4th European Air Transport Regulation Summary

“Consolidating the Single European Sky: From Physical to Virtual”

A Summary of the Presentations and of the Discussions

22nd April 2013

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Consolidating the Single European Sky: From Physical to Virtual

A summary of the presentations and of the discussions during the 4th European Air Transport Regulation Forum (EAirTRF) Fiesole on 22nd April 2013

Abstract

The present document summarises the content of the presentations delivered during the 4th European Air Transport Regulation Forum as well as the ensuing discussion. This report is divided in two sections: summaries of the presentations and the synthesis of the debates.

Presentations were delivered by representatives of many different types of stakeholders, who reacted to the introductory remarks on the current status of the Single European Sky (SES) proposed by the European Commission. Air carriers, Air Navigation System Providers, airports, authorities, associations, as well as knowledgeable academics offered their view on the state and challenges of SES, based on the following initial questions formulated by the organisers:

- Why is the SES only progressing slowly?
- Can a common infrastructure approach bring the Single European Sky forward?
- What steps need to be taken to define a harmonized regulatory framework to implement a common infrastructure approach?

The 4th EAirTRF assessed the current standoff of the SES and tried to come up with possible solutions to overcome this gridlock. One may say that everybody agrees that SES is a good idea and its full implementation will be a valuable tool to overcome the highly fragmented – thus inefficient, unsafe and polluted – European sky. However, recognizing the urgency for action does not mean that the actors involved are willing and/or able to take the necessary steps to concretely implement the SES.

In fact, the interaction among the different actors is framed by the complex balance of technological evolution and institutional regulatory framework setting. The 4th EAirTRF tried to look at the consolidation of the SES from a technical angle; in other words to look for possible performance improvements deriving from the adoption of new tools. Two proposals aimed at defragmenting the SES and based on the idea of building a single virtual platform for exchanging data have been put forward. The idea leading the discussion was how (and ultimately why) to build one shared infrastructure upon which the actors can autonomously operate via data exchange.

The presentations from the forum can be found on the web page of the Transport Area of FSR. To open it, go to http://fsr.eui.eu, choose “transport” from the top menu bar and then open “European Transport Regulation Forums”. Clicking on the title of the forum will take you to the relevant page. Alternatively each presentation may be downloaded by clicking on the relevant icon in the first section of the present document.

The FSR-Transport team is happy to receive feedback and comments on this document, and our activities. To engage in a discussion please write to FSR.Transport@eui.eu.
Summaries of the presentations

The debate was kicked-off with the following research questions:

- Why is the SES only progressing slowly?
- Can a common infrastructure approach bring the Single European Sky forward?
- What steps need to be taken to define a harmonized regulatory framework to implement a common infrastructure approach?

The following paragraphs include short summaries of each presentation, illustrating the main points made and matters treated, and have been compiled by the editors of this report. By clicking on a presentation’s icon you may activate an internet link taking you to the full presentation, when available. Presentations are hosted on the FSR website by permission of the authors.

Introduction to the 4th EAirTRF

Prof. Matthias Finger, Director of FSR-Transport and of the chair of Management of Network Industries (MIR), École Polytechnique Fédérale Lausanne (EPFL)

In his introduction, Prof Finger started out by introducing the European University Institute, its history, functioning and position. He continued by describing FSR Transport’s goal of contributing to the ongoing debate about de- and re-regulation, as well as to the debate about the governance of the European transport sectors in general. He also reminded the participants the main principles of Chatham House Rule, which is governing the Forum and is also applied to the present summary.

In his welcoming speech, Prof Finger recalled the main conclusions of the previous European Air Transport Regulation Forums, special mention to the 3rd EAirTRF “Single European Sky: How to achieve its performance”. Past discussions have shown that the evolution of the Single European Sky (SES) legislation already took many steps, yet most of them have been slowly implemented and there is now the need to rethink some aspects. In particular, Prof Finger set the stage for the ensuing discussion focusing on the dichotomy institutions-technology that determines the performance of the SES. By doing this, he presented the different actors involved in the process and introduced the research questions of the day.

