EUROPEAN COMMISSION

DIRECTORATE-GENERAL
JOINT RESEARCH CENTRE

Report of the STTP Stakeholder Workshop on ITS across modes

Participants:

Stakeholders: K. Dionelis (ASECAP), H. Meyer (ERTICO), L. Lochman (CER), J. van Ieperen (UITP), C. Klenner (ETTSA), S. Haon (POLIS)

Chairs: G. Ocakoglu (DG MOVE), F. Sgarbi (DG RTD), J. Jaaskelainen (DG INFSO)

Rapporteur: P. Dilara (JRC)

Venue: Brussels, 14 February 2011

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1. SCOPE OF THE WORKSHOP

The European Commission is currently developing a Strategic Transport Technologies Plan (STTP). The adoption of the STTP is foreseen for mid-2011 and it will play a main role in the definition of the Commission's future transport research and innovation priorities. The aim of the STTP is to match the most appropriate policy instruments to the needs of different technologies at different stages of the development and deployment cycle. It will address the entire innovation chain, from basic research to market uptake. The STTP will facilitate coordination of European and national public and private efforts and help achieve greater leverage through flagship EU instruments.

The STTP will include roadmaps for a set of leading edge technological solutions, including the supporting organisational, financial and governance frameworks, which are necessary for a future competitive and clean European transport system. The availability of appropriate research coordination structures has been identified as a potential critical issue for the transition to such a transport system.

The involvement of the stakeholder community is crucial to reach a shared European vision on the role of transport technologies as a follow-up to the White Paper and to produce a credible and widely supported STTP. At the same time, the process of preparing the STTP will help to identity the measures needed from the different stakeholders to attain their goals, and will exploit synergies across them.
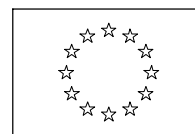
2. SETTING THE CONTEXT

A presentation on the STTP provided the stakeholders with insights on: rationale, objectives, structure, preparatory phase and indicative planning as well as expectations from stakeholders' hearings. It was emphasised that the term 'technology area' within the STTP is a comprehensive set of methods, practices and technologies with a shared focus of application.

Discussion during the workshop has been structured in accordance with a previously circulated questionnaire in:

(1)   Transport Vision and Activities: current status, development perspectives and expected impacts in first block;

(2)   competitive solutions;

(3)   Achieving the Vision, essentially focussing on: barriers, shortcomings, funding and organisational requirements;

(4)   Specific Questions on intelligent transport systems across modes.

The discussion therefore centred on how technology areas are expected to help the European Commission achieve its transport policy and transport research policy objectives, on the one hand, and how the European Commission can optimise resource use by investing in properly selected and prioritised technology areas via properly designed governance and funding schemes.

Stakeholders' advice is one of the inputs to the scientific process leading to the STTP Communication, as work is now focussed on identifying key technology areas in the ITS domain. Other input was requested by the end of February. It was made clear that an internet consultation will open soon for 8 weeks and stakeholders are also welcome to give their opinions either through the internet consultation or by sending emails to move-sttp@ec.europa.eu. The Commission will take into consideration any input received in time.

3. SUMMARY OF MAIN DISCUSSION POINTS

3.1. Transport Vision and Activities

The use of Intelligent Transport Systems has the potential to provide cleaner, safer, more efficient, more comfortable, safe and secure transport and with increased co-modal personal mobility. At the same time, the use of ITS in freight transport can improve its efficiency, safety and security both for long routes, as well as for in-city delivery. ITS have also the potential to support the implementation of electro-mobility, by providing assistance to the driver for finding the nearest energy source or optimising the energy management systems.

The Vision for ITS[1] is one of intelligent mobility towards fully informed people, towards zero accidents, zero delays, with reduced impact on the environment, where services are affordable and seamless, with privacy respected and security provided.

Linked to this vision, ERTICO has also set 4 interrelated goals:

- Cooperative Mobility (including X2X communication, cooperative monitoring, cooperative safety applications and cooperative traffic management)

- SafeMobility (including integrated road safety, safe urban mobility and road used behaviour)

- InfoMobility (including traffic and traveller information, geo-localisation, freight and logistics and access and demand management)

- EcoMobility (including eco-smart driving, eco-freight and logistics, eco-traffic management and eco-vehicles)

During the past decade a lot of effort has been concentrated in research and development of Intelligent Transport Systems and services. Several project have been funded in the last years and continue to be funded in the areas of: eco-mobility (eCoMove and the upcoming COSMO), freight (FREILOT, CityLog), multimodal traffic and travel information (i-Travel, in-Time, Viajeo) and on cooperative systems (CVIS, eCoMove, SPITS).

However, actual wide-scale deployment of ITS especially for multi-modal applications is lagging behind. In order to achieve in the future, proper development and deployment of ITS in Europe, it is necessary that many actors come together, such as local authorities, transport infrastructures, vehicle developers, information networks and telecommunication providers. Some of these players have higher stakes in a quick and efficient deployment of ITS (like local authorities and the public represented by POLIS and UITP). Cities for instance are looking for tools that can assist them in achieving their transport policy goals, which include reducing private car dependency, while maintaining an accessible city for all. However, governments on national, regional and local levels sometimes lack a strategic position on ITS and this can represent a high risk from the perspective of private investors. Especially for private stakeholders (such as telecommunication and informatics companies, or automotive companies) ITS, is seen currently as a non-profitable business case.

