



---

SWEDISH GOVERNMENT  
INQUIRIES

---

ITS Board N2010:06

# ITS Board Report 2012

## Summary

**Table of contents**

- 1. Background..... 2
- 2. The ITS Board..... 2
- 3. A developed cooperation between authorities and enterprises ..... 2
- 4. A developed cooperation with the help of MoU ..... 2
- 5. Use of innovation procurement ..... 3
- 6. Authorities need also cooperate ..... 3
- 7. Accessible data – a critical factor ..... 3
- 8. The ITS action plan – a good start ..... 4
- 9. The ITS Board – a catalyst..... 5
- 10. The EU – active and joint action within the EU ..... 5
- 11. The Board’s overall assessment – continuing joined forces..... 6
- 12. The proposals of the ITS Board..... 6

## 1. Background

ITS (Intelligent Transport Systems and Services) implies using information and communication technology to offer smart services and attractive solutions within the transport system. A multimodal strategy and action plan have been developed in the year 2010 to support a broader implementation of ITS in Sweden. The plan includes approximately 40 measures which demand cooperation between many different players – private as well as public – for their implementation. This plan has a five-year time perspective, i.e. up to year 2015.

## 2. The ITS Board

In June 2010, the Government appointed the ITS Board "in order to exploit the potential of ITS for contributing to the attainment of the transport policy targets". The ITS Board has three main tasks:

- To develop forms of cooperation between public authorities and private enterprises.
- To provide advice on and accelerate the Swedish Transport Administration's and other authorities' process of implementing the "Multimodal strategy and action plan for the use of ITS".
- To promote increased Swedish action in the EU in the area of ITS.

In addition, an ITS Secretariat has been established within the Swedish Transport Administration in order to support the Board's ongoing work.

## 3. A developed cooperation between authorities and enterprises

The task of the ITS Board to develop forms for an efficient cooperation between authorities and private enterprises aims to accelerate and stimulate the implementation and use of new services in the transport system, in order to fulfill pressing needs. The purpose is also to take advantage of the competence and capacity for development of the Swedish economy, which in turn strengthens Sweden's competitiveness. Not least, it intends to encourage innovation and accelerate the process from research to implementation. In other words, the Board's mission rests upon the basis of transport policy and enterprise policy motives. Furthermore, it is crucial to emphasize the intention to create prerequisites for long-term cooperation.

An important point of departure for a developed cooperation between the public and private sectors is a clarification of responsibilities on a comprehensive level. Thereby, the ITS Board assumes that the authorities are in charge of the problems and define the needs, while enterprises act as problem solvers.

The ITS Board has analyzed potential impediments for a closer collaboration. As a result thereof, the Board states that the legal conditions, for instance procurement legislation, intellectual property rights, disqualification and matters of competition, are important in order to reach a successful model for implementation. These issues have been further investigated by the ITS Board together with Sweden's Innovation Agency (VINNOVA) and various companies. This process has indicated that a model with MoU – "Memorandum of Understanding" – could be a useful tool for developing the forms of pilot and trial studies as well as for competitive procurement.

## 4. A developed cooperation with the help of MoU

Cooperation with the help of MoU provides opportunities to establish pilot projects as part of a learning process: how can content be created in services; roles and responsibilities; possible business models etc.

The ITS Board/Secretariat has together with the Swedish Transport Administration initiated MoU with Ericsson AB, Saab AB, Telia Sonera AB and Kista Science City AB. The companies were chosen according to several criteria with reference to the strategic challenges that have been identified by the Swedish Transport Administration and that demand solutions. In a first stage, a limited number of companies, which complement each other and all have large operations in Sweden, have been concerned. The cooperation should promote the export industry by serving as reference. It should have potential and provide a basis for large-scale implementation. Moreover, the collaboration should be able to lead to projects for pilots or test sites.

The agreements state the areas which will be developed in cooperation between the Swedish Transport Administration and the companies. Furthermore, they include specifications of the parties' respective roles and responsibilities. The pilot projects that are part of a MoU are procured according to the exception for research in the Swedish "Public Procurement Act" and in accordance with the Swedish "Law on procurement" within the fields of water, energy, transports and postal services.

## **5. Use of innovation procurement**

The work of the ITS Board has decided that innovation procurement is a suitable instrument for developing forms for sustainable cooperation between authorities and enterprises. Innovation procurement, where the public organizations give functional descriptions of the problems they face, implies more freedom of innovation for the industry in developing their solutions. The ITS Board considers very important that the Government commissions the authorities to increase the proportion of innovation procurements since this would enhance the possibility of creating new solutions and would encourage constructive joint development by the public and the private.