This 4th EAirTRF sought to identify and lay out the main responsibilities of the various stakeholders of the SES framework and challenged them to come with solutions to the current gridlock.
The European Commission’s View on the Single European Sky

Matthew Baldwin, Director for Aviation and International Transport Affairs, DG MOVE, European Commission

In his opening remarks, Matthew Baldwin set out the European Commission’s view on the Single European Sky (SES), the importance of the issues at stake, and the urgency of making progress. And he repeated the concerns expressed loudly at the political level by the Commission and European Parliament on the lack of progress, which he described as "highly problematic". His main message was that all stakeholders – particularly Air Navigation Service Providers (ANSPs) and airlines - have to work together in order to make progress. He therefore asked the 4th European Air Transport Regulation Forum to come up with ideas on how to overcome the current gridlock. He expressed particular interest in Frank Brenner's concept of Centralised Services, and Dani Weder's idea of Virtual Centres, which the Commission was keen to incorporate into its own thinking.

Mr Baldwin began by setting out the stakes in terms of the continued need for reform in European Air Traffic Management (ATM) in terms of the overall competitiveness not just of European aviation but of the European economy as a whole, stressing that this is a key network industry in the European Union, but plagued by fragmentation at the national and sub-national levels, and dominated by the interests of national monopoly service providers. Airlines were clearly very frustrated, given that they have undergone serious reform in the creation of the single European aviation market, but feel that a major part of their operating costs – ATM provision – is inefficiently provided. Hence the need for the SES programme. He went on to explain some of the achievements so far in the SES project since 2004. He explained that in the Commission's view, the key issue for the SES is performance and said that this would be the strong focus for the Commission in 2013 in setting European level targets for RP2 (the second reference period). Performance was not only objectively necessary (ATM unit costs being roughly double those of the US) but also provided for clarity and political accountability. He explained that the current round of target setting would be rendered harder by the loss of air traffic provoked by the continuing poor economic climate.

But there were a number of linked issues: the Commission was currently considering whether to proceed with "SES 2+", a legislative package to advance the SES legislation, addressing holes and lacunae left by SES2 in 2009. Important decisions were also needed with respect to Functional Airspace Blocks, where the legal deadlines for Member States had been missed on implementing real changes in the organisation of European airspace to drive better efficiency in the system. Decisions were also needed on the future "landscape" of European ATM governance: the differing roles of the European Commission, Eurocontrol and the European Aviation Safety Agency (EASA), given the need to ensure strong and independent regulation both in the technical and the economic sense.

Finally, Mr Baldwin updated the group on progress on the "new technology" arm of the SES, SESAR, where work had now progressed to the point that we should be able to talk about the deployment phase being reached by the end of the year. This would be a significant step if achieved, would bring visibility and concrete benefits to both ANSPs and airlines and was crucial if long term performance gains were to be achieved. Close coordination and cooperation at the global level would also be essential, eg with the US NextGen scheme to ensure interoperability.
Daniel Weder agreed in his presentation with all major stakeholders that the Single European Sky (SES) is in a cul-de-sac and requires a major shift to advance. In this context he presented the “Virtual Centre” Model as a proposal for a common infrastructure approach.

In line with other speakers he agreed that the aviation sector needs to be de-fragmented and consolidated. This, however, will require joint efforts and systemic approach, which is challenging as the different actors – airlines, Air Navigation Providers (ANSPs), manufactures, Eurocontrol, national and European authorities, associations and Airports – do not consider themselves as part of the same value chain, and they do all focus on protecting their own interests. Social, political, economic and regulatory aspects play an important role; therefore it is indispensable to obtain political and social support for any possible change. This political and social support is needed to achieve a proper paradigm shift and a new business model, which is indispensable as the “industry model has reached the end of its lifecycle”. Therefore the biggest question of all seems to be how to obtain political and social acceptance.

Given the complex situation and the currently lacking political and social acceptance for drastic changes, Mr Weder suggested that it would be best to bypass the standoff and focus on virtual integration. The “Virtual Centre”, consisting of “common controller cockpits”, “data centres”, and “standardised interfaces”, is such a proposal for a common infrastructure approach. This model consists of multiple independent centres using identical working processes and tools, which are all connected by a small number of data centre facilitating the system wide information management. A basic requirement for this are standardised interfaces. Furthermore, participating ANSPs do not have to purchase identical equipment, as long as these systems are interoperable and operate as open platforms.

In his concluding statement Mr Weder underlined that the ultimate goal – the de-fragmentation of the ANS industry and realisation of economies of scale – is in the reach. In addition, only few steps are necessary to reach virtual consolidation, for which Mr Weder provided a potential roadmap.
The presentation given by Massimo Garbini addressed the question “Why is the SES only progressing slowly?”, to which Mr Garbini reacted with the counter question if it is really progressing slowly. Notwithstanding the positive results in areas such as safety, delays reduction, environmental impact decrease, in his view the Single European Sky (SES) is indeed in a critical stage of the process. However, since several tools are already in place and deliver or are starting to deliver, it is not advisable to throw the achievements over board, but to recognize “what is working well, who is delivering [and] where improvement is still possible”.

