



# Results of the questionnaire on ICT for Clean Mobility

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# Foreword to the questionnaire

- The environmental effects of increasing demand for mobility of people and goods present challenges that need to be addressed in the interest of long-term sustainability.
- The **eSafety Forum** has proposed to look into the use of **ICT for improving sustainability** as a potential area for future area of ITS development and deployment.
- This **new ICT for Clean Mobility Working Group** will take the first steps to mobilise the various sectors that need to cooperate in **identifying possible new solutions for using ICT for cleaner and efficient mobility**.
- The eSafety Observers were asked to collect information about ongoing national programmes.

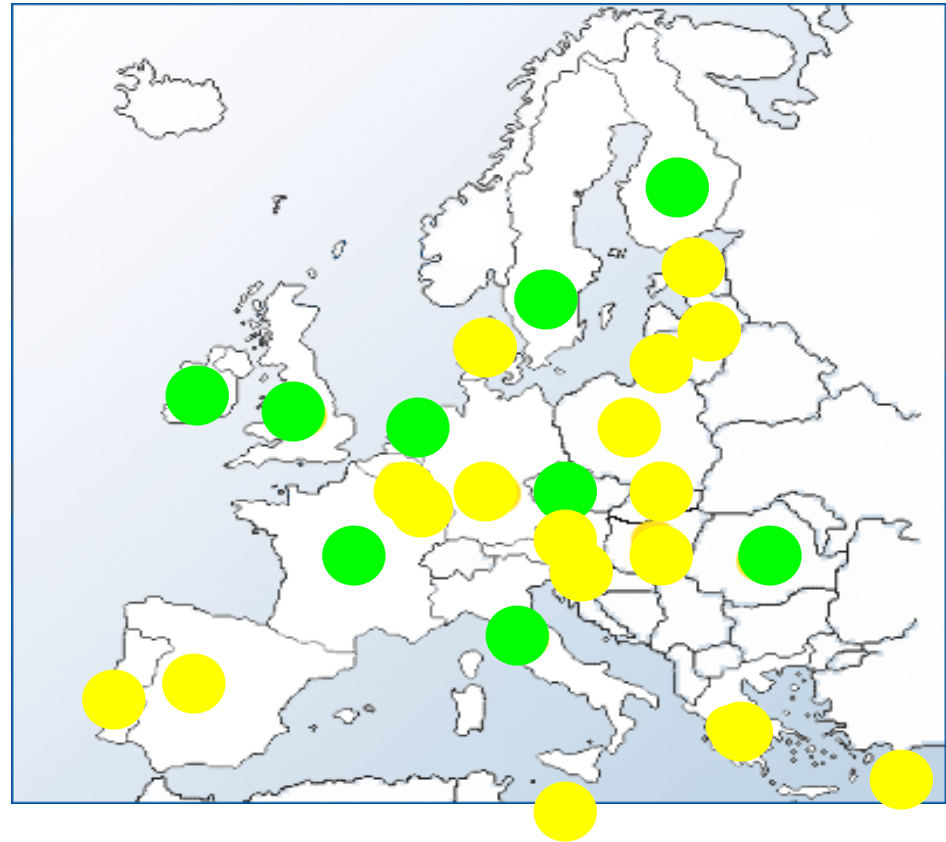
# Response to the Survey

## Answered the questionnaire

- ✓ Czech Republic
- ✓ Finland
- ✓ France
- ✓ Ireland
- ✓ Italy
- ✓ The Netherlands
- ✓ Romania
- ✓ Sweden
- ✓ United Kingdom

## Did not answer the questionnaire

- ✓ Austria
- ✓ Belgium
- ✓ Cyprus
- ✓ Denmark
- ✓ Estonia
- ✓ Germany
- ✓ Greece
- ✓ Hungary
- ✓ Latvia
- ✓ Lithuania
- ✓ Luxembourg
- ✓ Malta
- ✓ Poland
- ✓ Portugal
- ✓ Slovakia
- ✓ Slovenia
- ✓ Spain



# Question 1 (part I)

To what extent environmental traffic management strategies and operations are used in your country on national, network or local?

