EU ITS Action Plan

Polis position

I. INTRODUCTION

Polis welcomes the initiative of the European Commission to propose a European ITS Action Plan.

1. It welcomes this initiative considering that:

- ITS deployment has been slower for infrastructure (eg, traffic management) and public transport (eg, real-time bus information) than for in-vehicle systems, therefore, the former two require special attention in the ITS Action Plan.

- Previous EU action on ITS has failed to consider sufficiently local/regional authorities as:

    - development of ITS has essentially been industry-led focusing on in-vehicle and cooperative systems with insufficient involvement of local/regional transport authorities and

    - deployment of infrastructure-based ITS has focused on the trans-European road network.

- Yet main congestion and air quality problems are concentrated in urban and suburban areas and local/regional authorities are responsible for managing the roads in a way that is consistent with policy goals. Local authorities are regulators of their mobility network and infrastructure managers. In both cases they pursue policy goals..

2. Polis also welcomes the ITS Action Plan as an opportunity to accelerate the deployment of ITS solutions to support the achievement of unavoidable policy objectives: fighting congestion and containing the environmental impact of mobility. This initiative is therefore welcomed as a step towards the overall goal of changing the urban and regional mobility patterns, For this purpose, a number of initiatives and changes must happened, including the fast and broad deployment of ITS solutions for a more sustainable urban and local mobility.

This requires to move away from a business as usual approach and to achieve very significant progress in the short term, ideally within the next five years.

3. ITS can efficiently support a more efficient urban and local mobility through:

- Optimised use of infrastructure: better European urban and regional ***Network*** Management (policy target 1)
- The efficient implementation of demand management schemes (access restriction, tools and congestion charging, parking, public transport, etc.) (policy target 2)
- Enhancing the use of more environmentally friendly and energy efficient transport solutions (policy target 3)
- Improve road safety and the safety/security of commercial transport operations (policy target 4)
- Providing more reliable real-time traffic information in a safe way (policy target 5-1)
- Providing comprehensive travel information across the more sustainable modes (public transport, walking, cycling) that compares favourably with the information available to the car driver, both in terms of journey planning, and real-time in-journey (policy target 5-2)
- Improving the efficiency of the logistic chains (including the improvement of urban and local freight delivery), (policy target 6)

If the improvement of urban mobility would become a specific additional target, this would require a complete redefinition of all the targets. It is a fundamental issue of course, and possibly the strongest and most complex challenge for the future of mobility in Europe. As such, most of the targets listed above are related to urban mobility. This should remain the case or the creation of a new target would undermine rather than strengthen the importance of the challenge on urban mobility.
If the EC was to focus efforts on a short term ambitious objectives regarding ITS deployment, then giving priority to addressing the challenge of urban mobility in priority would be more meaningful.

Polis members consider that the ITS Action plan should:

- Be directly related to the policy objectives set in the Green Paper on Urban Mobility;
- Include an assessment framework for prioritising initiatives against policy objectives, including those of the Green Paper on Urban Transport;
- Focus on deployment in urban areas of **proven** ITS applications
- Ensure that stakeholders are **fully aware** and **competent** in the management and exploitation of ITS systems
- Deal comprehensively with legacy and operational & maintenance realities within urban areas.

More specifically:

- Have a clear emphasis on **Multi-modal dimension**. Currently in the discussion paper there is an excessive focus on car based applications. Public transport and other modes of transport are hardly considered. This is a major shortfall for two reasons:
    - It creates the risks of missing the opportunity to focus on policy objectives, in particular environmental objectives;
    - It creates the risk of increasing the barriers to modal integration while the objective should be to use ITS to support modal integration to allow to move towards mobility network management tools at the urban level, focusing more on people and goods than on vehicles.

- **Apply more strictily the criterias it sets for priority action, in particular regarding core ITS systems and applications. Existing and mature technologies** that have proven effective in meeting defined policies should be the focus. This is important to achieve a breakthrough in improving mobility in urban areas in the most critical period which is the next decade. Cooperative systems are still at the research stage and do not meet these criterias. Many issues are still to be resolved (role of infrastructure vis-à-vis role of infrastructure providers vis-à-vis intelligent vehicles).

- provide a **lead and framework** for improved coordination between different levels of public authority and better cooperation between industry and road authorities.