Mr Garbini called participants to see the SES in its historical context and what was already achieved. The achievements include the establishment of a single network manager and a single entity for research and development, European planning is centralized and a deployment strategy was identified. Further pragmatic steps will have to lead the way forward. Areas of intervention identified by Mr Garbini are: (i) institutions, (ii) Air Traffic Management (ATM) System modernisation, (iii) operations. Within the institutional dimension several aspects need to be tackled: a unique regulatory framework should be created, Eurocontrol has to undergo institutional reforms, the performance scheme of the second reference period needs to be decided, auxiliary services have to be unbundled, and last but not least the human factor has to be accounted for. After the ATM systems modernisation, the deployment manager should define the most appropriate business model to ensure economic and operational effectiveness for services because deployment is necessary.

After having argued that a radical change is neither needed nor advisable, Mr Garbini offered his advice how to progress, because pragmatic and active steps have to be taken. Among the possible actions, he suggested to consolidate and reinforce what has been achieved, to avoid additional regulation, to avoid any unnecessary delays, to identify areas where improvements are possible, and lastly to let operational stakeholders take the lead. Moreover, Mr Garbini stressed the importance of the reinforcement of what he called the 5th pillar, namely the human factor.
Stefano Baronci started his presentation by recalling the four pillars of the SES II package and the question why it took a second package to involve the airports in this undertaking. The individual pillars of the SES II seem to show some advancement, but there are still a considerable number of outstanding issues. To the question why the SES only progresses slowly, apart from mentioning the complexity of the several elements of the package, Mr Baronci’s answer was straightforward, namely “divergent interests of and reluctant enforcement by Member States seem to be the main problem”.

Given his function as representative of the Italian airport operators, Mr Baronci reminded participants that aircrafts ultimately have to take off and land at airports. Therefore airports have to increase their capacity at the same scale as the increased traffic flow. The opportunities for airport expansions throughout Europe are rather restricted, thus the focus should lay on optimising the turn-around process, engaging all key operators: airport operator, ATC, airlines and ground handlers. With this target in mind, technical and legal tools should be ensured. From a technical point of view, the deployment of SESAR can only benefit from the engagement of the aviation industry. From a legal point of view, more work is needed to precisely define the airport operator as ground coordinator. The most important issue in the development of the ground coordination function is the legal consequences of taking responsibility to facilitate and coordinate operations at and around airports. This is a “stop” or “go” issue. Quite clearly, airport operators cannot become responsible for the quality of the operations provided by ground handlers, airlines and Air traffic control. Instead, by taking-up the ground coordinator function, airport operators should take the responsibility to facilitate and coordinate, but not the end responsibility for the quality of operations performed by ground handlers, airlines and ATC. The result of the ground coordination function is a joint responsibility.

In a nutshell, he concluded that true performance can only be achieved if challenges in the air and on the ground are tackled simultaneously.
Andrew Charlton provided the participants with a clear and straight-forward analysis on the slow progress of the Single European Sky, which can be summarised as nobody appears willing to address the real problems.

Referring to Machiavelli, Mr Charlton explained that reaching the necessary paradigm shift is a true challenge, as it has no (powerful) advocates. Taking the lead in such a situation is a difficult in itself as there is no certainty of success, hampered additionally by those benefiting from the current system and/or would face existential fears in a new situation.

Using the allegory of symptoms and diseases Mr Charlton continued that each challenge – or symptom – is met with a different solution: technology with SESAR, fragmentation with FABs and performance with the Performance Review Body (PRB). One symptom (which is probably the closest to customers and air carriers) remains to be attended: the airports of the EU. In fact, there is still no ‘therapy’ addressing the underlying issue – or disease: a European sky without borders, customer-focused service delivery, and contestable markets. So far all steps add complexity and costs to the system, but did not remedy the underlying issue. One of the reasons for the inability to break the standoff is, according to Mr Charlton, the wrong focus. The protagonists focus on the product, rather than the actual service. When liberalising airlines the focus was on what should be delivered and they decided themselves on the way to go. Air Navigation Service Providers (ANSPs), instead are forced to work together, disregarding that the political (and geographical) allocation of partners might be wrong.