In order to gain further experience of how innovation procurement could work in practice, the ITS Board has initiated an innovation contest, together with the City of Stockholm and other stakeholders, which will test the viability concerning intellectual property rights, patents and ownership/dispositions.

## **6. Authorities need also cooperate**

Realization of the Swedish ITS Action Plan demands, among other things, that several authorities cooperate and take responsibility for different parts of the plan. Against this background, the ITS Board took the initiative to create the Authority Forum (Myndighetsforum) in 2011. The Authority Forum (Myndighetsforum) consists of the Swedish Transport Administration, the Swedish Transport Agency, the Swedish Maritime Administration, Swedavia, the Swedish Post and Telecom Authority, the Swedish Civil Contingencies Agency, the Swedish mapping, cadastral and land registration authority, the Swedish Meteorological and Hydrological Institute, SOS Alarm and the City of Stockholm. Within this framework, responsibilities for the different parts of the action plan have been clarified and forms of cooperation between the authorities in the ITS area have been discussed.

The Authority Forum (Myndighetsforum) has focused on two crucial areas for the achievement of the ITS Action Plan and for enabling quicker implementation of ITS solutions:

- Accessibility of data among public authorities
- Issues related to public procurement

Moreover, the Metropolitan Forum has been established with the three major cities in Sweden (Stockholm, Gothenburg and Malmö), as well as the Swedish Transport Administration's corresponding regions and public transport's principals Västtrafik and Skånetrafiken as members. The Metropolitan Forum serves several purposes. Apart from performing measures in the action plan, the participants engage in broader interaction and exchange information regarding ITS solutions for urban areas.

## **7. Accessible data – a critical factor**

The ITS Board establishes that the availability of data is a prerequisite for faster introduction of new services within the transport sector. It is crucial for the industry that Government authorities, who possess such information, make it available on clear conditions.

Several organizations, public as well as private, are working to make their data externally accessible. However, there is still a lack of homogenous definitions and interfaces within the transport area and multimodal data must be gathered from several authorities/organizations. While data are in some cases accessible free of charge, there is often a variety of price models for utilizing data. Under these circumstances, the Authority Forum plays an important role in reaching a consensus on the interpretation of the term "open data" and on

how to make data available. Moreover, it is urgent that transport-related data become integrated in the national portal that will be implemented by Sweden's Innovation Agency (VINNOVA) at the request of the Government. The innovation contest is another way of emphasizing the demands for data accessibility.

## 8. The ITS action plan – a good start

The action plan comprises six focus areas. Partly due to the heterogeneity of the measures, the implementation is at different stages in the respective areas. In general, measures of multimodal character have proved to be more difficult to activate.

- Focus area 1 - Planning and innovations within the transport system

Progress has been made with regard to the production of better decision bases for an increased use of ITS. Continuous method development as well as dissemination of knowledge are crucial in this respect.

Nevertheless, there is a void of models and methods for valuing actions from a multimodal perspective. A continued development of the ITS Postgraduate Research School is expected to provide a basis for future long-term knowledge growth within the ITS area and contribute to research and development within the ITS sector, at the same time as creating a platform of capacities/competencies for actors in the sector.

- Focus area 2 - Data and information

The ITS Board has devoted considerable attention to this area and observes numerous initiatives aiming to make data available on reasonable conditions. Part of these measures are included in the ITS Directive of the European Union and are being integrated into the Swedish legislation. Continued work is necessary in order to establish a market place for data and information for ITS services.

- Focus area 3 - Vehicles, communications and physical infrastructure

The ITS Board particularly wishes to emphasize the importance of continued support within this area in order to take advantage of the technical progress made. A considerable share of the advances in ITS takes place within this very area and strong commitment and knowhow are required if Sweden strives to lead the ITS development. Also, it is now time to prepare implementation strategies and plans.

- Focus area 4 - Freight transports

The ITS Board has, in cooperation with the Swedish Transport Administration, formulated a road map for ITS goods where four ITS applications are identified as particularly relevant and in need of support: ecological footprints, electronic waybills, dynamic control of access to infrastructure for vehicles that deviate from the standard and safe parking spaces.

