FREQUENTLY ASKED QUESTIONS ON CENTRALISED SERVICES

In the following, you'll find a compendium of more than 60 Frequently Asked Questions grouped into 12 items on Centralised Services (CS) which have been raised over the past 5 months by interested parties, and EUROCONTROL's answers to them.

I. GENERAL QUESTIONS

1. What is a "Centralised Service" (CS)?

A CS is an ANS support service or ATM function exercised at pan-European and central network level for harmonisation and cost-efficiency purpose. It is a mean to foster the implementation of new ATM technologies in support to SESAR and achieve unbundling of some ancillary services or functions through implementation of market mechanisms and competitions. It will allow CS processes to be provided on a pan-European level covering the airspace of the 40 EUROCONTROL Member States rather than on a local/national or regional/FAB level.

Centralised Services contribute significantly to the SES Performance Targets of the EU-Member States and support the implementation of SESAR developments on a central basis to become pan-European services. They encourage Air Navigation Service Providers and the ATM manufacturing industry to work together to provide the service outside of their national boundaries on a pan European level. Centralised Services allow the implementation of market mechanisms for some ancillary services, following a tender on a pan-European basis.

2. What are the problems that CS is tackling?

Part of the ATM costs in Europe can be directly attributed to the inefficiencies created by non-optimal route networks, delays, other operational factors like flight efficiency and the current complex and fragmented organisation of ANS provision. This has impacts on additional resources required and underlying infrastructures, particularly the multiplication of ancillary services, operational functions and supporting systems. As a comparison, European ATM cost is roughly twice as high as in the US[1]. Therefore, a centralised approach is the right answer to tackle the problem and proven to contribute to the EU performance targets in capacity and cost effectiveness. Centralised Services must be decided before SESAR deployment starts implementing new technologies on local/national level. Money spent on local implementation is sunk, therefore an early decision on the architectures and services to be implemented on a central pan-European basis is needed to safe that money and thereby contribute significantly to the performance targets.

3. What are the aims of the CS?

As all CS involve managing data centrally, these will help improving interoperability, predictability, reliability and consistency of the European ATM system. These data are essential to improve the work of the Network Manager, providing the high quality data also to the ANSPs and other stakeholders, such as Airspace Users, airports, airport slot coordinators and the military.

[1] U.S./Europe Comparison of ATM/Related Operations Performance, 2010, produced by EUROCONTROL and FAA.

The concept of CS will contribute to bridge SESAR development to the deployment processes while implementing market conditions to development, deployment and operation. CS support creating a pan-European market for some ancillary services.

4. Which CSs are proposed?

- **CS#1. Flight Plan and Airport Slot Consistency Service (FAS).**
  Match flight plans and airport slots to better exploit airport capacity and improve flight punctuality.
- **CS#2. 4D Trajectory Flight Profile Calculation for planning purposes Service (4DPP).**
  Provide a centralised facility for common reference for the 4D Trajectory profile for all ATM planning activities with an increased accuracy, allowing reduction of buffers around airspace occupancy, reducing under-/over- delivery.
- **CS#3. European Tracker Service (ETKS).**
  Enable the creation of an ECAC-wide, consistent, high quality Air Situation Picture and the provision of its required subsets to any user of processed surveillance information, civil and military.
- **CS#4. Advanced Flexible Use of Airspace Support Service (AFUAS).**
  This service will provide civil-military collaborative ASM decision-making processes based on transparent ASM data and ASM performance feedback.
- **CS#5. European ATM Information Management Service (EAIMS).**
  Accurate and timely information needs to be organised and provided through flexible means that support system-wide interoperability, secured seamless information access and exchange. In this Service the EAD service is integrated and enlarged by additional functions, such as ADQ, weather briefing, digital NOTAMs, briefing depicting relevant NOTAMs on a chart in accordance with the flight track etc.
- **CS#6. Management of Common Network Resources Service (CNR).**
  The scarce resource management addresses the Transponder Code Function (TCF) and Radio Frequency Function (RFF). These functions improve the management of these resources, optimising utilisation for the benefit of stakeholders and the Network as a whole, including allocation of scarce interrogator codes to Mode S radars installed in Europe. A centralised management of common resources (network addresses for instance) ensures a coherent and efficient utilisation of the resources shared by all stakeholders.
- **CS#7. Network Infrastructure Performance monitoring and analysis Service (NIPS).**
  In order to achieve a safe and efficient operation, the CNS infrastructure performance needs to be monitored and managed all along its deployment and operation. This service, consisting of seven interlinked and inter-dependent sub-services, such as datalink and transponder functions, will help to acquire a better knowledge of the infrastructure performance and therefore help in preparing infrastructure rationalisation.

- **CS#8. Pan European Network Service (PENS).**
  To meet all present and future ground communication needs a secure connectivity is required between sites and partners. PENS is a shared service with centralised management based on IPv6 and compliant with SES regulatory requirements for FMTP as well as ICAO ATN/IPS standards. The provision is contracted out to a Network Service Provider. It has the potential to be expanded and could cover all stakeholders.
- **CS#9. Data Communications Service (DCS).**
  To increase interaction between the air and ground ATM-related systems and to replace current fragmented means of communication, a data communication service is required in all airspace (airport, TMA en-route, polar and oceanic); this service shall support all A/G services such as datalink, AOC services, ADSC, flight information services, airport coordination services, space-based ADS-B, etc.
- **CS#10. under development**

5. How has EUROCONTROL identified the potential CS?

Following an analysis of the results which have been achieved through the SESAR development phase, EUROCONTROL provisionally has classified 70 to 90 projects that are suitable to be implemented at regional/FAB level while up to 10 potential CS have been identified as more effective if deployed at pan-European level. The CS have been evaluated against a duly verified positive business case, consistent with the ICAO Block Upgrade, technically mature and in line with the SESAR Master Plan, the Interim Deployment Plan and Pilot Common Project.

6. What is EUROCONTROL's proposal with regard to the services which could be deployed and operated at regional/FAB level?