Drawing a parallel with the telecommunication sector, Mr Charlton highlighted that that sector managed to solve part of its interoperability issues thanks to the standardisation of the underlying technology (the software platform) on which different products (telephone-, mobile-, smart-phone devices) designed to address particular services have then been autonomously developed.

In his closing statement, Mr Charlton advocated to make fundamental changes and, mainly, to find the courage to do so.
Prof Dr Dettling-Ott offered the perspective of one of the stakeholders that could benefit most from the Single European Sky (SES), the airlines. Airlines, as Prof Dettling-Ott put it, are acting in a very difficult and non-profitable environment: European network carriers are not profitable and on the last position in a global comparison. Therefore making the SES work becomes a matter of survival for European network carriers, since it could help them saving money with regard to both air navigation charges and fuel expenditure. Supported by statistics for the Lufthansa Group in 2012, Prof Dettling-Ott highlighted the benefits of a de-fragmented European sky.

Tackling the issue from a legal point of view, in her opinion the SES needs to be entitled to have the jurisdiction to prescribe, to apply and to enforce its own functioning, yet there is still a discrepancy between this and the attribution of the competence to prescribe, to apply and to enforce. There are multiple potential reasons for this, such as lack of binding technological standards, organisational deficiencies, regulatory issues, as well as a lack of competence at the EU level. Some of these reasons, such as the organisational, are complex, encompassing sovereignty discussions (related for instance to the Functional Airspace Blocks), lack of solutions for social issues, duplications of oversight, and lack of market elements (related to several issues such as uncertainties in prices and the sustainability of regional airports).

In her concluding remarks Prof Dettling-Ott emphasised that a properly functioning SES is urgently needed and will substantially improve the situation for all major protagonists. By doing this, she acknowledged that airlines were too passive in the past, given that they dedicated their scarce resources to the fight for survival. Simultaneously she announced that airlines would increase their engagement and founded of a group of four airlines (Air France/KLM, British Airways, easyJet, Lufthansa) to become active in the SESAR deployment.
Paul Riemens’ main message was a general warning on the fact that global air traffic is growing, but Europe is missing the chance to be part of this growth. In fact, combined forecasts estimate that in 2030 air transport industry will contribute to the world economy directly and indirectly as of a total amount of over 82 million jobs and $6.9 trillion in GDP (2010 prices, tourism included). Yet, air traffic in Europe is not moving at the same pace, and it seems quite unlikely that such a trend will be changing without a concrete re-thinking of the technological and the institutional paths.

Mr Riemens started his presentation by giving a look at global air traffic and pointing at the complexity of the world of Air Navigation Services (ANS). The high degree of fragmentation of the current Air Traffic Management (ATM) landscape is reflected also in the high amount of different systems used by the Air Navigation Service Providers (ANSPs) around the world. This complexity is one of the major causes of the costs, as European ANS Performance Review shows in its ATM Cost-Effectiveness (ACE) report of 37 ANSPs in Europe.

Mr Riemens pointed out that major savings could be expected, if ATM systems and technology on board aircraft were optimised, and that the Single European Sky (SES) is the answer that the European Union (EU) has been giving to this challenge. Notwithstanding the numerous initiatives promoted by the EU, Mr Riemens maintained that the amount of energy put into the elaboration of the SES and in the effort towards its concrete implementation has not been entirely successful so far. As conclusion to his wake up call, Mr Riemens highlighted that commitment is necessary from all the parties involved, being them CEOs of airlines, operators, NM, and mainly institutional bodies as to involve them.
Joe Sultana started his presentation by asking the audience on the options that might be put into place to tackle the challenge of air sector performance’s control in terms of cost effectiveness. Among the various options, the adoption of a common infrastructure at network level might be the best answer to guarantee the Single European Sky (SES) a good overall performance. Yet, the concept of Centralized Air Traffic Management (ATM) Service (CS) has to be in principle accepted by decision makers.

Eurocontrol is suggesting to have a limited number (10 maximum) of network-wide services consisting of a physical infrastructure whose main focus is on providing the data needed by the operators for their core functions. These CSs would also monitor technology, equipment and tools and include means to share data through physical infrastructure. A strong link with the Network Manager (NM) is foreseen.

However, before the CSs can be defined, some prerequisites should be met. Firstly, definitions should be agreed both in terms of what is local (FAB or network service) and with regard to the legal framework within which the NM is allowed to operate. Secondly, a competitive tendering and level playing field for the industry and the avoidance of monopolies should be ensured. Thirdly, technical and operational consistency of CSs, as well as local and FAB services and systems should be established.

