

CANSO response to the EC working document

“Consultation on the future trans-European transport network policy”

Objective of the document

The present paper intends to provide a supporting document for providing the CANSO view on the European Commission working document “Consultation on the future trans-European transport network policy”.

*The reference document (COM(2010)212final) aims at refining the available policy options which had been emerging from the contributions made in 2009 by EU institutions and a wide range of stakeholders with regard to the TEN-T Policy Review. The following paragraphs therefore presents CANSO’s view, which, by involving the European transport network as a whole as well as focusing on the ATM sector, offers a series of reflections enabling to fully comprehend **how and to which extent the European ATM Network and its infrastructure need to be taken into account throughout the TEN-T Policy review process.***

*Indeed, the recent **resolution from the European Parliament, adopted July 6th 2010, on sustainable future of transport, confirms that there is a need for “the urgent and full implementation of the Single European Sky programme, SESAR and the Eight Framework Programme for Research and the continuation of Marco Polo in a simplified form”.***

A first introductory chapter has been therefore included below in order to provide the necessary information identifying the ATM system context and its infrastructure.

1. European ATM Network and its infrastructure

The European Air Traffic Management (ATM) system is an invisible network physically linking all airports in the single European Market amongst themselves and connecting them with the rest of the world.

Such network and its related infrastructure underpins and enables the operation and development of the air transport sector. It stretches across the full length and width of the continent, and makes use of an infrastructure operated by a number of actors such as, but not exclusively, airlines, ANSPs, airports, military, business aviation and General Aviation.

The aviation network could be thought of as a ‘road system for the sky’, but in fact is more complex. It consists of both the physical infrastructure in and around airports, and the supporting air traffic control infrastructure both on the ground and in the air, ensuring all actors in the system can operate effectively and efficiently. The aviation network is not as obvious or ‘physical’ as that of say road, rail or inland waterways, but it is just as ‘real’, and ensuring this network is modern, pan-European, efficient and interoperable is critical for the future success of the EU.

Air transport is a key enabler to achieve important policy goals in Europe. It helps facilitate mobility both within Europe and with the rest of the world as well as bringing significant societal benefits, for example in providing connectivity to remote and peripheral regions. Air transport is also an important enabler of economic growth and a significant generator of jobs and technological innovation, helping Europe work towards the Lisbon Agenda goals.

Air transport is estimated to support around 4 million jobs in Europe (direct, indirect and induced), and this number is estimated to rise by as much as 1.5 million by 2020. It also has the potential, based on economic

forecasts, to contribute €470bn in 2020. In particular, if airport capacity fails to meet the demand, there could be a potential yearly loss to Europe of about €50bn of added value in 2020.

2. TEN-T Funding structure

Within the 2 planning layers the TEN-T Programme is providing funding to both studies and works, which are clearly defined in the TEN Regulation¹:

- 'Studies' [Article 2(8)] means activities needed to prepare project implementation, including preparatory, feasibility, evaluation and validation studies, and any other technical support measure, including prior action to define and develop a project fully and decide on its financing, such as reconnaissance of the sites concerned and preparation of the financial package.
- 'Works' [Article 2(9)] means the purchase, supply and deployment of components, systems and services, the carrying out of construction and installation works relating to a project, the acceptance of installations and the launching of a project.

The 2 categories of activities are funded at different rates: 50% of the eligible costs for the studies and 10% of the eligible projects costs for the works. However, if activities within "work" category belong to a priority project such percentage increases up to 20%-30%.

ATM is included in the current TEN-T guidelines. As per the Green Paper, by and large TEN-T priority projects cover major rail, road and inland waterway axes that traverse several Member States. **Until now aviation's share of TEN-T funding has accounted for approximately 5% of the total TEN-T budget.**

It is also worth noting that the contribution of TEN-T towards the ATM is a negligible part of the available funding; of such amount, the TEN-T contribution to the SESAR JU (2007-EU-40010-S SESAR: Single European Sky ATM Research - Development Phase) for the SESAR Development Phase represents the most significant part.

As for the above, the TEN-T budget devoted to the ATM modernization and in particular to the specific implementation of the short term initiatives is very limited. Therefore it does not significantly impact those initiatives paving the way for the system to achieve the challenging objectives set up within the SES II.

The two main developments, for which implementation will dominate the ATM industry in the next years, are the SESAR (Single European Sky ATM Research) programme and Functional Airspace Blocks (FABs). The R&D activities of SESAR is by far the largest ATM project financed from the TEN-T budget and it represents a truly European network approach with the participation of a wide spectrum of stakeholder groups.