In response to the discussion paper on the ITS Action plan and the workshop of the 26th of March, Polis members would like to stress the importance of some horizontal areas which should be considered as priorities enabling the deployment of more specific applications.

II. Barriers to the uptake of ITS

1. Barriers to the deployment of ITS at local/regional level

1. **Cost: the high capital and on-going revenue costs associated with ITS (operation, communications, maintenance, upgrading, etc) has been an important obstacle.**

2. **There remain a poor awareness of ITS potential benefits for urban and regional mobility among decision makers (who decide on budgets and programmes) and planners (who put forward the programmes). ITS is still too often perceived as a complex technical subject and ITS managers**

are not given the recognition their department deserve to contribute fully to the achievement of local and urban mobility policy objectives.

3. **Too often, de facto monopolistic or oligopolistic situations on the ITS markets for some applications and in many countries create the unsatisfactory situation in which the local/regional authorities of that country must 'adapt' to the systems provided by the supplier. This prevent the broad uptake of ITS and prevent a more efficient use of ITS to achieve policy objectives.**

4. There is a lack of evidence regarding the efficiency of some ITS applications (except for basic traffic management systems). The absence of data about the impact of ITS by objective and/or application is an obstacle.

5. Policy makers want quick returns on investments (at least within lifetime of mandate) which many ITS applications cannot deliver due to the time required for designing, installing, testing and the full operation of the systems.

6. Transport budgets tend to prioritise 'cleaner' modes (eg, public transport) rather than traffic management instead of using ITS to support efficiently cleaner modes.

7. ITS and the environment: By improving traffic flow, there is a fear that ITS can reduce the level of vehicle polluting emissions on the one hand but attract more vehicles and thereby more pollution on the other. This is one of the element stressing the need for robust decision support system at the urban level.

8. Shortage of skilled labour

9. Risk of rapid obsolescence

10. Absence of standards

2. Barriers to the effectiveness of ITS deployed at local/regional level

11. A rather poor coordination and partnership among the different agencies involved in ITS (eg, traffic authority/municipality, public transport authority and police) is an important issue. They often work towards their own objectives rather than a common goal. This is partly a consequence of the low priority of ITS in the local policy agenda and in the eyes of decision-makers.

12. The lack or poor coordination among neighbouring road authorities and local/regional-highway authorities is an obstacle. This starts to be addressed in some countries but remain too often an important problem.

13. The poor interoperability of systems forces authority to remain with a specific supplier. This issue starts to be addressed in some countries, for instance in the UK with UTMC.

14. Systems failure and systems security (eg, hacking prevention)

III. HOW CAN EU ACTION SUPPORT THE DEPLOYMENT OF ITS AT LOCAL/REGIONAL LEVEL

The instruments available at the EU level are the provision of financial support, standardisation, legislation and soft measures.

Polis members consider that priorities should be given as much as possible to the provision of financial support, soft measures - the word “soft” is unfortunate and could be replaced by “incentives-, and standardisation.

1 Financial assistance

A - The cost of ITS is one of the most important barriers to the deployment of ITS, especially among smaller transport authorities. EU financial assistance in the past (be it for research, development or deployment) has been shown to provide substantial leverage for investment from both the public and private sector. The administrative procedures for accessing this funding should be simplified as this is perceived as complex and time consuming, which combined with the difficulties in securing local funding creates a barrier.

B - Supports research to:

a. Establish a methodology for quantifying the benefits of core ITS applications and technologies – such a methodology should be based on outcomes rather than outputs
b. Benchmark ITS
c. Strengthen the evaluation and cost benefits analysis of ITS systems. Existing information are not sufficient and should be much more robust. This is absolutely necessary for further ITS deployment. As in the US, a significant part of the financial effort dedicated to ITS should be devoted to their evaluation and to cost benefits analysis. They should support an evaluation of the lifelong costs of systems (maintenance, etc.).