Once the agreement on these preliminary arrangements is defined, the implementation of CSs would require a transitional period from fragmented to integrated system architecture and the adoption of a new market-driven approach. This should be coupled with the attainment of a strong partnership between NM and ATM industry and with the recognition of a strong technical management that coordinates the CS set-up. This would then lead to the possibility of tendering the CS development, including service set-up and operation when possible.

Mr Sultana highlighted how the CS approach was designed to overcome some of the major deficits encountered by SES performing scheme, especially referring to cost effectiveness. While many blame the complexity and the scares possibility for the stakeholders to influence the SES results, Eurocontrol is proposing a mechanism where the industry’s role and responsibility are clear and unambiguous, and the relationship with service provider is established via tendering at formal contract level.
In his introduction, Marc Baumgartner illustrated the structure of the Single European Sky (SES) performance scheme, explaining that the sector is in a transitional period with some aspects on the right track and others have to be revised. In particular, he focused on the schedule of the targets set for the current 1st Reference Period (RP1) and on the on-going process of target setting in the view of the RP2, which is starting in 2015.

The monitoring of the performance operated by the Performance Review Body (PRB) on current data was then illustrated. It is worth to be noted that, despite the high economic and air traffic volatility, airspace design is progressing broadly in line with the target as far as both the environmental impact and the capacity are concerned. Mr Baumgartner pointed also to the cost-efficiency target, noticing that during RP1 performance plan had to be slightly reviewed above the EU target.

With regard to this, and looking ahead to the RP2, Mr Baumgartner made clear that there are costs than can be saved, and he identified margins and opportunities for efficiency improvement. Several aspects along the Air Navigation Services Total Economic Cost (TEC) have been taken into consideration. First and foremost, the pivotal role of technology – such as “Centralised Services” or “Virtual Centres” – is a non-negotiable prerequisite for any performance improvement. Hence, the development of SESAR comes as fundamental step towards a performance-driven approach to development. However, the exigencies from the communities cannot be underestimated, so the costs related to this part of the TEC would be difficult to be cut.
Klaus-Dieter Scheurle addressed the problem of the further steps towards a common infrastructure approach to the Single European Sky (SES) by looking at what went wrong so far, and concentrating on each of the main pillars of the SES regulation, namely performance, SESAR, and Functional Air Blocks (FABs).

As far as the downside of SES achievement is concerned, five major issues have been identified. First, in 2010 Europe had 56 Area Control Centres (ACC), which means about 10% less than ten years before, which is quite a good result. However, the majority of European ACCs controls less than 500,000 movements and has a maximum size of 10 sectors, meaning a relatively low efficacy. Also, the technical fragmentation of the SES is reflected in the number of the main Air Traffic Management (ATM) system suppliers. Second, regulation of Air Navigation Service Providers (ANSPs) is based on revenues, instead of taking into account the regulated asset base. Third, SES is determined by two partly contradictory approaches (on the one hand, the competition mechanisms in ATM, on the other hand, consolidation of the industry and centralized services) instead of following the principle that successful regulation requires a coherent vision. Fourth, there are internal problems among ANSPs (either within or between them) with regard to several aspects of the management of SES. Fifth, about 300 projects have been presented under SESAR.

After setting the stage, Mr Scheurle illustrated required steps to implement a common infrastructure approach and ways of improvements that could be adopted in the three main pillars of the SES regulation. As for performance, doing it better seems to be possible via (i) the establishment of independent and wise regulatory bodies in every member state, (ii) an holistic approach to the idea of performance, (iii) incentive regulation based on the assets, (iv) plans for restructuring that excludes both the costs for consolidation and the investments made under the EU’s ATM master plan. Overall, harmonization of the legal baseline as well as a reasonable target setting were also called for. With regard to SESAR, Mr Scheurle stressed the need for harmonization, specifically referring to the technicalities and the modernization of the system that needs to be politically supported. He mentioned the possibility for establishing “Centralised Services” though highlighting the need to have them integrated with the current SES regulation. Finally, Mr Scheurle dealt with the FABs, underlying both the possible positive outcomes and the expected shortcomings that different actors would face with their achievement. A general call for common understanding arose.
In his introduction to the presentation on the current state of play of SESAR, Carlo Maria Borghini showed the different phases of the innovation cycle in research towards deployment. On the other hand, he highlighted that every technical development needs an appropriate legal and programmatic framework.