Indeed, in order to prepare the ground for the European implementation of SESAR development phase R&D results, it is necessary that the baseline elements of the future SESAR system are fully and timely implemented. The Implementation Package 1, as described within the ATM Master Plan, represents the essential factor enabling Community investments, and in particular TEN-T investment in the SESAR Program to achieve the expected results.

¹ Regulation (EC) n° 680/2007 of the European Parliament and of the Council of 20 June 2007, laying down general rules for the granting of Community financial aid in the field of the Trans-European Transport and Energy Networks (OJ L 162, 22.6.2007, p. 1)

3. TEN-T revision Framework

In February 2009, TEN-T Commission published a Green Paper (ref. COM(2009) 44 final), aimed at promoting an open consultation on TEN-T policy review. In particular, such document highlighted the need to address a series of issues identified through the analysis of the results achieved so far and regarding several topics - from funding to methodology.

More than 300 organisations answered to this public consultation providing a series of inputs significantly supporting the Commission position on endorsing a broad policy review approach: such contribution led to set up six experts groups to *“assist the Commission in elaborating a methodology for the planning of the future TEN-T with a view to the forthcoming revision of the TEN-T Guidelines, in enhancing the effectiveness of the financial and non-financial instruments for TEN-T implementation and to examine relevant legal issues in relation to both planning and implementation”*.

Being now time to proceed with a second public consultation, the *“Consultation on the future trans-European transport network policy”* represents a document aimed at *“refining the available policy options that have been emerging from the contributions made in 2009 by EU institutions and a wide range of stakeholders, contributions that were further elaborated in the expert groups”*.

CANSO is therefore responding to the invitation by presenting its view and connecting the reference document content to the ATM reality, therefore providing the necessary information to include and consider the ATM sector perfectly aligned with the whole TEN-T review process.

4. The Methodology for TEN-T planning

Planning the comprehensive network

CANSO endorses the importance of planning a **European Comprehensive Network** by addressing the objectives of ensuring accessibility of and access to the ‘core network’ as well as contributing to the internal cohesion of the Union and the effective implementation of the internal market. CANSO therefore shares the need, identified by the Commission, of realizing a network which represents a reference in terms of land use planning, legislation, policies and technologies.

Such alignment is represented by the **European ATM Network**, which enacts the Comprehensive Network principles in the ATM sector and provides the infrastructural basis for co-modal services for passengers and freight. Fully in line with the European Community legislation (ref SES 1 and 2, Lisbon Agenda goals and European Green paper), the European ATM Network is growing on the basis of a incremental evolution of the present network through:

- Continental strategic planning of the deployment through the implementation of the European ATM Master plan endorsed by the European Council, of which the detailed planning is expressed by the European Single Sky Implementation Plan (ESSIP) and is binding for the Member States which are expected to produce aligned National plans through the Local Single Sky Implementation Plans;
- Improving regional Airspace use efficiency and effectiveness thanks to the establishment of Functional Airspace Blocks (FABs), guided by the operational needs of the airspace users and considered one of the 2 major pillars of the single European Sky initiatives together with the technological Programme SESAR, aimed at the design and development of the new European ATM system.

Core network planning

The definition of the Core Network, provided in the reference document as a network which “*will be made up of nodes and links of the highest strategic and economic importance throughout the EU, covering all modes of transport, include intelligent transport systems and provide, in a sufficiently flexible way, further infrastructural elements which are an indispensable basis for the achievement of various policy objectives in the transport and other sectors*” perfectly matches with the objectives of the European ATM infrastructure and its modernization needs.

Indeed, as previously mentioned, **the European ATM Network, through visible and invisible infrastructures, links all airports in the single European Market amongst themselves and therefore represents the most effective and efficient way to connect the highest strategic and economic nodes.** By stretching across the whole European continent, it enables to reach the most important cities and key junctions therefore creating an integrated transport system. Taking in consideration the traffic growth expected in the short, medium and long term, as well as the issues already occurred in the recent past - being the Volcanic Ashes crisis an unfortunate example, the ATM Network infrastructure modernization, developed through the implementation of the European ATM Master Plan and including intelligent transport systems, represents a necessary step in order to correctly address such issues in the future European ATM system.