Country	Strategies, Measures and Operations
<b>Czech Republic</b>	<ul style="list-style-type: none"><li>•Local level:<ul style="list-style-type: none"><li>–Five years project supported by Ministry of Transport to develop ITS National Architecture</li><li>–Traffic control systems (Prague)</li><li>– RDS-TMC</li></ul></li><li>•No measures at highway level (missing strategy)</li></ul>
<b>Finland</b>	<p>The Finnish Road Authority has paid attention to the environmental impact of road traffic in the vision of traffic management and defined targets for the year 2008.</p> <ul style="list-style-type: none"><li>–The means of the Finnish Road Authority are e.g.:</li><li>– acts, cooperation and information delivery during hazards</li><li>– automatic identification of hazards in tunnels</li><li>– real-time information to service providers about weather and road condition as well as traffic</li><li>– support to journey planner services for public transport users</li></ul>
<b>Ireland</b>	<ul style="list-style-type: none"><li>•Tunnel bringing heavy vehicles out of the city (Port of Dublin and Cork)</li><li>•Traffic Light synchronisation (Dublin)</li></ul>

# Question 1 (part II)

To what extent environmental traffic management strategies and operations are used in your country on national, network or local?

Country	Strategies, Measures and Operations
<b>France</b>	<ul style="list-style-type: none"><li>•Systems considered to have a short-term effect on the environment:<ul style="list-style-type: none"><li>–Traffic Light Synchronisation</li><li>–Congestion Management Systems</li></ul></li><li>•Tools considered for developing sustainable mobility:<ul style="list-style-type: none"><li>–Urban Goods Delivery Management</li><li>–Dedicated Lanes for Public transport</li></ul></li></ul>
<b>Italy</b>	<p>Mainly used in the <u>local context</u> (varying from city to city):</p> <ul style="list-style-type: none"><li>•Parking Management</li><li>•Traffic Limited Zones</li><li>•Intelligent Traffic Light Management</li><li>•City Logistic Management</li></ul>
<b>The Netherlands</b>	<ul style="list-style-type: none"><li>•<u>Direct measures</u>: Heavy goods vehicles traffic light priority</li><li>•<u>Measures with environmental side-effects</u>: measures to improve smooth traffic flow bring to less emissions and less noise<ul style="list-style-type: none"><li>–Highway network: flexible ramp use,, ramp metering</li><li>–Local level: parking directing, bus priority</li></ul></li></ul>

# Question 1 (part III)

To what extent environmental traffic management strategies and operations are used in your country on national, network or local?

Country	Strategies, Measures and Operations
<b>Romania</b>	<ul style="list-style-type: none"><li>•Public Transport Management &amp; Urban Traffic Control System (Bucharest): tender phase</li><li>•Pilot systems for Bus Priority (Bucharest and Costantza)</li><li>•Light rail line with priority in intersection in Bucharest</li><li>•Local traffic light synchronisation («green wave»)</li><li>•Automatic traffic incident detection, video surveillance, infrastructure management</li><li>•Multimodal terminal (Bucharest)</li></ul>
<b>Sweden</b>	<p>List of measures not directly used as environmental traffic management, but reducing Time To Travel. Overall effect on environment is still not clear.</p> <ul style="list-style-type: none"><li>•Traffic light synchronisation: time rule («green wave»), vehicle rule (traffic flow), adaptive</li><li>•Congestion management: info about accidents and possible queues, wildlife approaching</li><li>•Up-to-date information: RDS-TMC info</li><li>•Parking management: parking spaces available</li><li>•Automatic speed surveillance and Automatic support to maintain speed limits (ISA)</li></ul>
<b>UK</b>	<p>Congestion is a shared priority between central and local authority. Target fixed at national level. Local authorities empowered and with network management duties.</p> <ul style="list-style-type: none"><li>•<u>Local level</u>: traffic light synchronisation, parking management, congestion management</li><li>•<u>Network level</u>: goods delivery management, congestion management</li><li>•<u>National level</u>: congestion management</li></ul> <p>Examples of UK activities: <a href="http://www.itstoolkit.co.uk">www.itstoolkit.co.uk</a></p>

