



CENTRALISING SERVICES TO MEET PERFORMANCE TARGETS

There is some disquiet about the prospect of moving air traffic management (ATM) services from national providers to a single operator – but in many cases, the benefits will far outweigh the problems and cost.

At the October 2012 Conference on Progress Towards the Single European Sky (SES) held in Limassol, Cyprus, Siim Kallas, the European Commissioner for Transport said: “We must progress from planning to actual delivery. That will ensure Member States follow through on their obligations.” Commissioner Kallas continued: “Air navigation costs of an average flight in Europe should have fallen from its €800 starting point to €600 not the €715 it is today”, adding that “although functional airspace blocks (FABs) have been established..... at the moment, it is clear that they will make little if any contribution towards an integrated and defragmented airspace.”

In spring 2013 the Commission intends to present proposals for the “SES 2+” regime, to accelerate implementation of the Single Sky concept, with performance plans to be set collectively rather than individually and with targets assessed and enforced on a Europe-wide basis. “Member States need to be made accountable if they do not meet their targets,” said Commissioner Kallas.

Single European Sky ATM Research (SESAR) deployment potential investment costs of about €6 billion have been calculated to be borne by the air navigation service providers (ANSPs), and in the end by the airspace users. The question is if these investment costs can be afforded under the target setting of the Performance Scheme, putting all the necessary equipment into all European Centres.

It has become clear for some time now that if these performance targets are going to be met, Member States will have to reassess many of the ATM services being provided today at a national level, to see if by centralising them at a regional level they could improve safety and reduce costs and delays for airspace users. There are already clear examples where the process of centralising services – in areas such as air traffic flow management to balance demand with capacity, the billing and collection of air navigation charges and the provision of aeronautical data – has produced substantial, tangible benefits for airspace users and, in many cases, national ANSPs themselves.

But if further centralisation of ATM services is to take place – to reduce duplication and improve overall ATM performance – there are a number of key issues which will need to be resolved. Which services should be moved to the regional level? How should they be managed to ensure users and providers can get the best value and performance from them? What will be the impact of this on national ANSPs? And there is another important related question – how will a new series of centralised service be coordinated with the deployment of SESAR technologies, which are due to be introduced from 2014 onwards?

It is still too early to be sure exactly which current services provided by national ANSPs would be more efficiently managed at the regional level but there are clear industry trends which suggest which way the wind is blowing. “The debate has got to take place in the context of SES 2+, and within the reporting period two of the performance requirements,” said Bo Redeborn, Principal Director ATM at EUROCONTROL. “What has been proven in the past is that it is easier to introduce a new service in a centralised way than it is to take something away and centralise it.

“I think it’s a matter of collectively discussing and agreeing what can be done more efficiently locally and what can be done more efficiently centrally; there are many services where centralisation will merely add bureaucracy. Once you have done that it is just a matter of embarking on programmes. That debate needs to start now, before we actually deploy technologies because if we don’t we may very well miss an opportunity to get the capabilities implemented. I’m convinced that with some of these new technologies the business case works when they are deployed centrally but not if they have to be implemented separately within 70 or so centres, which will need to interact with each other. The coordination effort will simply be too much. So that means looking at services which are going to be provided centrally or not at all.”

One likely new candidate for centralised service provision is the collection, management

and distribution of flight data and linked ATM system status data within new system wide information management (SWIM) architectures. At the heart of SWIM is a huge data depository – or more likely two or more depositories separately holding static and dynamic aeronautical data along with time/geographic coordinates which will allow for the calculation of precise flight trajectories. One of the biggest challenges will be to ensure the data users are given the exact quantity of data which will allow them to plan their operations precisely without being swamped with reams of irrelevant data.

For those existing services which, after the appropriate cost-benefit analysis, are identified as being suitable candidates for migration from national to FAB or pan-European centralised provision there is a clear understanding in EUROCONTROL that there has to be benefits for national ANSPs in the process. Very, very few European ANSPs are contemplating massive changes to their business models as a result of SES operations.