2. Incentives

A – Policy

a. Setting EU-wide targets for ITS deployment
b. Strengthening the role of local/regional road authorities in EU-supported ITS activities.
c. Providing a framework for facilitating joined up strategic and operational approaches between national, regional and local ITS activities, eg, encouraging the sharing of data (through Datex II for instance).
d. Bringing together industry and public authorities to debate and reach agreement on:
    1. a common, open platform for in-vehicle services (both commercial and public) to avoid the multiplicity of OBUs.
    2. a framework for sharing traffic data
    3. a framework for developing commercial traffic information and route guidance services that take into consideration local/regional policy objectives.
    4. a shared ITS vision and strategy
    5. Simplification of tendering procedures for ITS.
    6. Making an ex-ante evaluation of an EU-funded ITS project mandatory (provided a methodology exists)

B – Networking

a. Promoting ITS and showcasing good (and bad) practice in order to raise political awareness.
b. Targeting top management within urban authorities in the value and opportunities of ITS

3 - Standards

- Definition of EU standards of specifications for core ITS systems specifications. Specifications should be functional rather than technical

- Definition of standards for VMS

IV. PRIORITIES

1. The ITS Action Plan should focus on using ITS as tools to achieve policy goals. This approach, repeated many times during the period of consultation on the ITS Action Plan, is still too often overlooked with a clear tendency to move away from it and focus on ITS for the sake of ITS exclusively.

The policy objectives at the European level are set in the Lisbon Agenda, as recently amended by the European Summit of the 13th and 14th of March when the EU heads of State agreed to include a new emphasis on Climate Change and environmental concerns in the Lisbon Agenda.

At the urban level, the policy objectives defined in the European Green Paper on urban transport, to which surprisingly and worryingly no mention is made in the discussion paper circulated on the ITS Action Plan, should also be taken into consideration.

Therefore the creation of a new mobility culture, changing mobility and travel behaviours, and modal shift should be important policy objectives that can be efficiently supported by the deployment of Intelligent Transport Systems.

2. To achieve these overarching policy objectives, policy targets can be defined, as this is proposed in the discussion paper.
Polis considers that several so-called horizontal areas, are essential to achieve a breakthrough in the deployment of Intelligent Transport Systems. They would enable other actions to achieve more specific policy targets.

It is therefore suggested that the Action Plan first identity and recognize the importance of these horizontal areas, and then identify additional necessary action to achieve specific policy targets.

I - Policy objectives:
- the Lisbon agenda, including climate change and environmental concerns;
- the Green paper on urban transport
- the Mid-Term review of the White Paper on the European Transport Policy

II - Policy targets

III - Cross cutting initiatives:

1. Exploitation of Synergies to be obtained by combining applications and services in the areas of commercial and private transport
2. framework for optimized used of latest ***mobility*** data (access to data, provision of traffic and travel information, data security, protection of individual's data and liability)
3. Strengthening public authorities' capability in ITS
4. Framework for programme concertation and coordination

IV - Additional specific actions to achieve specific policy targets :

The action plan develop high level initiative and a clear timeframe for the implementation of the cross cutting initiatives in the near future (2-5 years), to ensure that the tools will be there to achieve the policy targets.

Polis will here focus on horizontal areas and actions which are priorities for regional and urban mobility.

Priority should be for applications that have shown to be effective in managing traffic demand, promoting multi-modality and improving road safety.

3 - Cross cutting initiatives:

A - Exploitation of Synergies to be obtained by combining applications and services in the areas of commercial and private transport

Polis stresses the importance of the development of a platform for electronic payment of mobility services.

B - framework for optimized used of latest ***mobility*** data (access to data, provision of traffic and travel information, data security, protection of individual's data and liability)

- - cooperation between all relevant actors for defining frameworks for the exchange of data for the following purposes:
    - exchange of data between public authorities and freight operators (both for interurban transport and urban delivery)
    - exchange of data between public authorities
    - exchange of data between public authorities and private persons for improved travel information
    - exchange of data for reliable updated digital maps

C - Strengthening public authorities' capability in ITS

- Polis members call upon the European Union to support **an ITS platform for European cities** to exchange and benchmark their policies with the goal of raising the level of awareness on Intelligent Transport Systems and to facilitate the deployment of ITS solutions. The platform would encourage dialogue between towns and cities and allow for instance to set references and indicators to better quantify the potential of ITS for sustainable urban transport planning.

- Such a programme should be encouraged by the EU to lead to the definition of a **reference framework and roadmaps for European cities for the deployment of ITS solutions,** which would consist in a methodology and would help decision-makers to choose and implement the ITS tools best suited to the local challenges and needs. This could be part of the broader activities defined in the framework of the ITS Action Plan.