# Question 2 (Part I)

## Are there applications of integrated traffic/mobility systems?

Country	Applications
<b>Czech Republic</b>	<ul style="list-style-type: none"><li>•Main control centers integrating at least public transport and traffic signal control center operate in the biggest cities (Prague, Brno, Ostrava). Public transport plays important role in the CR. Priority for public vehicles at the crossings is “standard” for designers.</li><li>•Trolley contact for trams and IR beacons for buses as technological tools.</li><li>•Pilot project tests priority, based on GPS positioning system for one year (Prague).</li><li>•As of June 2006, the tram priority was introduced on 94 crossings, achieving 47% out of total 199 traffic controllers in Prague tramway network. The absolute priority that makes the tram goes through crossing with no stop is applied on 41 crossings.</li><li>• Three new regional TIC are practically finished and they will be also integrated in the sense of ITS architecture.</li></ul>
<b>Finland</b>	About 300 km of roads are equipped with adaptive systems and signs based on measurement of weather and road conditions.
<b>Ireland</b>	Missing info
<b>France</b>	There are currently three major on going projects (Grenoble, Toulouse and Marseille) aimed at providing a multimodal information to drivers to facilitate switching transportation modes in case of congestion .
<b>Italy</b>	Integrated traffic/mobility applications are working in the main cities (Turin, Milan, Rome, etc.), where public transport and traffic management are being managed taking into account the mutual interactions. Remarkable are the activities of the 5T Consortium of Turin ( <a href="http://www.5t.torino.it">www.5t.torino.it</a> )

# Question 2 (Part II)

Are there applications of integrated traffic/mobility systems?

Country	Applications
<b>The Netherlands</b>	<ul style="list-style-type: none"><li>•Park and Rail systems.</li><li>•Multimodal trip information.</li></ul>
<b>Romania</b>	UTC-PTM and ticketing system for public transport (Bucharest).
<b>Sweden</b>	Missing info (see question 4).
<b>UK</b>	<p>Many authorities are using area wide traffic management and control systems. These can help deliver multiple policy objectives, for example reducing congestion and delays to traffic, reducing pollution, improving public transport operation.</p> <p>Many of these are within UTMC/SCOOT applications.</p> <ul style="list-style-type: none"><li>•UTMC <a href="http://www.utmc.gov.uk">http://www.utmc.gov.uk</a> and <a href="http://www.utmc.uk.com/">http://www.utmc.uk.com/</a></li><li>•Gating in SCOOT <a href="http://www.dft.gov.uk/stellent/groups/dft_roads/documents/page/dft_roads_504754.hcsp">http://www.dft.gov.uk/stellent/groups/dft_roads/documents/page/dft_roads_504754.hcsp</a></li></ul> <p>Emissions estimates in SCOOT <a href="http://www.dft.gov.uk/stellent/groups/dft_roads/documents/page/dft_roads_504756.hcsp">http://www.dft.gov.uk/stellent/groups/dft_roads/documents/page/dft_roads_504756.hcsp</a></p> <p>Bus priority in SCOOT <a href="http://www.dft.gov.uk/stellent/groups/dft_roads/documents/page/dft_roads_504755.hcsp">http://www.dft.gov.uk/stellent/groups/dft_roads/documents/page/dft_roads_504755.hcsp</a></p>

# Question 3 (Part I)

**Does your transport policy include infrastructural measures aimed at reducing the negative impact of mobility?**

Country	Strategies, Measures and Operations
<b>Czech Republic</b>	ITS solutions and safety aspects are mentioned and strongly supported, but no more detailed official document.
<b>Finland</b>	<ul style="list-style-type: none"> <li>•Noise walls against the noise of traffic</li> <li>•Protection structures and guidelines for road maintenance to ensure good water quality</li> <li>•Priority Systems for Public Transport in Traffic Lights</li> </ul>
<b>Ireland</b>	Missing info
<b>France</b>	<ul style="list-style-type: none"> <li>•Lanes on highway for bus routes</li> <li>•Temporary use of emergency lanes by drivers during peak hours</li> </ul>
<b>Italy</b>	Most of the cities have a transport plan including infrastructural measures
<b>Netherlands</b>	<ul style="list-style-type: none"> <li>•Noise reduction screens alongside the highways</li> <li>•Ecological Main Structure (for animals to move through), Ecoducts, Tunnels below green areas or heavy populated areas</li> <li>•Compensation for building road infrastructure with green type infrastructure: woods, parks</li> </ul>
<b>Romania</b>	<ul style="list-style-type: none"> <li>•Increase the rank of road through improving the capacity and quality of traffic</li> <li>•Build new roads and infrastructure elements               <ul style="list-style-type: none"> <li>–Transnational Motorways between Bucharest and Hungarian border</li> <li>–National Motorways between Bucharest and Constantza</li> </ul> </li> </ul>

# Question 3 (Part II)

Does your transport policy include infrastructural measures aimed at reducing the negative impact of mobility?