EUROCONTROL has identified about 70 to 90 SESAR ideas that make economically more sense to deploy at the level of Functional Airspace Blocks. This way each FAB could share the equipment and develop common procedures. EUROCONTROL expects that this will significantly reduce costs and thereby contribute to achieve the Performance targets. So far, not much work has been done within the SESAR work packages to develop architectures for regional deployment. There is no overall assessment available on what SESAR projects could be implemented at a FAB level.

There are clear benefits associated with identifying ideas that can be developed as regional solutions rather being limited to local level. This work should evolve fast since there is a need to put together a FAB performance plan from 2015 to 2020. EUROCONTROL has encouraged CANSO and the ANSPs to start work in the framework of the SESAR Joint Undertaking (SJU) in this respect and offered our support if deemed helpful.

In this framework, EUROCONTROL appreciated the letter recently sent by the European Commission to the SESAR JU asking for this work to be expedited. The SJU will not be able to conduct the work alone; it will depend on the support and ingenuity of the ANSPs. EUROCONTROL is ready to offer its support if requested.

EUROCONTROL has identified about ten projects that should be implemented at network level. These are projects where the ATM community can save money by finding a common central solution. Typically they involve managing data. Centralising such services means improving predictability, making sure that there is more reliable, more consistent and more accurate data available. It also helps make sure that all maintain their excellent safety record.

7. Are MET services part of the proposal?

Yes, for example CS#5 is dealing with the enlargement of the EAD service, where additional functions such weather briefing are integrated. EUROCONTROL has learnt through the stakeholder consultation workshops on CS, that there is a great interest of the MET service partners and the manufacturing industry to embed MET services into the scope of CS, also for CS#2 high quality weather data is essential in the prediction of the trajectory.

8. Are military issues covered by CS?

Yes, for example with regard to CS#4 Advanced Flexible Use of Airspace Support Service (AFUAS), civil-military collaborative ASM decision-making based on transparent ASM data and ASM performance feedback is enabled, covering all related military issues and the involvement of the affected stakeholders, military issues are also of importance in the calculation of a 4D trajectory in CS#2.

9. Are the Airport Slot Coordinators involved?

Yes, CS#1 for example is dealing with data from Airport Slot Coordinators. EUROCONTROL has a cooperation agreement with EUACA, the association of Airport Slot Coordinators, and will work with EUACA closely in this respect.

10. Will there be a closer analysis of each CS?

Looking at version 2.0 of the EUROCONTROL proposal dated March 2013 for a first set of Centralised Services to contribute to SES Performance objectives, which was presented to the European Commission, there is already a first initial analysis of the costs and benefits available, which is accompanied by a stakeholder analysis and a legal assessment, focussing on the legal basis for CS and the related tendering principles. The CS will be discussed more in detail at the CS Specific Workshops in June and July 2013 to which all interested stakeholders are all invited. Moreover, the CS ask for new operational concepts that will be developed during 2013 with the involvement of the interested stakeholder groups.

II. ROLE OF EUROCONTROL

11. Why is EUROCONTROL the right entity to demonstrate the CS?

EUROCONTROL possesses a proven and widely acknowledged competence in European ATM network architecture and systems engineering and is an established, trusted centre of knowledge and information regarding European ATM-related performance issues. Furthermore, the Agency has demonstrated its commitment to the Single European Sky, fully supporting the European Commission in the framework of the High Level Agreement.

The Agency has already confirmed through its successful re-organisation in 2010 in view of its designation as Network Management and Performance Review Body, its ability and willingness to manage its resources according to the requirements of its role. As Network Manager, EUROCONTROL has already been nominated to provide some centralised functions in accordance with the Network Manager Implementing Rule. EUROCONTROL proposes to enlarge the scope of the NM in respect to the CS and the NMB.

EUROCONTROL is a founding member of the SJU and has supported with significant contributions (financial and manpower) to the current SESAR results, that now need to go into demonstration and implementation.

12. Why is EUROCONTROL the right entity to ensure the appropriate running of CS?

EUROCONTROL currently already provides partially a wide range of services, some of which are for the common benefit of all airspace users in Europe and some of which are specific services provided to individual organisations or groups of organisations. Projects such as the Reduced Vertical Separation Minima (RVSM) have showcased EUROCONTROL's ability to roll-out and successfully deliver complex projects on a European basis.

Moreover, the Agency is already successfully providing services on behalf of its Member States, as the stakeholder decided not to continue the provision of services on a national basis. These services are nowadays all completely undisputed, due to the improvement of quality achieved, higher integrity of data as they are coming from one single source and the associated efficiency gains. Examples are the CRCO founded in 1971, the creation of the CFMU in 1996, the ARTAS tracker for some participating countries and ANSPs and – very prominent – the EAD as of 2001. The Agency has the required experience and independence to manage the CS. As the Network Manager, the Agency has a detailed understanding of how the network is evolving and can help the ATM sector to control its costs.

13. Why should EUROCONTROL be the right platform to develop the CS concept?

EUROCONTROL is a neutral, unbiased body, already having the role as Network Manager given by the EU. The Agency is a place where important issues and problems related to the development and promotion of modern developments such as CS are debated between all stakeholders, be them Airspace Users, Member States, Airports, the Military, ICAO or Unions together with the European Commission. There is a good scope for establishing cooperation. It also represents an appropriate channel (network of services) for systematic exchange of information/data and lessons learnt on their implementation. EUROCONTROL is the only organisation in developing, implementing and operating pan-European wide based ATM-technology and infrastructure. EUROCONTROL has further on experience in developing, implementing and operating performance driven contracts and thereby has experience in opening the market for some ancillary services on a pan-European basis.

14. What is the role of EUROCONTROL in the establishment of the CS?

The role of EUROCONTROL is to support its Member States to achieve safe, efficient and environmentally-friendly air traffic operations across the pan-European region. The Agency plays a pivotal role in Europe by working together with all aviation partners (be them Airspace Users, Military, Airports, ANSP or the ATM-Manufacturing Industry) to deliver a Single European Sky that will help to meet the safety, capacity and performance challenges of European aviation in the 21st century.