With regard to SESAR, such a legal framework is represented by the Single European Sky (SES) legislation, translated in the European ATM Master Plan as roadmap to achieve the modernisation of ATM - see also Council Regulation (EC)219/2007. The Master Plan sets the performance targets and high level schedule for the successful achievement of the necessary operational improvements, enablers and projects. The idea driving SESAR’s research and innovation is going through the Release approach, which refers to having an annual set of results packaged and validated as far as possible in operational environment. This allows delivering the different components of SESAR during the Programme life, well before 2016. Moreover, Mr Borghini explained that SESAR is not meant to be realised *per se*, in fact its activities constitute the answer to the technological needs defined in the SES.

Looking ahead, Mr Borghini concentrated the second part of his presentation on the possibility of SESAR’s deployment. He highlighted the need of having a binding definition of the contents, which are coming from the results built up by SESAR and are to be adopted by the Commission in accordance with the procedures agreed with the Member States. Also, the implementation of SESAR must be performance driven, with all the implications this has in terms of governance and incentives for stakeholders.

Driving his conclusions from these needs, Mr Borghini pointed out that currently there is no need to create additional harmonized regulatory framework. It is rather necessary to concentrate on existing regulation, especially the current framework for the deployment of SESAR. If certain aspects have to be further addressed, coherence with the legal bases, SES, Master Plan etc have to be the leading principles. Finally, He highlighted that the current approach to research and innovation based on public-private partnership and an EU perspective has to be reconfirmed for the future phases of SESAR, since the participation of all stakeholders (the funding institutions together with the “industry” partners) has proved to be the best way to allow for the achievement of results.
What steps to implement a common infrastructure approach? - A view from an Authority

Andrew Haines, CEO, Civil Aviation Authority
UK

In his presentation Andrew Haines made a case for a harmonised regulatory framework to improve the Air Traffic Management (ATM) System. In addition, he presented the British Future Airspace Strategy (FAS) – which tailors the EU principles to the UK – to modernise the ATM System.

A harmonised regulatory framework would facilitate investments in the system and make them more efficient, expeditious and enforceable. Nevertheless, according to Mr Haines, this is not enough to mobilise the stakeholders. They have to be convinced by network benefits and commercial incentives. By analysing the individual pillars – the Single European Sky (SES), SESAR, Functional Airspace Blocks (FABs) and Performance Scheme – Mr Haines agreed that the EU has the right principles to improve the sector’s performance. Yet, even greater coordination among the EU and the national level is needed, and opportunities to centralise services and achieve convergence have to be taken.

Achieving a pan-European harmonised regulatory framework is a complex undertaking requiring various concessions from different stakeholders. In order to contribute to the discussions on the necessary steps, Mr Haines presented the British FAS as a potential model for Europe. The FAS for the UK-Ireland FAB, which follows the same logic as the SES’ approach, includes all the major aviation stakeholders of the UK and Ireland, and is a result of the engagement of airlines and politicians.

Drawing a conclusion from the comparison between the British-Irish and EU actions, one may say that a harmonised regulatory framework is “necessary but not sufficient for success”. The actual driver should be the alignment of industry investment plans, also to avoid wasting the investments made so far.
Highlights of the discussion

The following paragraphs report briefly on the discussions that took place during the Forum. The debates are reported without identifying the authors of the remarks so as to comply with the Chatham House rule.

The discussions were led by the Forum’s guiding questions and touched upon a wide range of issues, as is to be expected given the complexity of this topic. This summary of the discussions has been organised around these.

- Why is the SES only progressing slowly?
- Can a common infrastructure approach bring the Single European Sky forward?
- What steps need to be taken to define a harmonized regulatory framework to implement a common infrastructure approach?

Why is the Single European Sky only progressing slowly?

The discussions showed that the initiative is in a gridlock and major changes are needed. The sometimes heated debates about the reasons for the slow progress of the SES can be summarised as follows: despite of the general interest there is a lack of commitment from all parties involved. In fact, all players fear that, once SES is implemented, they could lose some freedom to manoeuvre (this is mainly true for national states). On the other hand, no one sees the SES as a driver for concrete and secure gains which it is worth fighting for. Finally, no actor, not even the Commission, is powerful enough to drive the necessary changes by itself.

While some ANSPs and some association of stakeholders are perceived to slow down changes, air carriers show little involvement, despite them strongly benefiting from a potentially de-fragmented Air Traffic Management (ATM). Air carriers had been required to prepare and install the necessary equipment to work in a de-fragmented environment. These costly investments, however, cannot be put to use due to the delay in the implementation of the SES, causing high costs for air carriers as well as disillusion. In an ordinary contract environment – as it was put by an attendee – the party suffering the damage (air carriers) would be compensated by the originator of the delay.