The platform would be a technology watcher. As such, it could be a reference for cities and local authorities to develop **pre-commercial procurement strategies** with the same goal of accelerating the market deployment of new technologies.

D - Framework for programme concertation and coordination

There are numerous bodies in existence today which represent ITS organisations exclusively or in part. However, there currently is no body that represents proportionally and effectively all parties (industry, public service agencies and all levels of government – national, regional and local).
Any new EU-level mechanism would need to have demonstrable benefits (financial or intellectual knowledge transfer). It could be the European ITS Committee and would be welcome by Polis.

This new body should gather together all stakeholders, with a representation from cities and regional public authorities.
It should provide a strong and formal coordination between various relevant on-going initiatives at the European level (eSafety, technology platforms), without duplicating any work.

It should provide the sector with an overall vision for the future deployment of ITS.

High level representatives of cities and regions will be willing to take part to this body and play an active (and not only reactive) role.

2 - Additional specific actions to achieve policy targets:

- Optimised use of infrastructure: better European urban and regional ***Network*** Management (Target 1)

  i. Traffic management systems: dynamic UTC, monitoring and data collection (traffic & air quality), access control systems (area-wide, bus priority at traffic lights, etc), dynamic routing, incident management, cooperative systems,
  ii. Multi-modal applications: door-to-door trip planning, RTTI, route guidance, ITS for soft modes
  iii. Traffic management systems: the transition from traffic planning/management to multi-modal network planning/management with emphasis on (1) movement of people and goods and sustainable modes rather than movement of vehicles, (2) short-term (future) incident prediction systems and (3) decision support systems for averting/handling incidents; enhanced cooperation between traffic management systems and in-vehicle systems of commercial vehicles, notably, sharing of data (traffic, vehicle and load characteristics, route information) and route guidance.

- The efficient implementation of demand management schemes (access restriction, tools and congestion charging, parking, public transport, etc.) (Target 2)

  - platform for electronic payment of mobility services

- Enhancing the use of more environmentally friendly and energy efficient transport solutions (Target 3)

- Improve road safety and the safety/security of commercial transport operations (Target 4)

  - Road safety and enforcement: variable speed management, tunnel safety systems, cooperative systems,

- Providing more reliable real-time traffic information and providing reliable travel information for journey planning (Target 5)

  Multi-modal applications: real-time travel information (pre-trip and on-trip); integrated payment systems for different transport services (public transport, road pricing, parking, public bicycle schemes, etc); 'sustainable' route guidance that is not just based on congestion levels but also takes into account other factors such as avoiding residential areas (especially for HDV) or air quality objectives.

Here are examples of ITS and key enabling services that supports more sustainable modes of transport.

Multi-modal Trip	**Examples of Key Service or Enabling ITS**
1) Car Park – Walking to Work – Cycling	Cycling Storage, Cycle Parking, Travel Route Planning
2) Car – Park&Ride – Walking to Work – Cycling	VMS & Parking Guidance, Cycle Parking
2) Taxi – Walking – Cycling trips in town	Cycling Storage, Cycle Parking
3) Shared Transport/Lift Sharing – Walking – Cycling	ITS based Lift Management Service,
4) Bus – Walk – Car Sharing Club – Taxi	Travel Route Planning, Web based Car Sharing
5) Demand Responsive Transport to Work - Cycling	DRT Service, Traffic Dispatch Centre service
6) Train – Cycling to Work – Train – Cycling Home	Travel Route Planning, Real-time Passenger Information
7) Bus – Cycling to Work	Real-time Passenger Information, Cycle Storage
8) Bus - Walking to Work	Real-time Passenger Information

- Improving the efficiency of the logistic chains (including the improvement of urban and local freight delivery), (target 6)

It should be noted that the European Logistic Action Plan only refer to the upcoming action plan on urban transport when it comes to urban freight delivery. It is very important that urban freight delivery is comprehensively considered in this ITS Action Plan, in coordination with the preparation of the Action plan on urban transport. Urban freight delivery is a sector within urban mobility which can greatly benefit from the deployment of ITS in cities.

Annex
Elements submitted by Polis in the framework of its answer to the public consultation on the European Green Paper on urban transport

9. Are further actions needed to ensure standardisation of interfaces and interoperability of ITS applications in towns and cities? Which applications should take priority when action is taken?