The Agency is proposing to initiate and monitor the demonstration of the CS but not to provide CS itself, but rather to tender them to the market in order to allow interested parties to bid for a limited contractual period to provide services at a pan-European level. EUROCONTROL would manage the services and be responsible for the service results towards the Member States and the European Commission. The technical set-up and operation will be put as far as possible out to tender. This allows Air Navigation Service Providers, manufacturing industries and interested stakeholders to develop and to conduct the technical systems and services on a pan-European basis under market conditions with performance based contractual arrangements.

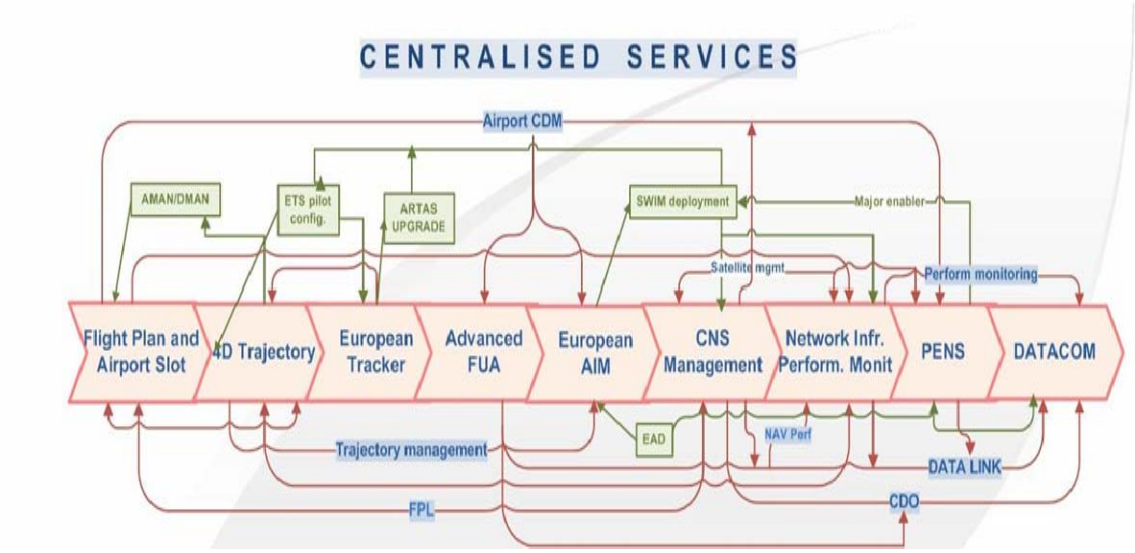
15. Why are up to 10 CS proposed and not more or less?

Some more than 10 technological ideas and services out of the SESAR portfolio could qualify for a centralised implementation. EUROCONTROL has identified 10 services where there is a positive business case and where the merit of the concept can be proven. It has to be taken into consideration that each of the projects requires a dedicated project structure with the respective resources to be provided.

One could argue that one should start with only one or two Centralised Services. The disadvantage of starting with only one or two CS is that the potential contributions of the other Centralised Services to the performance targets might be lost. The chances for the involvement of the manufacturing industry and the ANSPs would also be considerably reduced.

If the 10 services are provided on a pan-European basis by 2-3 consortium partners (EUROCONTROL Member States ANSPs, possibly the Manufactures of the equipment and other stakeholders), the chances for all interested parties to participate in the provision of one of the services, depending on the offer submitted, would be significantly higher, rather than if only one or two services are available.

In addition, the links between CS (including the integration and the interface between new and existing services) enable maximisation of the benefits and cater for synergies in support of EU Performance targets.



III. STAKEHOLDER INVOLVEMENT AND CONSULTATION

16. How are the Stakeholders involved in the development of CS?

To achieve its mission, EUROCONTROL works closely with Member States, ANSPs, civil and military airspace users, airports, the aerospace industry, professional organisations, intergovernmental organisations and the European institutions. Those partners are involved at every level of EUROCONTROL governance. The Organisation's decision-making processes and management are based on principles of sound corporate governance, transparency and partnership.

EUROCONTROLs stakeholders have been invited and involved in discussions about the CS concept through different workshops. The first one took place on 4 March 2013, having a briefing with the Member States to present the CS concept. An ANSP workshop, an Airspace Users Workshop and an Industry Manufacturing Workshop followed on 24 and 29 April and on 17 May 2013. Presentations were also been made to IATA, CANSO, ACI, EUACA and to EUROCONTROL advisory bodies such as MAB, AAB and NMB. CS specific workshops are planned for each CS from June to July 2013:

- 25 June 2013: CS#2 Workshop (4D Trajectory Flight Profile Calculation for planning purposes Service (4DPP))
  A centralised service for calculating and communicating 4D trajectory profiles with increased accuracy, leading to improved predictability in the planning phase.
- 26 June 2013: CS#4 Workshop (Advanced Flexible Use of Airspace Support Service (AFUAS))
  A service for the collection and provision of airspace management data, enabling the more efficient and effective use of available airspace by both civil and military users.
- 28 June 2013: CS#5 Workshop (European ATM Information Management Service (EAIMS))
  A development of the existing EAD service, to include all predeparture static and dynamic data (e.g. airport information, weather and digital NOTAMs); this service enables the acceleration of the early deployment of the SWIM technology.
- 1 July 2013: CS#3 Workshop (European Tracker Service (ETKS))
  This service will enable the creation of a Europe-wide, consistent, high quality picture of the air situation, processing and unifying all the data sent by numerous surveillance sensors.
- 4 July 2013: CS#1 Workshop (Flight Plan and Airport Slot Consistency Service (FAS))
  A service to check consistency of flight plans against airport slots on a centralised basis – which will result in better exploitation of airport capacity and improved flight punctuality.
- 5 July 2013: CS#6 Workshop (Management of Common Network Resources Service (CNR))
  This service improves the management of scarce resources such as transponder codes and radio frequencies by handling them on a unified basis across Europe.

