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Challenges and Main Drivers for Urban Mobility: From Policy to Innovation - The role of ITS



EU



TRANSPORT RESEARCH



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EU Political and Strategic Context

New Commission Political Guidelines

- 5 challenges relevant for research planning
- Reference to decarbonising transport sector
- Emphasis on R&D potential to meet these challenges
- Innovation part of Research Portfolio



EU 2020 Strategy

Priorities:

- Smart growth
- Sustainable growth
- Inclusive growth

Targets:

- Employment
- Research and innovation
- Climate change and energy
- Education
- Combating poverty



New Research and Innovation Strategy



EU Policies and Strategies relevant to Transport Research

EU Research policy (incl. Innovation)

- New Research & Innovation Strategy
- Focus on major societal challenges:
- Broad definition of "Innovation"
- Public Private partnerships
- Interact with international partners

- ✓ Climate change
- ✓ Energy efficiency
- ✓ Health
- ✓ Ageing

EU Transport Policy

- Transport White Paper (2010-2020)
- Strategic Transport Technology Plan



Other inputs

- European Economic Recovery Plan
- Europe 2020:

- ✓ Better integration of transport networks
- ✓ Developing alternatives to road transport
- ✓ Promoting clean technologies
- ✓ Upgrading infrastructure





Challenges for Urban Mobility



- **Urban areas are home to 72% of the European population and origin to 85% of EU's GDP**
- **Efficient transport is vital for economic growth and employment in urban areas**
- **Urban areas face particular challenges in making transport sustainable**
- **Urban mobility is of growing concern to citizens**
- **Urban mobility is a central component of long-distance transport**



Main EU Policy Drivers

- **EU Research policy** : realization of the European Research Area in the different transport sectors (**2007 Green Paper 'The European Research Area: New Perspectives'**), Europe 2020 Flagship Initiative **Innovation Union** - COM(2010) 546 final (October 2010)
- **EU Transport policy**: Future **White Paper** (~ March 2011), the **Green Paper on Urban Mobility & Action Plan**, the **ITS Action Plan**
- **Other policies**: EU Environmental policy, EU Cohesion policy, EU Industrial policy



The European approach

- Action Plan on **Urban Mobility** [COM\(2009\)490](#): Programme of 20 actions to support sustainable mobility in cities and regions; addressing congestion, pollution and social concerns.
 - Action Plan **Intelligent Transport Systems** [COM\(2008\)886](#): Programme of 24 actions to coordinate and accelerate the deployment of ITS; Make road transport and interfaces with other modes more sustainable.
- Creation of an **Urban ITS Platform** to promote the deployment of urban ITS





Research Framework Programs

- EU main instrument to implement research in Europe
- The 7th Framework Program (FP7) will run from 2007 to 2013
- FP7 budget: € 50.5 billion
- FP7 was designed to:
 - ➔ Keep EU as a world leader in the selected priority areas
 - ➔ Respond to Europe's employment needs and competitiveness
- Dedicated **Theme on « Transport »**
(Transport Research web site:
http://ec.europa.eu/research/transport/index_en.html)



EU Research for Sustainable Urban Mobility: a strong foundation to build upon

- **From the 4th to 5th Framework Programmes (1994-2002):** Increased collaboration, development of critical technologies and problem solving approaches
- **6th Framework Programme (2002-2006):** Building ERA, strengthening structuring and coordinating EU R&D, concentration on EU challenges, EU competitiveness:
 - For research on technology development HEAVYROUTE, CITYMOBIL, FIDEUS, ...)
 - To support transport policy (CIVITAS I, II, +)
- Stimulating the creation of industrial led “**European Technology Platforms**”, inc. **ERTRAC** for road transport and **ERRAC** for rail





Urban Mobility in FP7

- A dedicated priority activity of the “Transport” Theme on
“**Ensuring Sustainable Urban Mobility**”
- **Objectives/approach:**
 - Improving mobility of people and transport of goods in urban and peri-urban areas (All transport modes and all users)
 - Developing clean, energy efficient, safe and intelligent urban transport systems
 - Technological, economic, regulatory and institutional aspects
 - New and accessible public transport systems



ITS: a key component for an integrated system's approach

Transport Research (SST) supports an increased integration within the transport system especially through ITS

Integration is needed at 3 levels:

- Between vehicles, infrastructures, user and legislation
- Between the different transport modes for optimal door-to-door trips
- For multi-criteria optimisation (inc. safety, congestion, environment, cost and comfort)



Transport Research supports the implementation of generic ITS technologies into innovative transport applications in line with societal and industrial challenges



EC responsibilities in the field of ITS

- Three Directorate Generals (DG) mainly involved in the field of ITS:
 - **DG Mobility & Transport (DG MOVE)**: Policy, legislation, deployment (ITS Action Plan for road transport, SESAR-air transport, RIS-Inland waterways, VTMIS-Maritime, ERTMS-rail, Easyway,...)
 - **DG Information Society (DG INFSO)**: Research and deployment, standardization (generic research on ICT, cooperative systems, deployment/FOT).
 - **DG Research & Innovation (DG RTD)**: Research & development, demonstration (integration, implementation of generic ITS technologies into innovative transport applications).



ITS Research contribution to Transport research policy

- New technologies in support of **greening of vehicles and energy efficiency**
- Improving **road safety** with an evolving approach from passive to active safety
- Contribute to new approaches to **traffic management and infrastructures**
- Ensuring sustainable **urban mobility**
- Turning industrial challenges into opportunities and improving industrial competitiveness by support of **electromobility**
- **International cooperation**



Research Priorities - ITS

- SST(RTD) main research topics are:



- New mobility concepts for passengers with the development of clean urban vehicles;
- Accessibility in public transport (**in particular identifying the most promising ICT aids and services for vulnerable road users**);
- New public transport systems: European bus system of the future; Urban and delivery vehicles using 2nd generation hybrid electric technology;
- **Intelligent mobility systems for passengers and freight transport (multi-modal mobility services, info-mobility systems, traffic management systems in cities, ...)**;
- Clean and efficient urban freight transport vehicles and services.



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Future Events

- **ITS Action Plan Conference, 6th June 2011, Lyon, France**
- **8th ITS European Congress, 6-9 June 2011, Lyon, France**
- **CONDUITS Final Conference, 9 June 2011, Lyon, France**



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Thank you for your attention