Country	Strategies, Measures and Operations
<b>Sweden</b>	<ul style="list-style-type: none"><li>•Park and ride facilities built near large roads outside city centre. Good accessibility to public transport</li><li>•Network of pedestrian and bicycle paths: good network continuously improving</li><li>•Improving accessibility for buses: additional bus lanes, widening of lanes, improvements of street design</li><li>•Bypasses</li><li>•Road tunnels for better local air quality (Stockholm, Gothenburg)</li><li>•Noise barriers. Over 580 million SEK spent on reducing indoor and outdoor noise levels:<ul style="list-style-type: none"><li>– by changing windows</li><li>– building noise barriers and fences</li></ul></li></ul>
<b>UK</b>	<p>A number of projects and authorities have provided information to travellers to help them make better informed travel decisions.</p> <p>There are numerous examples:</p> <ul style="list-style-type: none"><li>• <a href="http://www.transportdirect.info">www.transportdirect.info</a></li><li>• Winchester Movement and Access Plan <a href="http://www.clearzones.org.uk/casestudyhampshire.htm">www.clearzones.org.uk/casestudyhampshire.htm</a></li><li>• <a href="http://www.reading-travelinfo.co.uk">www.reading-travelinfo.co.uk</a></li></ul>

# Question 4 (Part I)

Are there on-line environmental information services for drivers in your country?

Country	Strategies, Measures and Operations
<b>Czech Republic</b>	<ul style="list-style-type: none"> <li>•General information transmitted by radio.</li> <li>•Environmental conditions measured in big cities (sensors within road tunnels controlling ventilation systems and green light on the access)</li> </ul>
<b>Finland</b>	<ul style="list-style-type: none"> <li>•Major cities: quality of air is measured and the information is available in real-time.</li> <li>•Finnish Road Authority has more than 300 weather stations and cameras to follow weather conditions</li> <li>•Finnish Meteorological Institute has its network of weather stations.</li> </ul>
<b>Ireland</b>	Missing info
<b>France</b>	In case of air pollution exceeding regulated levels, speed limit on highways is temporarily reduced and new limit is posted on variable displays on road side
<b>Italy</b>	<ul style="list-style-type: none"> <li>•On-line real time situation concerning the main gas emissions as relieved by the monitoring network (Milan): <a href="http://www.ama-mi.it/infoambiente/default.asp">http://www.ama-mi.it/infoambiente/default.asp</a></li> <li>•5T provides traffic warnings including information on zones closed to vehicles not satisfying ecological requirements ( <a href="http://www.5t.torino.it/5t/it/avvisi">http://www.5t.torino.it/5t/it/avvisi</a> )</li> </ul>
<b>Netherlands</b>	•Smog-alerts
<b>Romania</b>	<ul style="list-style-type: none"> <li>•Web cameras for traffic information (Bucharest and Suceava)</li> <li>•Systems for environmental information of general public, inclusive driver, about the level of NOx in different places of the city (Bucharest, Craiova, Suceava, Brasov and Drobeta Turnu Severin).</li> </ul>

# Question 4 (Part II)

Are there on-line environmental information services for drivers in your country?