Furthermore, the importance of the future TEN-T to be linked with key infrastructure in third countries has been fully addressed by the ATM sector, as stated in the Single European Sky framework regulation/ Article 7 “*Relations with European third countries*”, and is currently being developed:

The Community shall aim at and support the extension of the single European sky to countries which are not members of the European Union. To that end, it shall endeavor, either within the framework of agreements concluded with neighboring third countries, or within the context of Eurocontrol, to extend the scope of this Regulation, and of the measures referred to in Article 3, to those countries.

Besides, the full alignment of the European ATM system with TEN-T objectives is further confirmed by the complete sharing of the Core Network general principles as reported in the reference document:

- **Multimodality** is a critical factor for the ATM infrastructure, as it enables passengers and freight to reach their final destination through the optimal combination of flights (long distance quick connection) with the road, rail and sea modes.
- **Interconnectivity** is at the core of the ATM system, as proved by the realization and modernization of strategic hubs. It enables passengers and freight to optimize their journey by providing efficient and effective links amongst the strategic nodes.
- **Network optimisation** is indeed the objective pursued by the ‘**business trajectory**’ concept, being it **a 4D trajectory which will represent the most efficient and effective way to connect two nodes. It includes both ground and airborne segments of the aircraft operation (gate-to-gate) and is built from, and updated with, the most timely and accurate data available**
- **Interoperability and improved efficiency** are amongst the major objectives of the modernisation of the ATM infrastructure through the implementation of the European ATM Master Plan. Indeed, several initiatives address the key issues of planning, designing and implementing enhanced flight data processing systems capable of supporting advanced operational concepts through innovative technologies. Furthermore, it must be noted that improvements in interoperability are also expected

to come in the short-term from the interoperability Implementing Rules in the frame of the SES regulation.

- **Sustainability**, including the reduction of climate change impacts and pollution, is one of the main benefits generated as a result of the European ATM implementation, which has been estimated to incrementally reduce fuel consumption by 40-50 KTonnes per year, equivalent to almost 125-155 KTonnes of CO₂. In addition, the impact of the SESAR improved processes will also reduce ground delays, and at a typical major hub airport this could ideally remove 44% of ground emissions.
- **Focus on quality of service** for both freight users and passengers, as airspace users are at the core of the European ATM network
- **Safety and Security of transport infrastructure:** safety is of paramount priority in aviation and, under the Chicago "Convention on Civil Aviation", States are required to provide safe air traffic services. The safe operation of aircraft is fundamental to Air Traffic Management (ATM), which is an essential element of the overall transport process. The SESAR initial indicative safety performance objective builds on the ATM2000+ Strategy objective: *"To improve safety levels by ensuring that the numbers of ATM induced accidents and serious or risk bearing incidents (includes those with direct and indirect ATM contribution) do not increase and, where possible, decrease"*. Considering the anticipated increase in the European annual traffic volume, the implication of the initial safety performance objective is that the overall safety level would gradually have to improve, so as to reach an improvement factor 3 in order to meet the safety objective in 2020. With regard to security, as stated in the E-ATM Master plan- D2 Performance target, *"the future European ATM System will provide an essential role in the support to National Governmental Authorities (NGA) in the areas of aviation security in general, airspace as well as onboard and ground security"*. Furthermore, the security status of the "Self Protection of the ATM System" within each member state is carefully evaluated and an accreditation of ICT security facilities has already been established.
- **Application of advanced technologies and ITS** are essential for the ATM infrastructure which, by nature, requires the implementation of innovative and complex technologies in order to achieve the challenging goals stated in Lisbon agenda. Indeed, as confirmed by the creation of SESAR programme, the Air navigation services and their supporting systems are not fully integrated and are based on technologies which are already running at maximum. In order to accommodate future Air Traffic needs, a "paradigm shift", supported by state-of-the-art and innovative technologies, is required.
- **Minimisation of investment, maintenance and operational costs** is amongst the significant benefits resulting from the implementation of the European ATM Master plan:
 - The investments on common projects, widely shared throughout the European borders, will lead to significantly minimise costs by applying an economies of scale
 - The implementation of a new completely interoperable architecture will mean dramatic costs reduction of maintenance and evolutionary maintenance.

Finally, operational costs will not only benefit from the above mentioned factors, but they will also take profit by the implementation of innovative technologies which will allow for a more efficient day to day operation, thus impacting positively on the running costs.