- 8 July 2013: CS#7 Workshop (Network Infrastructure Performance monitoring and analysis Service (NIPS))
  A service to ensure the safe function and anomaly resolution of common/distributed CNS infrastructure. This service would set up and operate sensors so that performance of the infrastructure could be measured and issues resolved.
- 9 July 2013: CS#8 Workshop (Pan European Network Service (PENS))
  As data interchange increases, this service would meet all the ground communication needs between sites and partners (based on Internet Protocol version 6). This existing service would be expanded both in scope and in coverage.
- 10 July 2013: CS#9 Workshop (Data Communications Service (DCS))
  A data communication service between the air and the ground, to support services such as Datalink, AOC services, ADS-C, flight information service, airport coordination services, space-based ADSB etc.

Additionally, the work on the Concepts of Operations will be conducted during the summer/autumn of 2013.

17. How are airports involved in the CS idea?

The airports, as well as other stakeholders like the Member States (including military authorities), Air Navigation Service Provider or the Manufacturing Industry, are involved through the stakeholder workshops.

EUROCONTROL has a cooperation with ACI under which there will be a close cooperation on the CS development, obviously CS#1 and CS#2 will have positive impacts on airport operations.

The Airport Operators benefit from the Flight Plan and Airport Slot Consistency Service depicting automatically consistencies and inconsistencies between the Airports Slots and the filed Flight Plans. The elimination of inconsistencies allows a better use of the available airport capacities.

It is clear that it becomes more and more difficult to build new runways in Europe, therefore the capacity available through the current runway systems must be exploited to the maximum thinkable.

18. Has EUROCONTROL talked to ATM Manufacturing Industry to test their willingness?

Yes, the workshop on CS with the ATM Manufacturing Industry took place on 17 May 2013. The European Commission fosters successful high-tech development as part of its policy towards European industrial leadership and competitiveness in the global market place. It is suggested that advances in European ATM technology will serve as a major contribution to the worldwide competitiveness of European ATM manufacturers. European ATM manufacturers can benefit from the development and deployment of centralised infrastructure and services in Europe, but also in marketing these solutions and services to other parts of the world, having a proven positive track record in Europe.

19. What impact will the CS have on job protection in the ANSPs of the Member States?

The CS are chosen not to endanger jobs in national Air Navigation Service Providers organisations or EUROCONTROL. The jobs in ANSPs to operate some databases (such as trackers for example) might become superfluous. As the people operating this service currently on a local level are also responsible for other technical equipment, they will not become redundant as a consequence of the CS concept as they are needed to operate other databases/servers. The concept allows to create some new highly qualified jobs in new consortium structures to operate the centralised pan-European services.

IV. BUSINESS MODEL

20. What is the business model to be applied for the operations of each CS?

The concept of CS is based on the model used for the European Aeronautical Information Service Database (EAD). In 2011, EUROCONTROL has been entrusted by its Member States with the development, establishment and operation of the EAD. Operations are externalised to industry through procurement. The Agency is proposing to initiate and monitor the demonstration but not to provide services itself and rather to tender them to the market in allowing interested parties to bid for a limited contractual period to provide services at a pan-European level. EUROCONTROL would manage the services, the technical set-up and operation will, as far as possible, be put out to tender.

Instead of implementing hard- and software on a local basis, multiplying the need to invest, it is proposed to reduce costs by a central deployment and operation. The contract between EUROCONTROL and the Service Provider will be based on key performance indicators to be achieved.

21. What is the impact of the CS on the ATM business model?

One of the key objectives of the CS is the application of market principles and competition of these CS in a limited sector of some ancillary services. The CS concept supports ANSPs offering services outside their national borders.

The impact of opening such ANS support services, which are so far fragmented and provided at national level, to market competition is unprecedented. It will allow the constitution of new cooperations and creation of Special Purpose Vehicles, fostering competitiveness of the European ATM industry and ANSPs. Also, it will be an evolutionary approach based on the unbundling of some ancillary services and functions that will help reduce fragmentation and thus improve efficiency in the aviation transport system. The advantage of this approach would avoid double investments and irreversible costs at local/national level.

Those chosen to provide the services will have good market chances to offer and provide the services outside Europe.

V. SES AND SESAR

22. How does the CS initiative fit in the SES Framework?

Improving performance in the European ATM environment is pivotal to the delivery of the Single European Sky. All individual elements of the SES, such as the Performance Scheme with the targets set, the creation of the Network Manager, the development and deployment of SESAR and the establishment of Functional Airspace Blocks play their part. The aim of the CS concept is to bring together the performance scheme and SESAR to implement specific SESAR initiatives on a pan-European level. European Commission Vice-President Kallas wrote to EUROCONTROL in order to ask for its

views on the evolving role of the Agency, in particular with regard to its potential contribution in delivering the SES and to elaborate on the Centralised Service idea. He also invited the Agency to develop further the concept of Centralised Services with a view to enabling an informed debate on the topic, recognising the obvious links with the various stages of SESAR deployment. For this purpose, EUROCONTROL developed a first draft document on the concept of Centralised Services at the end of 2012. In March 2013, EUROCONTROL provided an updated version of this document[2]. The principle is to implement a number of SESAR initiatives at pan-European level, covering the whole airspace of the EUROCONTROL Member States. This will support the EU Member States in achieving the Performance Scheme targets. These economic performance targets are currently not reached by a significant number of EU Member States and their ANSP for RP1. For RP2, the targets are not yet clear.

23. What is the relationship between CS and SESAR development and deployment?

Centralised services are a vehicle to bring some ideas that have come out of the SES research programme SESAR into implementation at a pan-European level supporting the Performance Scheme targets rather than implementing on a local/national level as done in the past. Integrated into the heart of SESAR development and deployment mechanisms, CS will contribute to the Pilot Common Project and the associated governance structure represented by the Deployment Manager as recently adopted under the framework of the EC Implementing Rule. The CS could be qualified as implementation projects aimed at deploying important ATM functionalities that will achieve the essential operational changes defined in the ATM Master Plan on a pan-European level. At the same time, there is a strong link between CS and the Network Manager. CS assist the Network Manager in improving the performance of the network. CS have the potential to strengthen Europe's position in the establishment of data formats, standards and practices that could be brought into the ICAO mechanism.