- Focus area 5 - Passenger transports

Measures within this area concern passenger information, booking and payment systems and security projects. Multimodal travel data are covered by the ITS Directive and are being integrated into the Swedish legislation. The Swedish Transport Agency is preparing an action plan for passenger information in accordance with a recently developed strategy. The Swedish Public Transport Association is pursuing a project on a common payment system and works actively with security issues.

- Focus area 6 - Metropolitan areas

The measures in the action plan are managed chiefly by the Metropolitan Forum. Within the Metropolitan Forum there is a broad consensus on the need for more active traffic governance. Although initiatives have been taken in line with the vision of such governance, the Metropolitan Forum notes that increased financing is

required for success. Other prioritized areas for the Metropolitan Forum are joint party traffic management and multimodal passenger information.

In the opinion of the ITS Board, the work for realizing the action plan is well underway. However, the Board had expected more tangible results of the effectuated work. Nevertheless, it is important to remember that several of the actions serve primarily to create prerequisites.

## **9. The ITS Board – a catalyst**

The Board would also like to call attention to the initial set of problems that it faced before the work could be seriously started and before the ITS Secretariat was in place. These troubles were partly related to the ongoing formation of the recently created Swedish Transport Administration.

Finding forms and parties for the different measures in the plan was a time-consuming process. Often stated in the plan it is not uncommon that implementing an action requires the participation of several parties. However, it is not always evident who is responsible or willing to accept responsibility. As a result, the initial work of the ITS Secretariat consisted of comprehensive and time-consuming contact management before the planning and implementation of measures could begin. Another experience is that it was unexpectedly complicated to establish collaborations, partly because of the legislation and the interpretation and application of The Swedish Public Procurement Act.

An important explanation lies in the ITS Board's lack of financial and human resources to start larger projects.

The work within the ITS Board has developed over the two year-period and there is now greater knowledge about the activities and possibilities of the different organizations. Contacts have been established through networking with participating organizations and the Board is deemed to have acted as catalyst. This, in turn, provides a good basis for continued realization of the ITS Action Plan.

## **10. The EU – active and joint action within the EU**

In support of the Swedish representatives involved in various European contexts, position papers for seven areas have been produced. The particular areas have been chosen since they are mentioned in the Swedish ITS Action Plan and are covered by an EU Directive, have a utilitarian perspective and comprise several actors.

The Board has produced position papers within the following areas:

- Publishing transport-related data irrespective of the mode of transport
- ITS for Goods
- Vehicle-related ITS
- Attractive travel services
- Common payment systems within the transport sector
- Traffic management in metropolitan areas – all modes of transport
- ITS and traffic safety

The position papers provide a short review of the ongoing work in the respective areas and state priorities for future efforts. The latter concern the different activities to undertake for the purpose of accelerating the progress in the seven areas.

The role of the ITS Board to promote and strengthen Swedish representatives in their work within the EU necessitates a well-developed and coordinated collaboration. Thus, within the framework of ITS Sweden, a Swedish International ITS forum has been created with the commission to supervise, inform and give recommendations for future orientation within the ITS area in accordance with the position papers.

## 11. The Board's overall assessment – continuing joined forces

In addition to its efforts to create forms for cooperation between the various actors and to speed up the implementation of the Swedish ITS Action Plan, the ITS Board has also commissioned a study which reaches towards 2030 (*ITS 2030*). The analysis puts the work of the ITS Board in relation to the contemporary progress within the Swedish and European transport policy and international trends within the area, for instance how well the Swedish strategy and action plan keep up with the development. The main purpose of the study is to coordinate the current action plan with the Royal Swedish Academy of Engineering Sciences (IVA)'s project *Transport 2030*.

Moreover, the ITS Board has commissioned an evaluation of its work, for which most of the members have been interviewed. The conclusions from the evaluation, as well as the study *ITS 2030* and the work of the Board according to its directives, guide the overall judgments and proposals. Furthermore, in order to accelerate the implementation of ITS, the Board has continuously informed the Government of its suggestions.

The ITS Board has hitherto provided a solid basis for speeding up the realization of ITS. Large efforts are now being devoted to create prerequisites such as forms and forums for cooperation and commitment among authorities. In addition, a considerable amount of work has been done to remove obstacles. The next phase is about launching concrete measures that will solve problems and yield benefits, as identified in the Swedish ITS Action Plan.

The ITS Board assesses that, in order to reach a comprehensive implementation of ITS, there is a continued need to join forces and to rely on an organization designed to lead and coordinate the efforts. Hence, the ITS Board advocates that its mandate be prolonged until 2014-12-30, (i.e. over the lasting time of the current action plan) alternatively that its duties be transferred to another authority or organization. The ITS Board further deems that additional actions will have to be made in a number of areas. The Board has taken initiatives which demand continued support and commitment.