For the infrastructure developers and managers (represented by ASECAP) it is an issue of creating a level-playing field within each mode of transport and letting fair competition and innovation play its role in developing a cooperation framework among modes. It was clear however, that for some of the players the push of a legislative framework might be needed if

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[1] Created by ERTICO

they are going to be involved. A good example for this is the recent legislation for passenger rights, which gives push to develop passenger communication information systems.

In addition to the need for a viable business case, a driver for the deployment of ITS is the ability to offer an enhancement "quality of service" for the mobility solutions. The interoperability of systems and compatibility between modes are other crucial issues. They are crucial for the proper deployment of ITS throughout Europe, and need to be supported by proper standardisation, harmonisation, certification and guidelines. Both rail and aviation has since long used ICT (information and communication technologies) systems for traffic management and can provide lessons to be learned.

In the rail sector ICT is already implemented for the current operations. The rail sector (represented by CER) has structured these systems in a multilayer fashion. For instance, the ERTMS is necessary for the safety layer and is a "closed system", while the non-vital layers, such as traffic management, communication with the customers, freight operators and other transport modes are open. Furthermore opportunities provided by navigation and identification technologies such as Galileo and RFID, respectively, should not be overlooked as they could bring benefits to both vital and non-vital layers in rail.

For public transport operations, single ticketing and advanced travel information are key applications for the future. The evolution of new Internet technologies should also be followed closely to avoid a "bandwidth" generation gap in public transport.

Still, confidence of some stakeholders in the deployment of these systems is rather low. For road transport, and in particular for the evolution of cooperative systems, some stakeholders believe more in the V2V (vehicle to vehicle) systems, because they can be implemented rapidly, without the need of expensive infrastructure changes. On the other hand V2I (vehicle to infrastructure) has a completely different and more demanding deployment scenario. More complex future applications, like automated driving, although proven at an experimental phase under controlled conditions, are still a long way from deployment.

3.2. Achieving the Vision

From the discussion it was clear that while all stakeholders believe in the clear benefits for the society and the citizen which would be brought by the quick and efficient deployment of ITS, they also believe that the EU has the role to create a level playing field and also in safety applications.

For instance some of the current efforts of ICT service providers to centralise information for travel planning has proven a failure, because it take too long for the updates to be downloaded to the central server. A distributed system, when info remains where it originates and the central system then takes care of calculating journey planning would be much more efficient. The role of the EC would be in this case to make sure all necessary information is available throughout the EU, and to organise the availability of information by setting the proper regulatory framework. This is even more so true for freight, which is an excellent candidate for telematics operations as it has been liberalised for at least 2 years.
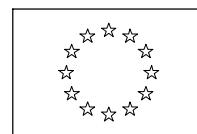
In general, it was pointed out repeatedly that the public sector should be involved, and not only the private, which mainly looks for a profitable business case. Within the private sector it is important to assure the participation of all important players, such as ICT developers, infrastructure, manufacturers, communication companies, etc. Still any regulation needs to be flexible enough to foster innovation. In this aspect public-private partnerships (PPPs) like ERTICO, can prove important in supporting the necessary research and deployment efforts and share a common vision.

For instance some of the following issues will be priorities for the future[2]:

- Communication bearers for ITS services

- Data warehouses/Data marketplaces

- ITS and electromobility

- Location referencing methods

- Public transport / multimodal traveller services

- eFreight

Overall the role of the EC is seen to be in promoting interoperability, assuring the availability of good quality data and quality assurance of the systems through standardisation in order to promote the research, innovation and deployment of reliable and efficient ITS services within and between modes for the European citizen, taking care to address properly intellectual property rights and privacy issues.

4. CONCLUSIONS AND NEXT STEPS

The vision of the stakeholders is an intelligent cooperative mobility with fully informed people, towards zero accident and delays, more efficient and with a reduced impact on the environment. Such future ITS will be affordable, seamless and secure, while respecting privacy. The European Commission should promote the deployment of interoperable systems, making sure that all necessary stakeholders are involved based on appropriate legislation.

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[2] Prioritised within the ERTICO position paper, but most of them mentioned also by other stakeholders in their position papers (POLIS, ERRAC, etc.)