The evolution of existing EUROCONTROL Centralised Services (such as CFMU or EAD) moving ahead towards new centralised systems as part of SESAR implementation, to be developed and operated in strong partnership with the ATM industry, is clearly intended to the achievement of major benefits in network operations, quality of data, continuity of service and savings, all leading to the benefit of SES performance achievement.

24. Is there a need to wait for an official decision about the SESAR Deployment before the proposed CS can be further developed?

The Network Manager has been created by the Single European Sky II legislation to organise the management and operations of network functions (including ATFM), to develop and to create Route Network Design, to provide a central function for Frequency Allocation, to coordinate improvement of SSR Code Allocation and to provide support for Crisis Management.

[2] EUROCONTROL Proposal for a first set of Centralised Services to contribute to SES Performance Achievement, Update to the European Commission, Version 2.0, 25th March 2013.

EUROCONTROL as the Network Manager will contribute to the deployment of SESAR according to the European ATM Master Plan. The already nominated Network Manager and the future Deployment Manager will coordinate closely as foreseen in the new legislation. No official decision is yet available about SESAR Deployment, and there is no need to wait for a Deployment Manager to be nominated, organised itself and ready to operate.

25. Do the CS proposals fit with the SESAR Pilot Common Project (PCP)?

EUROCONTROL has publicly stated that it supports an extension of the SJU. The SJU is currently entrusted on the identification of technical dependencies between the PCP and the list of CS and will then use the technical dependencies to assess potential impact of CS on the PCP CBA. EUROCONTROL further on encourages the SJU to start developing architectures for SESAR solutions to be operated on a regional/FAB basis and to propose technical solutions and services that can be implemented more efficiently on that level than on local/ANSP or national level.

26. How does the link with the SESAR Pilot Common Project and the Interim Deployment Plan (PCP/IDP) work?

EUROCONTROL is very closely associated with PCP and IDP and, in its role of work package leader for the ATM Master Plan, is responsible for looking at technical coherence. With regard to public funds, EUROCONTROL applied for TEN-T funds for the set-up and demonstration of CS in March 2013. The European Commission decision is expected in September 2013.

27. Does the proposal slow down SES measures?

No. EUROCONTROL is strongly committed to promote a competitive air transport market in Europe through an ambitious approach to ANS/ATM that will significantly contribute to the achievement of the targets laid down in the Performance Scheme. EUROCONTROL is offering to cooperate closely with its Member States and the EU to bring the three pillars of the SES 2 package (Network Functions, Performance Scheme and SESAR) even closer together.

The proposal of the CS concept can rather be seen as a wake-up call speeding up the real implementation of technologies on a central level rather than continuing business as usual and implement on local/ACC or national/ANSP level.

VI. FINANCING

28. How are CS financed?

The creation of CS is based on the underlying principle that the overall costs of ANS/ATM charged to airspace users at European level will decrease and therefore bring a significant contribution to the EU performance targets. The unbundling of services at national level to allow a provision of services at European level will result in a decrease of corresponding national cost-bases. For the development and demonstration of the proposed CS, EUROCONTROL forces not to increase the cost base. On the contrary EUROCONTROL intends to contribute pro rata to the EU Member States performance targets for the RP1-2 period. If all States, NSA's, ANSPs and weather services would do this, the targets would actually be reached.

29. How is the CS funding planned?

EUROCONTROL applied for TEN-T funding for the set-up and demonstration of CS in March 2013. The decision of the European Commission is expected in September 2013. The missing financial part is foreseen to come from the Agency cost base. CS operation could be supported at the beginning through the deployment of SESAR as implementation projects being part of a common project. An overall amount of 3 billion EUR has been requested by the European Commission in the TEN-T and CEF (Connecting Europe Facility) programmes.

30. How are the costs calculated?

Initial CBA analyses have been developed from a bottom-up perspective looking at the specific scope and implementation model for each Centralised Service. Based on experience of current centralised services, the Agency has calculated significant cost savings for service development in each participating State as well as savings for annual operational costs.

Taking EAD results up to 2008, total annual savings of between 20 and 30 million EUR per year for EAD can be observed. Recognising that the EAD is not yet fully used as a centralised service by all European states, as there is a PC decision but no binding EU-mandate, it is reasonable to anticipate that overall savings could reach at least twice the current level.

Assuming that the entire list of Centralised Services represents in complexity and functionality the equivalent of 4 EAD-like programmes, the total annual cost savings for the States could reach 150-200 million EUR. This bottom-up estimate is complemented by the actual cost savings analysis performed at detailed level for each targeted Centralised Service, but is considered to be conservative. This means that 10 years after full implementation of the proposed CS around 1.5 to 2 billion EUR can be saved, which is about the timeframe to write off the equipment. EUROCONTROL will present figures for each CS in the CS specific workshpos .

31. What impact do the proposals have on ANSPs investments?

CS will have no impact on recent investments. For the transition phase from local solutions to a pan-European solution, a well-defined plan must be established for the different ANSPs and their centres to connect to the CS. Those ANSPs and centres that need to make a replacement decision at a time when their equipment needs to be replaced should not go again for a national replacement, but instead connect to the CS in question. EUROCONTROL proposes to put this into legislation by the European Commission to avoid duplication of costs on a local/national level and on a pan-European level for the airspace users. Those ANSPs that have just invested on a national basis of course would not immediately throw away their equipment, but instead would secure their investment and connect at that point in time when replacement is necessary. In the interest of the airspace users, it must be ensured however that there are not continuing investments at different levels.

32. There is a majority of ANSPs that have not foreseen any investments for SESAR technologies. What impact does that have?

Airspace users and taxpayers have invested via EUROCONTROL / ANSPs / Manufacturing Industry and via European Commission in SESAR/SJU. It would not be acceptable to throw away the SESAR results, but an implementation must become a must given the fact that all parts have significantly contributed to the SJU. Therefore the investments for SESAR deployment need to be foreseen in the ANSP/FAB investment plans.

