



# DETERMINING THE **BENEFIT** AND **COST** OF CENTRALISED SERVICES

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The outcome of an initial cost-benefit analysis has shown each Centralised Service will realise operational improvements over the current model – but this is just the first step in quantifying savings and benefits.

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**E**UROCONTROL estimates the adoption of some nine Centralised Services (CS) will save as much as €150-200 million in costs per year. Asked by the European Commission (EC) to develop the concept in late 2012, EUROCONTROL began a cost-benefit assessment (CBA) in parallel to the main development work. Andreas Tautz, EUROCONTROL's Head of Performance and Methods, says this approach is in line with the overall aim of creating a cost-effective European network operation. "Centralised Services focus on making air traffic management (ATM) more cost-efficient thus reducing cost. In order to understand whether we are on the right track, we have, from a very early stage, tried to estimate what the cost and benefit of each CS could be. This process has several stages."

The initial findings were presented during June and July 2013, at workshops which

were held to encourage the widest possible involvement in the CS concept development. Paula Leal de Matos, EUROCONTROL's Business Case Leader and her team had been working in the previous months in order to identify potential savings from CS. "We have analysed the yearly costs for each CS and we estimate that the CS will deliver annual operating cost savings of more than €150 million, Leal de Matos said. "It is evident that the amount differs for each service, but all CS will deliver significant financial benefits.

"In the first step, we identified two scenarios for each CS," explained Tautz. "We compared a full CS deployment with what we call the 'fragmented situation'. The best case for fragmented implementation includes deployment by air navigation service providers (ANSPs) or deployment at Functional Airspace Block (FAB) level. This is not a do-nothing

scenario, but is the most likely situation if the ANSPs have to continue to develop their own systems and implement them in each centre." In order to achieve a robust CBA at this early stage, uncertainties are addressed through conservative assumptions, with 'high' costs / 'low' benefits for the Centralised Service scenario and 'low' costs / 'high' benefits for the fragmented scenario.

The outcome of the initial cost-benefit analyses reveal positive cost-benefit results for CS overall. EUROCONTROL has also contracted an independent company to validate the cost-benefit analysis and review the most recent conclusions. "We want to make sure that our assumptions are realistic and thus credible," added Tautz.

"We can say that we have analysed the yearly cost depending on the timeline of operation." The CBAs take account of investment, operating and maintenance costs; and where applicable, operational benefits, such as fuel burn and quality of service as well as the cost and benefit impact of the time on operations.

Looking at CS5, the European ATM Information Management Service (EAIMS), costs would be halved through the use of centralised preparation and delivery of information, including aeronautical information (AIS), digital NOTAMs, weather information, natural hazards, air traffic flow and capacity management planning. That single CS would save €62 million of operating and maintenance costs per year. CS4, a service for the collection and provision of airspace management data, promises to bring

early fuel-burn benefits.

Both CS5 and CS4 result in improved quality of data and support many pan-European activities such as CS2 aiming at more direct routes with better flight profiles and fewer delays. Another important enabler among the CS put forward by EUROCONTROL is CS8 – the Pan-European Network Service (PENS). The main purpose of CS8 is to allow stakeholders to rely on a common ATM-grade IP network to exchange ATM information. Currently European ANSPs use a fragmented communications infrastructure built on bilateral connections. Some 17 ANSPs and EUROCONTROL have created PENS and six of these ANSPs have started to use PENS for day-to-day operations. However, PENS is currently a voluntary agreement and has yet to replace existing international connections. If all stakeholders embraced the concept of a single IP communications backbone, PENS would result in significant economies of scale and would provide connectivity for the other CS. Many more benefits would become apparent, over and above the estimated €7 million saved in annual operating costs.

#### A cost-effective service

PENS will also provide a cost-effective service for the CS. These include the European Tracker Service, which aims to deliver a high-quality picture of the Europe-wide air situation by processing and unifying data from Europe's surveillance sensors. PENS is also fundamental to the delivery of aeronautical information made available by CS5 and CS4, and for exchanging the 4D trajectory flight profile provided by CS2. The links between CS maximise benefits and allow for synergies in support of EU performance targets.

A call for interest followed by a call for tender is expected to bring a wide response from stakeholders and consortia interested in providing the Centralised Services.

EUROCONTROL has always been confident about the financial savings associated with the CS, which have now been confirmed by the external assessor who stated that EUROCONTROL's CBA calculations have been conservative. It is therefore worth noting that, so far, EUROCONTROL's calculations have not taken the synergy effects that will be generated through operating all CS into account. The Agency intends to tender out all the services in parallel in order to get the maximum benefit, rather than associate financial savings with particular services. ■



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**Andreas Tautz,**  
Head of Performance  
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EUROCONTROL



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