

In Focus

A briefing from the Civil Aviation Authority

July 2013

A cost benefit analysis of continuous climb operations

To help quantify the benefits that the UK's Future Airspace Strategy (FAS) can deliver, and the costs of implementing these, we have undertaken a study on one of the main benefits that FAS could deliver – systemised continuous climb operations (CCOs), where an aircraft is able to climb straight to its optimal height without having to stop at various levels in-between; which is currently the case, on a tactical basis.



FUTURE / AIRSPACE / STRATEGY
DEPLOYING SESAR

What are the benefits?

The study found that CCO could deliver the following 2013:

- total benefits up to £179 million (average of £12 million /year) across the UK
- savings in fuel, CO₂, time and maintenance cost for airlines, and passenger time
- a neutral noise impact
- probable safety benefits and potential workload savings for controllers and pilots
- potential for release of controlled airspace at lower levels to other users

Why do the study?

We wanted to scope the benefits to consumers and wider society from FAS and also provide findings from a wider consumer and societal perspective, rather than the commercially focused assessments industry stakeholders will produce as part of their own investment strategies to realise the benefits of FAS.

While the study examines only one of the operational improvements that FAS could bring, it also aims to set a framework for future FAS analysis that would build a comprehensive picture of the full benefits and costs associated with the project.

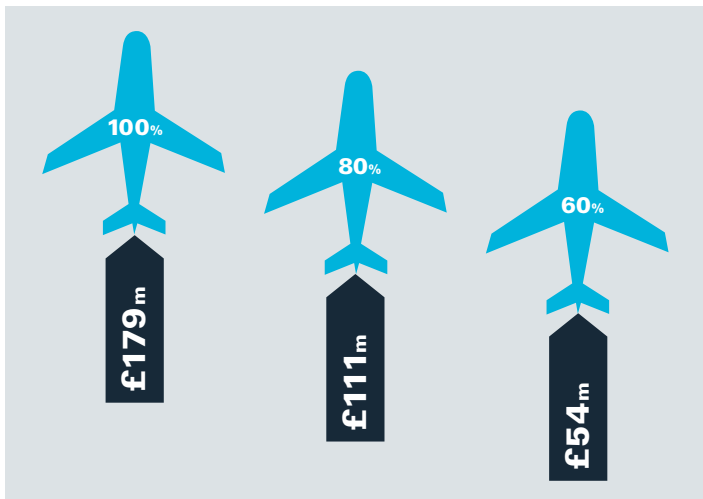
What are the costs?

- total costs between £45 million to £71 million;
- major airspace redesigns and some changes to aircraft equipment

Achieving systemisation is key?

The study also found that to achieve significant benefits it will require the industry to achieve 100% implementation of CCO.

An 80% CCO achievement would deliver £111 million benefits. While a 60% CCO achievement would bring £54 million in benefits by 2030.



Changes in London could bring most benefits

The study found that implementation of the changes should be prioritised on where the biggest benefits can be gained:

- 94 per cent of the total benefits would be at the London airports
- with Heathrow alone seeing 56 per cent of total benefits

Aviation needs to act sooner rather than later

Finally, it also showed that early implementation of the changes is key to gaining the most impact.



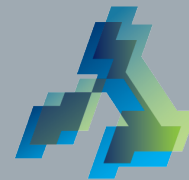
delayed implementation of Gatwick, Luton and Stansted would bring a 6% loss in benefit



delayed implementation of Gatwick, Heathrow and London City would bring a 21% loss in benefit

What is the Future Airspace Strategy?

Aviation relies on the scarce resource that is airspace to ensure that passengers, businesses, the military and leisure flyers enjoy the many benefits aviation brings.



FUTURE / AIRSPACE / STRATEGY
DEPLOYING SESAR

The basic structure of the UK's airspace was developed over 40 years ago. Since then there have been huge changes, including a hundred fold increase in demand for aviation.

Throughout Europe there is a move to simplify and harmonise the way airspace and air traffic control is used through the Single European Sky project. In the UK and Ireland we're meeting those and other issues through the Future Airspace Strategy (FAS) which sets out a plan to modernise airspace by 2020.



The benefits of implementing FAS include:

- Fuel savings from more direct routing and greater flight efficiency are expected to generate direct financial benefits to operators.
- Time savings from more direct routing and the provision of additional capacity when and where required are expected to generate direct financial benefits to operators.
- CO₂ savings from more direct routing and greater flight efficiency are expected to generate societal benefits.
- Noise reductions from less aircraft holding at low levels are expected to generate societal benefits.
- Passenger time savings from more direct routing and the provision of additional capacity when and where required are expected to generate societal benefits.

www.caa.co.uk/fas