33. Can a mix of contracting out, TEN-T and UPP to finance the CS work?

EUROCONTROL is an intergovernmental organisation. The cost base is financed by its Member States. It covers core and support functions of the Agency, logistics and performance improvement.

EUROCONTROL does prepare to finance the set-up and demonstration of the proposed CS, via the Agency cost base and supported by TEN-T. This money will be used to contract the consortium structures. EUROCONTROL does not propose to apply UPP for the CS, as the CS as an enlargement of the NM responsibility is for the benefit of all ANSPs similarly. As EUROCONTROL proposes to make the CS usage mandatory, there is no risk for airspace users to pay twice, once on local/ACC/ANSP level and additionally on pan-European level. The technical and operational service provider will be paid on the basis of performance achievements by EUROCONTROL.

34. What is the setting up and operating percentage for CS in the overall ATM costs?

The actual cost base for ATM in Europe is 5 Billion EUR per year. Set-up costs for CS depreciated by 10 years are estimated at 7 Million EUR per year, and operating costs at 10 Million EUR per year. Altogether these are 17 Million EUR, leading to 0,34% of the overall ATM costs.

VII. TENDERING PROCESS

35. How will the Tendering Process look like?

EUROCONTROL will use the procurement principle of the Call for Expression of Interest. The latter is a method of supporting potential interested parties to come together, discuss their interests and potentially at the end of the process declare their joint interest to EUROCONTROL. The Call for Interest (CfI) will be followed by the Call for Tender (CfT) at the end of the year. EUROCONTROL will unveil details on the CfI in due time.

36. What should interested parties do to participate in the Call for Interest (CfI)? How to create a consortium?

The Agency intends to publish a Call for Interest (CfI) throughout the EU Official Journal and on the EUROCONTROL website. The CfI notice will contain that information and specifications can be downloaded and in which all individual organisations or established consortia will have to register. This CfI period was deliberately chosen to be quite extensive to allow interested parties to discuss between themselves intensively. At the same time, it allows interested parties to make preparations with a view to bidding later on as part of the Call for Tender.

VIII. GOVERNANCE AND SERVICE PROVISION

37. How would CS be governed?

For the governance of CS, EUROCONTROL proposes to extend the remit of the Network Manager (NM) and the remit of the governing body, the Network Management Board (NMB). An involvement of major stakeholder groups through representation is already ensured, such as in the NMB where currently the European Commission, EUROCONTROL, ANSPs, airspace users, airports and the military are represented. EUROCONTROL proposes to assess the NM IR in this respect to discuss whether additional stakeholders, such as the Airport Slot Coordinators, ANSPs from non EU Member States or Member States should be invited to join. The NM operation is currently regulated by EASA. An enlargement of NM operations with the operation of the CS would then also be regulated by a central regulator.

38. How would CS be provided?

A key element of the project is the tendering of a major part of the set-up of equipment and services to the industry, while EUROCONTROL will retain managerial, legal and overall responsibility for the operation of CS. EUROCONTROL does not intend to provide the service itself, but rather be responsible for the technical set-up and service delivery results, management of the process and run the competition in which ANSPs and manufacturing industry of EUROCONTROL Member States would be eligible to bid. EUROCONTROL thus avoids entering into any competition with the ANSPs. This is expected to make best use of the resources of all ATM players in a collaborative and performance based framework.

Stakeholders will be in the position to announce their interest and bid later on to provide the respective CS going beyond their current national boundaries. These services are not intended to interfere with ANSPs direct service delivery to airspace users, but instead to provide enhanced efficiency and lower costs, helping the States and their ANSPs to achieve or at least come closer to their performance targets, and for the system to become more efficient for airspace users.

39. Do CS fit with the Network Management functions?

EUROCONTROL took on the role of Network Manager in 2011 and has made progress in harmonising route planning, reducing delays and making flights more efficient. This work continues with the recent publication of the Network Strategy Plan, which will help drive forward the development of European ATM.

Centralised services are envisaged to be delivered at the pan-European network level for all EUROCONTROL Member States, and even beyond if this is requested. They would run under the responsibility of the Network Manager, bringing significant benefits in cost-effectiveness and harmonisation and contributing to the States and ANSPs performance targets. They support the implementation of SESAR.

The Network Manager will gain a more pivotal role. The Network Manager is already evolving into a decisive European player, with regard to EU Member States in accordance with its remit granted under EU regulation, but also in its bridging effect to

other EUROCONTROL Member States, and in the EU Foreign Aviation Policy and EU Neighbourhood Policy. Linking the concept of Centralised Services with the work of the Network Manager is not only a way to place it under a consistent legal framework within the SES initiative, but also to ensure that the industry is adequately represented in this initiative.

40. Is the Agency seeking to become the European Infrastructure Manager?

The function of Infrastructure Manager remains to be defined by the EU decision making level. This function needs to be consistent with the roles of the Deployment Manager and Network Manager. As long as the role is not defined, it is premature to discuss the feasibility to achieve the role of Infrastructure Manager.

41. Does the CS implementation create monopolies?

The provision of air navigation services and related functions have, with the implementation of SES 2, to be fully performance-driven and optimised with a view to facilitating cooperation among Air Navigation Service Providers. CS are performance enablers to create synergies based on operational requirements, established regardless of State boundaries, with an objective to reduce the current ANS fragmentation across Europe, decreasing the national monopolies that exist today.

EUROCONTROL will pay extreme attention to the selection criteria in the tendering process, to avoid creating monopolistic situations and to minimize the financial risk.

42. Are CS going to compete with ANSPs, and/or would they be under EU governance?

CS are not going to compete with ANSPs, their goal is to help ANSPs and Member States meet their Performance Scheme targets and to make the data/services available to ANSPs to provide cheaper and better services to airspace users.

43. Does EUROCONTROL intend to bid for the CS and provide them in-house?

EUROCONTROL is not interested in providing the CS internally and therefore does not intend to participate in any bid for CS. EUROCONTROL anticipates that there will be sufficient response created as a result of the Call for Interest and Call for Tender. Should however this not be the case, EUROCONTROL would be ready to operate the services itself.