## 12. The proposals of the ITS Board

The ITS Board has identified areas of development where efforts have to continue in order to achieve greater impact of ITS within the Swedish transport system.

### 1. The ITS Action Plan

The action plan should be updated and complemented.

The study *ITS 2030* illustrated that the current plan is insufficient in terms of actions for capacity development. Moreover, there is a need for stronger focus on ITS measures aimed at achieving an energy efficient and environmentally friendly transport system. Security and vulnerability within the transport system is another area of development. Last but not least, it is important to link the ITS Action Plan with the realization of the suggestions presented in the Swedish Transport Administration's capacity investigation.

### 2. Continued development of existing cooperation and initiatives

- MoU
- The Authority Forum
- The innovation contest
- The Metropolitan Forum
- The Forum for innovation within the transport sector

### **3. Large-scale implementation within four areas in the near future**

Although certain ITS solutions are of such character that every individual user perceives a large enough private benefit to justify investment, other problems/needs rather concern benefits to society and are therefore difficult to realize on entirely commercial grounds. For the purpose of accelerating the ITS progress public resources are, in the opinion of the ITS Board, required in order to achieve large-scale implementations in the near future.

In the short run, the main concerns are to use existing infrastructure more efficiently and to use the opportunities inherent in new technology and new services that facilitate travels and transports whether within individual modes of transport or in cases where several modes of transport are connected. In this particular context, ITS implies a number of powerful tools. Information and communication technology enable more efficient and environmentally friendly traffic governance, create demanded real-time information services, new solutions for traffic security etc. Nevertheless, in order to have an impact on environment, security, choice of vehicle and accessibility, a larger number of participants have to make more comprehensive and coordinated efforts. Furthermore, it is crucial that the actions take such proportions to inspire other implementation processes. Within the areas designated by the Council are technically mature ITS solutions that are available for relatively quick introduction.

- Multimodal information in the metropolitan areas

The Metropolitan Forum has observed that passenger information in the metropolitan areas is substandard and recommends cooperation between different parties to remedy this shortcoming.

- Coordinated information, booking and payment systems in public transport

Increased use of public transports is a prerequisite for a sustainable transport system. That, in turn, requires that the public transport system is simple, reliable and comprehensible and complements other modes of transport. Compared to today's flora of different technical systems for control and payment, development of common standards would benefit passengers in terms of simplicity. In this context there is much to learn from other sectors with analogous need for quick, secure and well-functioning information and payment services.

- Vehicle-related services /synergetic systems in vehicles with prospect of benefitting traffic security and enable further development of ITS services

New vehicles have advanced sensors and systems that generate information which could be more useful if it could be transmitted and used by other vehicles and road-users. New and more efficient solutions can be developed by the automobile and telecom industries and authorities in cooperation, to the benefit of both society and business. Sweden possesses a unique combination of leading actors in the area, which ensures an efficient realization of such solutions. In this context, large-scale pilot projects are deemed crucial for developing cooperation and business models and to indicate the benefit of new cooperative applications.

- Vehicle-related services within the goods transport area with prospect of benefitting environment and efficiency

This refers to a coordinated implementation of prioritized services, as identified in Swedish Road map for ITS Goods.

### **4. The European Union (EU)**

- Further development and additions to the position papers
- Continued realization of the EU Directive for ITS and the ITS Action Plan

**5. Business models**

Continued work on the production and use of business models respecting the “Swedish Public Procurement Act “ and accounting for both the benefit to society and the commercial benefit.

**6. Transport portal**

Development of a transport portal integrated in the national portal which was decided by the Government.

**7. Innovation procurement**

There is a need for further practical experience of innovation procurement and pre-commercial procurement.

**8. Organization**

The conducted evaluation clearly conveys the need for a unifying organization with mandate. Furthermore, based on the experiences made it is appropriate to review which actors that should be part of the organization. The evaluation also calls heavily for increased resources. Against this background, the ITS Board proposes

- that the commission of the ITS Board should be further explicated
- that the constitution of the ITS Board should be reviewed
- that the ITS Secretariat should be strengthened by both financial and human resources by means of links to other authorities and to industry during the implementation phase.

**9. Resources**

The ITS Board will need financial and human resources for realization of the proposed measures. The possibility of co-financing will be investigated.