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APPENDIX 1

Stakeholder hearing
Intelligent Transport Systems across modes

Monday, 14 February 2011, 14.00 – 17.30
Meeting Room DM24 3/47

- AGENDA -

Chairpersons: *J. Jaaskelainen*, DG INFSO
       G. Ocakoglu, DG MOVE
       F. Sgarbi, DG RTD

14.00 – 14.10 Welcome and introduction of the participants
       (*All*)

14.10 – 14.30 Objectives of the STTP, purpose of the hearings
       (*M. Rommerts,* DG MOVE)

14.30 – 15.30 General questions (Part 1 of questionnaire)
       (*All*)

15.30 – 15.45 *Coffee break*

15.45 – 17:00 ITS specific questions (Part 2 of questionnaire)
       (*All*)

17.00 – 17.20 Open floor for further stakeholder interventions
       (*All*)

17.20 – 17.30 Summary
       (*chairs, M. Rommerts*, DG MOVE)

APPENDIX 2

Intelligent Transport Systems across Modes
Questionnaire

1. INTRODUCTION

These questions are designed to facilitate the stakeholder hearings. We would appreciate, if you could send us your answers to the questions 1 week before the meeting. Please answer them in the way you consider most appropriate to convey your key messages. It would be helpful, if you could identify to which mode/technology area your answer relates to. To help answering the questions some suggestions are given regarding what could be explained under each question.

2. GENERAL QUESTIONS

2.1. Transport Vision and Activities

2.1.1. Current state of play within transport?

Indicate: market readiness/penetration of the different technologies within the activity area for each mode or cross-modal issues; on-going or planned public, public-private or private initiatives relevant for the STTP; type and scale of initiatives at which level - International/EU/MS/Regions

2.1.2. Likely evolution of transport?

Indicate: major trends in the transport sector (technology and actors); evolution of transport needs (volume and quality); likelihood of structural changes as a result of new business models, globalisation, competition, ageing population; influence of the market structure on future market potential; possible effects of legislation etc

2.1.3. Key technology penetration targets (2020, 2030, and 2050)? What are the main assumptions underlying these estimates? What are the main barriers to overcome to achieve them?

Indicate: main constraints and showstoppers, risks, needs for technological breakthroughs, resource/feedstock availability, consequences for the current infrastructure, etc

2.1.4. If these targets are met, what will be the contribution to EU policy goals in the field of transport?

Indicate*:* Contribution to (1) achieving low-carbon transport (reducing CO2 emissions and dependency on imported oil), (2) achieving seamless mobility in a Single European Transport Area (establishment of a seamless European TEN-T network that is intelligent, efficient, and green, single European 'transport ticket' for passengers and freight), (3) competitiveness and innovation (e.g. future market sizes for a given technology, European share of new market, additional jobs, export revenues), (4) other policy goals (such as reduction of congestions, local/urban pollution, noise reduction, damage to cultural heritage, etc.)

2.1.5. Contribution to the overall ('well to wheel') energy efficiency?

Indicate: Effects on energy efficiency in electricity and fuels supply, as well as in use; evolution over time and depending on market penetration, etc

2.1.6. Are there any interactions with other community policies and initiatives?

Indicate*:* Potential contribution of the technology to other EU policies; need for measures and initiatives in other policy areas to support the market penetration of the technologies

2.1.7. Which are the main competing or synergetic technologies within the activity area? (in relation to the indicated market penetration targets)

2.2. Achieving the Vision

2.2.1. Is your vision achievable under a 'business as usual' scenario?

***Indicate****:* Current support programmes and policy measures and their expected impact

2.2.2. Are there barriers to innovation? Is there a need for change in the innovation system?

Indicate*:* For the mode in question any weaknesses in the current system

2.2.3. Does the considered mode/sector already benefit from or plan to set-up initiatives to bridge the gap between the current state of technology and a cost-effective market entry? What would be the critical mass (e.g. investment) needed for such initiatives? What new approaches could be considered to accelerate innovation?

Indicate*:* i.e. how could the STTP help the sector; which actions of it would be most effective; what impact could be expected with respect to 'business as usual (i.e. No STTP)?

2.2.4. What actions need to be carried out at European level? What actions would be better implemented at national and or regional level? Is there a
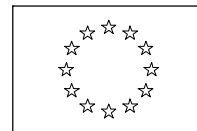
need, or a potential benefit, to integrate or to better coordinate action carried out at different levels?

    2.2.5. International Dimension - Is there a potential for international cooperation? What type of cooperation?

Indicate: Major initiatives in other countries; assessment of specific opportunities for international cooperation

3. SECTOR/ISSUE SPECIFIC QUESTIONS

ITS across modes:

1. In order for systems fostering seamless and multi-modal mobility to be implemented, measures to align competition and cooperation between different modes of transport need to be put in place. How do you envisage such processes?

2. What are the major ITS applications or enabling underlying ICT component, in a given single mode of transport, which could be translated in other modes of transport?

3. What do you consider to be the main systems or services for multi- and intermodal ITS? Where could a concerted effort of different transport sectors have the most impact for the deployment of innovations? Where do you see a greater role for EU policy in this respect?

4. What can the role of the European Transport Corridors be in the development and implementation of ITS?

APPENDIX 3

List of Respondents

- ASECAP
  (European Association with tolled motorways, bridges and tunnels)

- CER
  (Community of European Railway and Infrastructure Companies)

- ECTAA
  (Group of National Travel Agents' and Tour Operators' Association within the EU)

- ERTICO
  (Network of Intelligent Transport Systems and Services Stakeholders in Europe)

- POLIS
  (European cities and regions networking for innovative transport solutions)

- UITP
  (International Public Transport Association)