IX. CONTRACT MANAGEMENT

44. Are CS opened to the pan-European market?

EUROCONTROL intends to open the market for every ANSP, manufacturing industry and interested stakeholder located in the Member States of EUROCONTROL. ANSPs and interested stakeholders from non-EU States EUROCONTROL Member States are eligible to bid as part of a consortia, provided that they demonstrate their compliance with equivalent requirements.

45. Have lessons learnt from the industry been considered when looking at CS?

It is intended to build on the positive experience and lessons learnt gained from the European Aeronautical Information Service Database (EAD). The EUROCONTROL Organisation has been entrusted since 2001 by its Member States with the development, establishment and operation of the EAD. Operations are externalised to industry through procurement, under the responsibility of EUROCONTROL.

46. How will EUROCONTROL control the CS provision? What will the contracts look like? Will performance based contracts be put in place?

The set-up of technical systems and service provision will be conducted on a pan-European basis under market conditions with performance based contracts being controlled and managed by EUROCONTROL. Details on the requirements will be made available as part of the Call for Tender.

X. LEGAL ASSESMENT

47. How does the idea of CS fit in the legal order?

EUROCONTROL was nominated as the Network Manager for the ATM Network Functions by a decision of the European Commission on 7 July 2011. Considering that EUROCONTROL already performs a number of centralised functions it would be a natural evolution for the Agency to undertake management of CS, which would facilitate and enable the execution of the functions.

The current EU regulatory framework does not prevent the creation of CS or functions by EUROCONTROL, these services can be initiated by EUROCONTROL under its Convention.

48. Will there be a legal obligation and an implementation rule for putting CS in place?

The objective of CS is to support the goals of SES and there is strong support from the European Commission for the initiative. Therefore, the means to firmly embed the CS initiative in the SES framework and the remit of the NM are currently being developed. Out of gained experiences of the past, EUROCONTROL proposes to make the CS obligatory within a defined timeframe.

49. How is liability handled within CS?

Liability will be addressed in respect of each CS. The legal relationship between all players involved (EUROCONTROL, the selected consortia, users and third parties), the nature of the service and the associated risks will be carefully looked at and be covered by adequate insurance arrangements. To give the example of EAD, EUROCONTROL is liable for the EAD service provision towards the EAD users (covered by insurance), while GroupEAD is liable towards EUROCONTROL for the EAD operations under the EAD contract with EUROCONTROL.

50. Will CS lead to sovereignty problems?

CS should not create sovereignty issues for EUROCONTROL Member States. EUROCONTROL's role in the CS is covered by the EUROCONTROL Convention which provides that the organisation may develop, establish and operate the future common European ATM system elements entrusted to it.

51. How is the idea behind CS matching to the role of EUROCONTROL being an intergovernmental organisation?

EUROCONTROL, through Centralised services, will support the Member States in realising performance contributions by managing centralised services complementing the implementation of SESAR results at local/national/ANSP and FAB/regional level. EUROCONTROL's tasks are, on behalf of the Contracting States and the European Commission, carried out in the public interest. Such tasks generally aim at ensuring and improving air navigation safety and strengthening co-operation between all parties in so far the set-up fits ideally.

52. What if volume rises under CS, could this challenge EUROCONTROLs intergovernmental status?

The CS will be developed and managed by EUROCONTROL within the strict frame of activities set by the EUROCONTROL Convention, at all times closely monitored by the Member States. Unless the Member States in the future decide to ask the Organisation to go beyond that scope, while taking the necessary decisions in the governing bodies, the CS will not affect EUROCONTROL's intergovernmental status.

XI. OPERATIONAL QUESTIONS

53. Could CS lead to service quality or safety problems?

The implementation of CS will enhance service quality, leading to a stable and harmonised interoperable infrastructure, irrespective of national boundaries or regional border lines. The services will contribute significantly to the Performance Scheme, supporting the competitiveness of the European air transport industry, which ultimately brings benefits and contributes to the European mobility policy.

The Airspace Users have long been advocating the provision of centralised ATM services, in the interest of cost efficiency, but also of de-fragmentation, harmonisation and interoperability. They also benefit from the proposed services directly, be it by the extension of the European ATM Information Management Service through the overall provision of a better quality of data or the integration of weather data. The Flight Plan and Airport Slot Consistency Service will support better exploitation of airport capacity and improve flight punctuality.

In the case of the Advanced Flexible Use of Airspace Support Service, the civil airspace users benefit by getting more access to direct routes with less fuel burn. The military users receive in accordance with their military user requirements the needed military training airspaces for the needed limited period of time.

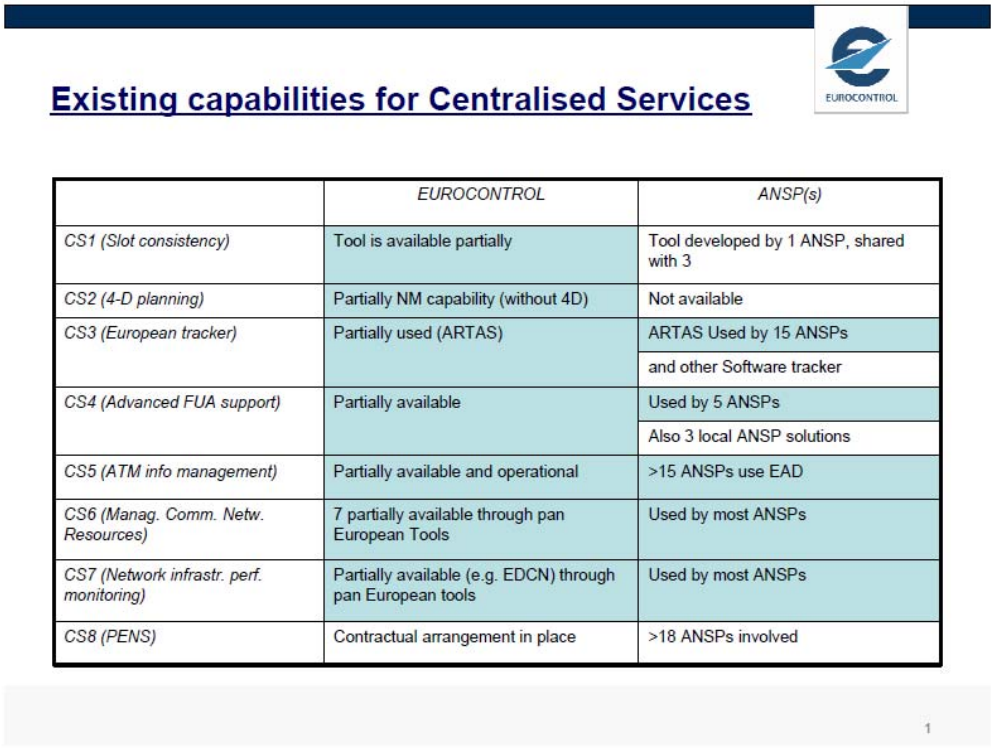
With the provision of higher quality of data, such as the 4D Trajectory Flight Profile Calculation for planning purposes, this will allow more precise prediction of traffic and the times at which they will be in the respective control sectors. Flow Measures can be applied with much higher accuracy, leading to fewer regulations, which will be of benefit to the airspace users.