Innovative infrastructure measures

As stated in the reference document, *“the core network should give priority to transport infrastructure-related measures that stem from EU policy goals resulting for instance from the “Europe 2020” strategy transport, energy, climate, environmental or innovation policy”*.

Following the very same principles and according to the agreed Community policies for development of sustainable air transport, the European ATM Network provides a clear answer to the above mentioned items, through the introduction/endorsement of adequate instruments:

- A European ATM Master Plan as a roadmap for implementation, endorsed by the EC
- A Performance Framework to define implementation objectives
- Network Management functions to support the optimisation of the network
- FABs to be implemented at regional level.

Furthermore, Intelligent Transport System and innovative technologies - which are an important part of the core Network, represent as well one of the key factors ensuring the success of SESAR programme and the timely and effective implementation of the European ATM network.

5. TEN-T Implementation

Funding

TEN-T reference document states that *“a key issue for the revision of TEN-T guidelines and for the post-2013 multi-annual financial framework is how to ensure the best possible use of the EU financial contribution in order better to achieve the objectives set out in the Guidelines”*.

CANSO completely agrees on this priority, especially considering the fact that the significant developments that have taken place in all modes of transport since the TEN-T guidelines were developed in 1996 and updated in 2004, have radically changed context and financial needs. In particular, with regard to the ATM Master Plan, the recent adoption of the second package of SES and the adoption by Council of the European ATM Master Plan are important milestones for air transport and must be fully reflected in the revision of TEN-T guidelines.

Perfectly in tune with the reference document, CANSO supports the necessity to review the TEN-T scheme by considering how to best coordinate TEN-T funding with other European financing schemes in the view of ensuring the required level of economic support to the key initiatives for the European Air Transport sector, as stated in recent resolution from the European Parliament adopted July 6th 2010 on sustainable future of transport (see <http://www.europarl.europa.eu>):

“23. Considers that, in order to achieve greater effectiveness in transport policy, there is a need to evaluate programmes (such as Galileo and ITS for all transport modes) and, depending on the results, strategy and programming should be reoriented as appropriate; sees a consequent need for, among other things, a new road traffic safety programme, further revitalisation of the TEN-Ts, a mid-term review of NAIADES, the urgent and full implementation of the Single European Sky programme, SESAR and the Eight Framework Programme for Research and the continuation of Marco Polo in a simplified form”

Indeed, such key initiatives are of paramount importance for the European economy, being the air transport an important enabler of economic growth and a significant generator of jobs and technological innovation, helping Europe work towards the Lisbon goals. Air transport is in fact estimated to support around 4 million jobs in Europe (direct, indirect and induced), and this number is estimated to rise by as much as 1.5 million by 2020. The catalytic effects of aviation relate to the provision of opportunities for business investment as more flights encourage more businesses to locate or expand in a region, labour mobility, widening of markets, increased competition, more innovation, transfer of technology and increased productivity. Not considering the catalytic effects, air transport has the potential, based on economic forecasts, to contribute €470bn in 2020. In particular, if airport capacity fails to meet demand, there could be a potential yearly loss to Europe of about €50bn of added value in 2020.

Such important conclusions have also been highlighted by the SESAR Economics Task Force where an extensive description of financing solutions is provided including, inter alia:

- Sources of financing: debts via commercial banks, bond issue, lease finance, vendor finance and EIB loans
- Sources of financing via TEN-T grants, other grants by public subsidy and state budgets, use of grants as an incentive tool
- Financial structures that can use all these different sources of financing and grants

Indeed, the full implementation of the European ATM Master Plan (SESAR) will require a combination of various financial streams; considering the ATM specific characteristics, the combination of TEN-T funding together with EIB loans will:

- Ensure full economic coverage of the key projects for the core European ATM network/priority projects;
- Limit the responsibility of the Member States, thus overcoming potential obstacles to the submission of large dimension projects;
- Guarantee suitable conditions for continuity of the projects;
- Allow the coherent management of financing and funding enabling traceability, monitoring and control of all economic instruments related to a single initiative.
 - Ensure a timely coordinated and synchronized SESAR developments implementation
 - Support a faster developments of FABs
 - Ensure the SJU follow-up

In order to achieve such important objectives, **the combination of the instruments should be considered within the TEN-T Programme, so that different possibilities could be envisaged**, inter alia: single call for the 2 instruments, coordinated calls, priority evaluation of EIB loans to the TEN-T core network/priority projects. The significant added value resulting from such combination is considered to be worth of further assessment within the relevant bodies.

* * *