Country	Strategies, Measures and Operations
<p><b>Sweden</b></p>	<ul style="list-style-type: none"> <li>•Website for information: <a href="http://www.trafikenu.se">www.trafikenu.se</a></li> <li>•Sweden has a national travelling guide, Resplus, <a href="http://www.resplus.se">www.resplus.se</a> encouraging public transport and reducing the dependence of individual car travelling. Travelling on-line can be planned with train, long distance bus, boat and public transport from door to door.</li> <li>•The Swedish Consumer Agency (Konsumentverket) have a long tradition of consumer information on cars including fuel consumption, CO2 emissions and environmental class of all new available vehicle models in Sweden. The information started as an annual brochure in 1978 but has for a number of years been available as an interactive website (<a href="http://www.konsumentverket.se">www.konsumentverket.se</a> ). Nowadays also information on older models for the market of used cars is available.</li> <li>•Swedish Road Administration (SRA) has the sectoral responsibility for the effects of road transport on environment in Sweden. Therefore also SRA website includes a lot of information on environment and road transport. Also advices how to act in with more environmental responsibility. <a href="http://www.vv.se">www.vv.se</a></li> </ul>
<p><b>UK</b></p>	<p>There is limited on-line environmental information available but not necessarily in the detail that would be required to influence driver behaviour.</p> <ul style="list-style-type: none"> <li>• <a href="http://www.airquality.co.uk/archive/index.php">www.airquality.co.uk/archive/index.php</a> (general summaries of current air quality by area)</li> <li>• Consumer information on new car CO2 emissions is available <a href="http://www.vcacarfueldata.org.uk/">www.vcacarfueldata.org.uk/</a> .</li> <li>•The Department for Transport is also funding the national door to door car and public transport journey planning website Transport Direct to present travellers with information about the climate change impacts of their journeys. For motorists a tool will be developed to show users how much fuel they will use on particular journeys and how much caCo2 they will generate. <a href="http://www.transportdirect.info">www.transportdirect.info</a></li> </ul>

# Question 5 (Part I)

**Is driver education and support for environment-friendly driving behaviour part of the driving school training? Are the other courses for the same?**

<b>Country</b>	<b>Strategies, Measures and Operations</b>
<b>Czech Republic</b>	Lectures oriented to optimization of traffic in view of environment (Faculty of Transportation Sciences of Czech Technical University ).
<b>Finland</b>	Economic driving is a part of the education given those who aim to have a driving license.
<b>Ireland</b>	Missing info
<b>France</b>	Not really, but such training is delivered to Public Transport Bus drivers in order to reduce fuel consumption.
<b>Italy</b>	<ul style="list-style-type: none"><li>•No mandatory environment friendly part in the driving school training.</li><li>•Special training centres supply for environmental friendly driving courses, especially addressed to professional drivers.</li></ul>
<b>Netherlands</b>	<ul style="list-style-type: none"><li>•“The new driving” advertisement campaign (Ministry of Traffic and Water management).</li><li>•Driving schools integrated this concept in their driving instructions.<ul style="list-style-type: none"><li>–Low revolution shifting gears, gradually and gently applying throttle, compliance with speed limits and better anticipation enabling to release the throttle when applicable in stead of keeping throttle position to the last seconds and then applying full brakes. For instance on the approach of traffic lights that have turned to red or at stopped traffic/vehicles</li></ul></li></ul>
<b>Romania</b>	<ul style="list-style-type: none"><li>•Driver education is resumed at knowledge of legislation and rules about driving on the roads and to improve driving skills of people. There are several courses in schools and universities.</li></ul>

# Question 5 (Part II)

**Is driver education and support for environment-friendly driving behaviour part of the driving school training? Are the other courses for the same?**

Country	Strategies, Measures and Operations
<b>Sweden</b>	<ul style="list-style-type: none"><li>• Knowledge both in practice and in theory of eco-driving is mandatory from year 2006 for getting a passenger car driving licence (besides knowledge of the impact of road transport on environment in general) and therefore also included as part of the driving school training. This will in the coming years be expanded to other vehicle types.</li><li>• Since 1999 Eco-Driving and later also other concepts for environment-friendly driving have been available in driving schools for professional training of those already having driving licence. Courses are available both for passenger cars and heavy duty vehicles.</li></ul>
<b>UK</b>	<ul style="list-style-type: none"><li>• Fuel efficiency - or eco-driving - is to be made part of the UK driving test from 2008.</li><li>• Goods Vehicles: The Department for Transport has developed the Safe and Fuel Efficient Driving scheme (<a href="http://www.safed.org.uk">www.safed.org.uk</a>) and funded the training of 6000 truck drivers to demonstrate the benefits. The Government is currently funding the training of drivers in the vans sector and the aggregates sector.</li><li>• The Department for Transport funds the 'Freight Best Practice' programme to promote operational efficiency within freight operations in England. Information is available via <a href="http://www.freightbestpractice.org.uk">www.freightbestpractice.org.uk</a></li></ul>

*Thank you  
for your attention*

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