Centralised services

The European Aeronautical Information Database (EAD) programme (see “Why EUROCONTROL built a cloud”, this issue) offers one example of how centralised ATM services can be provided by a consortium of industry and ANSP partners working within the framework of a EUROCONTROL programme; if the current blueprint for this successful service is used as a basis for future centralised services then ANSPs will open the door to new opportunities for ANSPs to bid for centralised service provision work.

ANSPs are today mainly restricted to provide services only within the national airspace. There might be changes in the future when services are organised within the FABs to be provided for the FAB area. But even then the ANSPs do not have a chance to provide the services on a broader basis, on a European or pan-European scope.

“The implementation of different centralised services on a pan-European basis is key to open the market conditions on a pan-European scale”, according to Frank Brenner, Director General of EUROCONTROL. “This can foster further cooperation between the parties to provide pan-European services in form of consortia, newly founded subsidiary or other groupings, like EEIG etc.”

“When we are looking at contracting →



→ the services, we're not trying to reduce the ANSP workforce by 10,000 while increasing EUROCONTROL's staff count by 3,000," said Bo Redeborn. "We will play the role of architect, the designer of the system, taking account of the needs of the entire European network – and then let the service provider actually do the job of delivering the service."

But there will be no single blueprint of public/private partnership (PPP) to follow – the consortium structure will depend on the type of services being offered. There exist other blueprints for PPP centralised services within EUROCONTROL apart from the EAD model. The Pan-European Network Service (PENS) is a joint EUROCONTROL-ANSP led initiative to provide a common internet protocol network service as the backbone of the SWIM system and which is a key enabler, for example, for the Collaborative Decision Making (CDM) concept under development in the context of SESAR. At least 19 ANSPs are currently involved in its development.

"We tried to do PENS on three different occasions," said Bo Redeborn, "and failed. So the providers said that we're going to do it ourselves. They tried twice and then came back to us to ask us to set up a centralised service and we were able, in cooperation with ANSPs, to absorb a lot of the costs in setting it up and running it and we eventually succeeded. There are many people who would be willing to bid for centralised services but without some kind of management around the programmes they are unlikely to be successful."

Precise monitoring

Another model is the European Regional Monitoring Agency (RMA) "(see "Stronger global links", this issue), which is responsible for the oversight of Reduced Vertical Separation Minima (RVSM) operations. A key element of the programme is the precise monitoring of the altitude of RVSM-equipped aircraft in European airspace. EUROCONTROL has outsourced the job of collecting data from

height monitoring units to three different service providers, who feed the information directly to EUROCONTROL which analyses the data and assesses the safety of the overall system.

Other centralised service provision examples include the Integrated Initial Flight Plan Processing System (IFPS) and the Centralised SSR Code Assignment and Management System (CCAMS).

"These are all examples which are very different in nature and structure but they are all centralised services and they all provide great value for money. With centralised services there is an opportunity for the service provider to acquire better data for a lower price and that means they can more easily achieve the performance targets of cutting costs," said Bo Redeborn.

This is not to underestimate the challenges to centralisation which will have to be addressed over the coming months. Some aviation stakeholders are not necessarily convinced that EUROCONTROL is the most economically efficient body to operate a centralised service itself. There is opposition from some system suppliers who would prefer to sell equipment to 70 centres, rather than a single customer. And ANSPs are, understandably, concerned about how their income streams might be affected if the number of services they offer is cut.

"I'm sure many view this with a mixture of fear and opportunity," said Bo Redeborn. "And it's an illusion to believe that all people are in favour of change. They're not. Eighty per cent feel most comfortable when nothing changes. But there are plenty of opportunities here for them and at least it will help providers to cut their costs. It's only a threat for those who are desperately holding onto their infrastructure as the main part of their business."

And change is coming. "The next centralised service will happen soon," said Bo Redeborn. "We are looking at working with a partner on pre-departure, 4D trajectory planning and assessing what we could do in terms of getting the best solution to deploying this technology and this could happen within three years. So between three and eight years I see quite a few of these proposed centralised services going into operation. Some of these proposals include actual improvements to present services – the EAD transposition into a SWIM environment could also happen within that same time frame, definitely." ■



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Bo Redeborn, Principal Director ATM, EUROCONTROL