Missing the lack of commitment, most of the participants agreed upon the fact that states are the most reluctant players. This led to the observation that ignorance from politicians and the public is often an obstacle for SES. For instance, several small airports are not cost efficient, yet implementing the technology of the SES would make them cost efficient. On the one hand, decision makers are unaware or ignore these benefits. On the other hand, decision makers are not exposed to sufficient public pressure because the citizens are not aware either. Achieving the SES thus requires involvement of society, which has to be informed of its benefits.

Most attendees saw the need for action, but were diverging about the dimensions and the urgency of the matter. Indeed, certain improvements had been achieved, but the recent downturn
in air traffic partially hid the real status of the system and camouflaged performance. It was further explained that, without a shared acknowledgement for the urgency, there will be little courage and consequently little commitment to bring the SES system forward. Because of the economic uncertainties, there is now little room for taking unnecessary risks.

The ATM sector is characterised by a large portion of fixed and operational costs. In some cases, 70% of the costs for Air Navigation Service Providers (ANSPs) are staff costs. Consequently, cost reduction is inevitably connected with lay-offs. Addressing the social aspects related to the implementation of the SES is thus of great importance, as social matters have the power to block any measures. Furthermore, in order to reform ANSPs it is essential to know what is expected of ANSPs. Most participants agreed that their role is to (i) allocate capacity to the highest benefit for the system, (ii) to indicate where additional capacity can be created, and (iii) to deliver capacity at a lower cost than is currently the case.

Almost to all participants agreed that improvements in the aviation sector will force somebody to bear the costs, i.e., loss of sovereignty and jobs. Here, the unanswered question is how to enable stakeholders to sacrifice their own interests to deliver what the customer asks for, and how to compensate these stakeholders. In this context the vivid image of committing suicide was used. Yet, larger ANSPs seem to have less concerns regarding consolidation as they are in a more comfortable position compared to smaller ones.

Turning to the Functional Airspace Blocks (FABs), many participants perceived their role very critically. Some argued that as soon as the FABs were established cooperation ANSPs worked less well. Moreover, FABs seem to have no ambitions, and their strategy seems to be to do as little as possible the latest possible, i.e., just enough to avoid interference from the European Commission. Also, the FABs, so far, do not look like being a valuable tool to improve the efficiency of the flights. Despite all the problems associated with FABs, many still see them as a solution and a necessary step towards a SES. The on-going infringement procedures against states do not exempt countries from honouring their commitments, thus it is necessary to consolidate and reinforce best practices.

Indeed, any form of new regulation altering the SES too fundamentally was appraised critically by most participants. One viewpoint was that the SES is starting slowly to deliver and should be given more time, as well as punctual reinforcement, rather than having a complete shift in focus, which adds additional layers of complexity to the situation. Beyond that, the question about the owner of the problem and the system remained unanswered, pointing to the fact that a clear governance structure is needed in order to bring the SES forward.
Could a common infrastructure approach bring the Single European Sky forward?

At the 4th EAirTRF two different concepts for a common infrastructure approach were presented: the ‘Virtual Centres’ and the ‘Centralised Services’. Both concepts were well perceived as they are practical, cost efficient, and, if built around the Network Manager (Eurocontrol) and SESAR, have the potential to deliver results and provide incentives.

In the debate participants discussed the similarities and differences of these two common infrastructure approaches. Both focus on the necessary data to offer air navigation services, but their exact emphasis differs. ‘Virtual Centres’ seem to focus more on the core of the operations, while the ‘Centralised Services’ deal with the service providers. Both inherently aim at reducing costs of air navigation services by centralising parts of the infrastructure. It was argued that the approaches complement each other and should be treated together despite the different focuses.

Notwithstanding the common infrastructure approach’s possibility to bring the SES forward, some participants expressed the view that this may not be the right focus. The real focus should be on services, not on technology, which is a mean to an end. Others criticised the increased number of parties involved. ‘Virtual Centres’ and ‘Centralised Services’ are new “balls in the game”, but do not change the situation fundamentally: discussions will be long and the concepts do not offer a framework for stakeholders to set their interests aside. Participants also mentioned the possible problem of funding of these approaches.

