

ICT for Clean and Efficient Mobility

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ICT for Transport

Content

- **Clean and Efficient Mobility**
- Projects 5th and 6th FP
- Potential of ICT in Road Transport
- Additional Information

Clean and Efficient Mobility

Vehicle based systems

Engine control
Ecodriving style
.....

Cooperative systems

Infrastructure based systems

Synchronisation of traffic signs
Incident detection + mgt
Congestion; park; speed mgt.
.....

CLEAN + EFFICIENT

ICT for people

Online environm. info
Context aware, always on
Personalised Info systems
Intermodal support
.....

ICT for goods

Tracking and tracing
Route + load optimisation
Delivery optimisation
Cooperation of stakeholders
.....

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Clean and Efficient Mobility Vehicle based systems

- No project that dealt explicitly with clean mobility
- MAP-related projects: NextMAP, ACTMAP, MAPS&ADAS (PReVENT), FEEDMAP
 - Energy efficiency of safety related applications like ACC etc.

Clean and Efficient Mobility Infrastructure based systems

- **HEAVEN** (traffic data and traffic management strategies and their environmental impact)
- **SMART NETS** (traffic-responsive urban control strategies, especially for saturated traffic situations)

Clean and Efficient Mobility ICT for people

- **ADAMANT** (Airport decision and management network)
- **AMBIESENSE** (Information systems for mobile users)
- **DIAMOND** (ITS applications through Multimedia DAB)
- **ITSWAP** (Transport services via wireless applications)
- **PEPTRAN** (Pedestrian + public transport navigator)
- **TRASCOM** (Traveller assistance for multi-modal transport in regional areas)
- **TRANS-3** (Multimodal travel information service in cross border areas)
- **APNEE and APNEE-TU** (Combine environmental data with travel information)

Clean and Efficient Mobility ICT for goods

- **PARCELCALL** (Cheap RFID for tracking + tracing)
- **MOCONT-II** (Positioning of containers using D-GNSS)
- **ROLLING STOCK** (Internet monitoring of cargo for time of arrival)
- **TROP** (Virtual enterprise for forwarders)
- **GIFTS** (Global freight information system)
- **MOSCA** (DSS for door to door delivery)

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Potential of ICT in road transport

Eco-driving

- Up to – 15 % of fuel consumption
- Supported by Advanced cruise control (ACC) + applications supporting foresighted driving

ACC:

- Field data: ACC in “normal traffic” = 0.4-3.6% reduced fuel consumption
- Simulations: 10 % ACC vehicles up to - 28% fuel consumption + up to - 60% less pollution in specific situations

Potential of ICT in road transport

Traffic management

- SMART NETS: new software + real-time traffic data in urban traffic control centres
 - ➔ reduction of up to 40% in traffic standstill and congestion
 - ➔ considerable energy savings

Potential of future ICT in road transport

Predictive Cruise Control

- cruise control linked to intelligent map information + position (GPS – Galileo) + maps
 - ➔ driving adapted to road
 - ➔ up to further 2 % of fuel economy

Navigation systems

- linked to real time traffic information
 - ➔ reduced driving time and fuel consumption (avoid traffic jams)

Potential of future ICT in road transport

Cooperative systems

- System that allow communication between vehicles and with infrastructure (V2V, V2I)
- → INVENT subproject shows: equipment rate of only 20 % of vehicles could avoid traffic jams on the selected highway section
- → subsequent energy savings

Additional information

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