, toolkit of funding schemes
Simplified access
Seamless connections
Coherent with other EU and MS actions

Europe 2020 priorities
EU - Horizon 2020

Horizon 2020
Transport specific programme

• Resource efficient transport that respects the environment
• Better mobility, less congestion, more safety and security
• Global leadership for the European transport industry
R&D&I – Cooperation in EU
ITS in national transport policy and ITS

- New transport policy corner stones:
  - Climate change
  - Utilization of intelligence
- First European ITS strategy launched in 2009
- Updating going on
- Transport policy communication 2013, Government major transport actions in 2012-2015
FI ITS strategy 2009 – key actions

1. Public transport services
2. Traffic management and control
3. Automated road traffic monitoring
4. Vehicle safety systems
5. Operating models for accidents and incidents
6. Payment system trials
7. Electronic operating models for goods transport
8. Use of public information
## Mapping EU/FI ITS priorities

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US ITS Strategic Research Plan 2010-2014

- Safety-Mobility-Environment:
  - Vehicle-to-vehicle Communications for Safety (V2V)
  - Vehicle-to-infrastructure Communication for Safety (V2I)
  - Real-time data Capture and Management
  - Dynamic Mobility Applications
  - Road Weather Management
  - Applications for Environment: Real-Time Information Synthesis
  - Human Factors
  - Mode-Specific Research
  - Exploratory Research
  - Cross-cutting Activities
National ITS master plan definition

National ITS Master Plan

- ITS strategy: goals and vision 2020
- ITS priority projects 2010-2015
- ITS evaluation framework and impacts 2011-2015

Regional ITS master plans

- International trends and standards
- EU White Paper
- EU ITS directive and ITS action plan

Pilots
- National
- Regional

Related strategies and programmes

- ITS vision 2020
- Priority projects 2015-2020
ITS master plan definition

- Collaboration with urban regions and industry in National ITS Strategy implementation
- Definition of National ITS vision by effectiveness
- Linking the national activities with neighbouring countries and EU
- Activating the development of ITS service markets
- Connecting ITS to traffic system development and other main domains
- Definition and monitoring of environmental goals of ITS
Transport policy report 2012 and ITS

- Finland has the best real-time description of traffic conditions and situations in 2020
- Finland has a uniform public transport system
- Seamless travelling and transport in urban regions
- Travellers are supported to economic and environmentally friendly mobility
- Road charging is based on legitimate principles and supporting the achievement of the transport policy goals
- Finland is one of the leading countries in ITS development and deployment
- Needs for improved procurement and innovation will be defined
ITS research and development environment in Finland

EU- and international cooperation in ITS
- Future Internet: Technology Platforms ITS projects
- HeERO / eCall
- SATIE/ELSA
- DRIVE 2CX
- TELEFOT
- WiSafeCar

ITS Technologies and services
- Tekes: ICT in Transport
- Tekes: Multisservice platform

ITS and transport policy
- MoTC/TA/Tekes: Build environment and services
- Tekes: Environment and services
- MoTC: Revolution in transport

ITS and Electric transport services
- Tekes: EVE
- VTT: Transeco Smart Grid Electric vehicles and services
VTT INTRANS innovation programme

- Utilises intelligent transport systems innovations to improve services
- Develops the grounds, needs and scientific basis for producing intelligent transport services

- Participates in service concept creation, experiments and evaluation together with businesses, authorities and the research sector
- Offers test environments and services to support development
- Generates information for anticipating future developments
- Compiles VTT expertise and resources for development of intelligent transport systems and cooperation in various areas, including service needs, service business, ICT and evaluations
VTT’s strategic research portfolio

Addressing innovations, business, services and people

Materials for breakthroughs
- functional materials and nanotechnology
- bio-based chemicals and precursors
- industrial biomaterials
- wood-fibre value chain

Low carbon technologies in energy
- efficient use of energy
- renewable energy sources
- nuclear energy, clean fossil energy
- energy systems, modelling for changes

Industrial resource efficiency
- industrial biotechnology - green chemistry
- clean water
- waste refinery
- resource efficient processes

Enabling electronics and photonics
- high-performance microsystems
- printed intelligence
- sensing solutions

Eco-efficient intelligent built environment
- connected sustainable districts
- multimodal intelligent transport
- integrated design, production and use
- comfort, health and safety

Emancipation of data
- interacting with the real world
- gratifying user experience
- managing design complexity
- massively scalable services

Technologies for health and wellbeing
- healthier food solutions
- drug discovery and diagnostics
- systems biology
- ICT for health

Agile industrial systems
- organisation and management of global manufacturing
- simulation based engineering
- eco-efficient machines
- human and organisational practices

Digital world
VTT INTRANS ITS Programme 2011-2013

Commercial services
Public services
Logistics services

Innovative services and service needs
ITS business models and value networks
Management, communications and networking
Focusing of the work packages of the INTRANS innovation programme

- **Innovative services and service needs**
  - ITS development support
  - ITS testing environments and services
  - Transport system operation and organisation
  - Cooperative mobility

- **ITS business models and value networks**
  - Creating service networks and structural models
  - Service solution export concepts
  - ICT platforms
  - Service development and efficiency and effectiveness assessment tools

- **Management, communication and networking**
  - Open workshops and annual seminars
  - Website: [www.vtt.fi/sites/intrans](http://www.vtt.fi/sites/intrans)
  - Presentation and publication of results
  - Conferences, exhibitions, etc.
INTRANS-programme priority actions 2012

- Roadmap for ITS actions in public and private sectors
- ITS Export systems and concepts: Finnish Road Weather Excellency
- Business oriented ITS services systems and platforms
- Intelligent corridor concept for Finland-Russia cross-border services
- ITS systems and services concepts methods and tools
- Envisioning of ITS market development
- Systematic ITS services introduction and tools (test-sites etc.)
Towards systematic and focused national RTD cooperation
VTT creates business from technology