1. Intelligent Transport Systems can efficiently contribute to the creation of an integrated mobility network, which is necessary to support modal shift and a new urban mobility culture.

To achieve an integrated mobility network with the support of Intelligent Transport Systems, the various ITS tools must be compatible and it should be possible to integrate them with each other.

To achieve an integrated mobility network, there should be tools for integrated network management, integrated exchange and provision of information and integrated payment tools for the use of mobility services and transport infrastructure.

The full integration of these tools is prevented by technical barriers. Several of them could be removed in the future with future systems if standards and interoperability norms are adopted at the European level.

Standards and norms for interoperability can accelerate the deployment of new solutions for this integration and bring down prices, therefore also accelerating market deployment for new systems.

Initiatives to promote interoperability norms and standards are necessary but should take into account the cost of their implementation for cities which have already made considerable investments in ITS systems. These cities should be given time to reap the benefits foreseen in the business cases for their original investments.

2. *Integrated network management*

Intelligent Transport Systems must allow to move towards an integrated network management focusing on the movement of people and goods and not only on the movement of vehicles as it is often the case.

For this purpose, it is necessary to develop the standards and norms of interoperability to integrate network management tools and in particular the exchange of data between Public transport passenger transport real time scheme, UTMC, and electronic parking management.

Standards and norms of interoperability should allow to move towards this integrated network management with the deployment of cooperative systems, and of applications for nomadic devices.

The interoperability of the various components of a complex ITS system at the European level, including the interoperability of the components of traffic management systems, is essential for the rapid deployment of the technologies.

It would also be necessary to take initiatives at the European level to accelerate the certification process of material which is in used in other countries. This would again contribute to remove barriers to the efficient implementation by local authorities of the instruments of their choice to encourage a new urban mobility culture.

3. *Integrated payment*

Standardisation of interfaces and interoperability of ITS applications is a key element to improve Co-Modality (inter-, multi-modality) of collective and individual public modes by establishing a common

information technology surface, which would integrate good information, easy access and simple payment (for one-way trips, pay-as-you-go).

Payment modes should be as simple as possible for the user. There should be a move towards common payment tools for various mobility services (public transport, parking, congestion and infrastructure charging when applicable, …).

The ticketing policies and systems used in individual cities within Europe have over many decades evolved to form a highly diverse mix. Cities differ from each other in the technology they use, in the prices they charge and in the products they offer for urban travel.

Any initiative in this area should take into account the interoperable standards provided by the payment industry and the new solutions offered by mobile payment.

Several paths should be explored, interoperability of payment systems, the use of various technologies, or moves towards a fare collection system based on payment industry standards. The potential of each of these approaches in terms attractiveness for customers, technical and economic efficiency, should be thoroughly evaluated.

At the European level, harmonised technical standards for electronic public transport ticketing (integrating all modes, local and interurban), harmonised technical standards for interfaces and interoperability of systems for congestion charging and road pricing, and harmonised technical standards of interfaces and interoperability for cash-free payment of fees e.g. by mobile phone and credit-/debit-card would be welcome by Polis members.

Polis believes the European Commission should also consider the development of a European standard by which any city's ITS software, in particular ticketing softwares, could be delivered "over the air" as a software application to suitable contactless mobile phone handsets. With a standard agreed and in place, it would be for cities to package their own ITS application in the appropriate way and make it available through national mobile network operators for download by visitors on the internet or at kiosks at convenient places both before and during their visit. The European Commission is ideally placed to engage with the mobile operators on a pan-European basis on this concept.

The use of mobile phone for mobile payments of transport services such as parking or public transport should be facilitated by harmonization of national legislations in the European Union on the integration of these services in phone bills

4. *Integrated mobility information*

The answer to the previous question details the need for integrated information for passengers. Standards and/or norms of interoperability to integrate information systems on public transport, traffic and soft modes mobility solutions need to be developed to provide on the short term the integrated information needed for travelers.

For freight urban delivery, integrated information systems area also necessary, but they should focus on the exchange of information between businesses and public authorities/ infrastructure managers, which will require an harmonized European platform, as explained in the question on Green Zones of this consultation process.

Polis contribution to the upcoming ITS action plan and Polis answers to the consultation on the action plan will detail further what actions can and should be taken at the European level in this area.