Deliberating the two different proposals as well as common infrastructure approaches in general, attendees touched upon cost-benefit-analyses. Cost-benefit-analyses were criticised by some for being imprecise, given that they require forecast based on assumptions (and in some cases faulty data). It was argued that ultimately it is a matter of trust in the analysis and the model.

Safety was an important issue in the discussion as to whether a common infrastructure approach could bring the SES forward or not. Although agreeing that safety is essential, it is difficult to set targets that actually are meaningful. Measuring safety remains difficult and the best way to measure it is by comparing it with previous years. With respect to a changing air traffic control (ATC) system it was said that there is no evidence favouring a specific system, but changes in the U.S. ATC system did not decrease safety or created additional risks.

What steps need to be taken to define a harmonized regulatory framework to implement a common infrastructure approach?

The question about the necessary steps to define a harmonized regulatory framework was controversially discussed, especially as participants did not share a common position on the steps and not even whether the SES framework needed drastic changes. Participants seemed to agree that the main institutional pieces of the SES are in place, but that the SES is not delivering as expected.
The SES is a complex socio-technical system. Each stakeholder – who is bound by the rules of the game and technological feasibility – contributes to the system with the aim of increasing the performance. This in turn means that most (if not all) stakeholders have to be involved in defining a harmonized regulatory framework.

An important step to implement a common infrastructure approach is to facilitate data sharing among the different entities. Yet, sharing data is strongly interrelated with sovereignty. Sovereignty is a legitimate concern and has to be addressed, but the way sovereignty is perceived seems to be somewhat outdated. In addition, sovereignty is often used as an argument when there is no better argument to oppose developments.

In the past, Nation-states’ positions were that each nation needs their own airline, but this position has clearly shifted over time. The same change of mind will inevitably happen with respect to the ANSPs, it was argued. For some, the consolidation process among airlines also functions as a warning for ANSPs. In this process, triggered by liberalization, (near) bankruptcy was necessary to restructure a system for the good. ANSPs are too relevant for the system to go bankrupt, but maybe they require a severe adverse situation in order to start changing. It seems that that “discussions need to escalate to get a result” and ANSPs need to face new realities, and “think the unthinkable”: competition or/and consolidation.

Recognising that certain stakeholders oppose changes in the regulatory framework, it was argued that changes are unavoidable, especially in light of the current economic situation which forces people to question current practices and to find ways for reducing costs. One of the speakers said it clearly; major changes are more likely to happen during (economic) crises. Advocates of the ‘Virtual Centres’ highlighted that additional regulation was actually not needed. In fact, common infrastructure approaches can be implemented within the current regulatory framework. Nevertheless, it is important to launch a discussion at the pan-European level.

Another highly complex question that needs to be tackled to bring the system forward, is the financial one. Many countries perceive overflights as cash cows. In other words, political and budgetary reasoning dominates the discussions, while airlines have to pay the bill. A proposed solution was to create a suitable system to pool and distribute revenues from route charges. Yet, not all saw this as a wise measure, as guaranteeing money can create disincentives. Moreover, it was mentioned that it is highly unusual to compensate actors, who perceive themselves as ‘losers’ of the liberalisation process.

A number of possible steps were touched upon, but not discussed in great detail. Some of them pertained to the role of the Performance Review Body (PRB), in particular whether it should consider more radical timelines with setting the performance targets, and whether there was the possibility of two-tier performance targets with corresponding rewards and punishments. Another measure would be to give operational stakeholders the lead in this process. This proposal was, however, not accompanied by details on how this could be managed. Further, a number of attendees voiced that incentives, but as well sanctions – which can be seen as part of the incentives system – are an essential element in any possible harmonized regulatory framework. This position was not shared by all. Some saw controls and sanctions as counterproductive. A common position was that only a strong system manager can lead the way.
out of the current gridlock. This manager – being Eurocontrol – has to be modernised and has to define the way forward without being too considerate eventually.

Finally, it was explained that it is unlikely that all goals can be met, forcing stakeholders to think of a trade-offs according to market rules. Costs could be reduced, but the major trade-off between cost efficiency and overall performance has to be faced.

During all the discussions “courage” and “overcoming nationalistic thinking” were the key words, since they are an essential part of the approach for a well-functioning system. For this reason, it is important to keep pressure on the system by demonstrating the willingness to use all tools in place. This role must chiefly be played by the European Commission. As far as the other players are concerned, the same need of commitment is required by all the member States and by the industrial partners so to encourage a productive private-public partnership, for instance built on the model of SESAR.
FSR-Transport: Events 2013

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