The CS are proposed to be managed by the NM and regulated by EASA.

54. Will there be safety cases for the CS?

Yes, EUROCONTROL will prepare safety cases for each CS to be overseen by EASA. It is clear that specific safety cases will be made available as a basis for approving later on the operation.

55. Which of the services of the CS including the subservices in 6 and 7 are currently being performed by ANSPs and which by EUROCONTROL?



Existing capabilities for Centralised Services

	EUROCONTROL	*ANSP(s)*
CS1 (Slot consistency)	Tool is available partially	Tool developed by 1 ANSP, shared with 3
CS2 (4-D planning)	Partially NM capability (without 4D)	Not available
CS3 (European tracker)	Partially used (ARTAS)	ARTAS Used by 15 ANSPs
		and other Software tracker
CS4 (Advanced FUA support)	Partially available	Used by 5 ANSPs
		Also 3 local ANSP solutions
CS5 (ATM info management)	Partially available and operational	>15 ANSPs use EAD
CS6 (Manag. Comm. Netw. Resources)	7 partially available through pan European Tools	Used by most ANSPs
CS7 (Network infrastr. perf. monitoring)	Partially available (e.g. EDCN) through pan European tools	Used by most ANSPs
CS8 (PENS)	Contractual arrangement in place	>18 ANSPs involved

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56. Who currently owns the infrastructure of these services?

This depends on the actual situation of the stakeholders, and the respective service is very different and varies from ANSP to ANSP.

EUROCONTROL will tender the setting-up of the CS; the consortia selected shall run the services but the infrastructure developed will remain the ownership of the agency since funding shall be provided by EUROCONTROL together with TEN-T grants.

XII. IMPLEMENTATION

57. Is there a timeline for the implementation of CS?

It is intended to demonstrate the CS proposed until end of 2015.

58. How is the project setup for CS structured and managed within EUROCONTROL?

EUROCONTROL implemented a Programme Management on CS, ensuring coordination between all parties involved and establishing governance. The Programme Management consists of three main parts: first, the Institutional, Regulatory and Stakeholder relations; second, the Business Processes & Change Management and third, the Centralised Services Development & Implementation. Within the last one, there is a further breakdown on Operational Concepts, Service Orientated Architecture and Integration and Performance & Implementation Planning. Each CS is having its own responsible Project Leader who reports to the Programme Manager.

59. How is the transitional aspect of CS organised?

The Transition is a progressive, stepwise process adopted from the current fragmented national infrastructures that will be replaced by a network centric system architecture. Stakeholders need to align their investment planning decision with the CS programme. Those having just invested in new equipment will be connected to the new service only when their equipment is obsolete or after a transition period. A detailed transition plan for all stakeholders for each CS is part of the program.

60. How will CS be established and implemented?

The establishment and operation of the CS consists of the following consecutively and simultaneously implemented phases:

- **Consultation phase**: Dedicated workshops addressing the information and needs for all ATM stakeholders. Information will be provided for each Centralised Service that will take place during June and July 2013.
- **Phase 1**: An open market competition to bidders to initiate, design and demonstrate the fitness for purpose of each CS. The process includes the Calls for Expression of Interest. This phase will foster dialogue between the interested entities in giving them possibility to assess which CS would be of their interest, which could be partners to team with according to their field of expertises. This part of Phase 1 runs until September/October 2013, followed by Calls for Tenders. The contract to awarded consortia is foreseen to be signed for December 2013/January 2014 and the works should start early of 2014.
- **Phase 2**: Successful deployment and operation of CS from 2016 onwards. The scope of the services, the requirements and the contractual period need

to be evaluated taking into consideration the lessons learned from Phase 1. Moreover, it must be stressed that the transition from local solutions to a pan-European solution will need to be aligned with investment plans of ANSPs to allow their Centres/TWRs to connect to the CS and the individual demonstrators to be built between 2014-2015 would contribute to consolidate the definition of the operational concepts (CONOPS).

- **EU regulatory landscape adaptation phase**: The deployment and operation of CS will impact the remit of the Network Manager. Therefore, its governing body, i.e. the Network Management Board on which the EC, EUROCONTROL, ANSPs, airspace users, airports and the military are represented could be extended in the future to allow the operation of the CS being regulated by EASA, the latter is already the regulatory body for the Network Manager. Through its nomination as Network Manager, EUROCONTROL is entrusted to manage certain existing centralised services. The interface of the CS with the existing Network Manager and the foreseen Deployment Manager will have to be addressed by the EC and the Single Sky Committee with care in order to ensure clear accountability of each manager and a proper and efficient interface.

61. When putting CS in place, is the service continuity being granted for the transition phase?

The implementation of CS is a progressive, stepwise transition process. Local level systems will be integrated into network centric system architecture in a stepwise approach, service continuity will be guaranteed until the final cut over, meaning the full migration to the CS.

EUROCONTROL benefits from the experiences made in similar large pan-European projects, such as NM operation, EAD etc.