Airspace Modernisation

Department for Transport

Civil Aviation Authority

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Airspace modernisation programme: summary

1: Where we started in 2017

Department for Transport

Civil Aviation Authority

- Airspace has not been restructured since the 1960s; changes were incremental, sponsored and approved one by one.

- Flights in UK airspace are forecast to grow from 2.25 million per year in 2015 to 3.25 million in 2030 (an increase of 44 per cent). Heathrow's proposed Runway 3 alone is forecast to add 240,000 more aircraft per year.

- NATS predict an average of 26.5 minutes of delay per delayed flight, with more than one in three flights from all UK airports expected to depart over half an hour late due to a shortfall in airspace capacity, costing airlines £1.8bn.

- Other airspace users such as general aviation and drone operators want more access to this infrastructure, while local communities want adverse impacts better mitigated.

NATS: current route structure for 15 airports to be included in the Southern Masterplan (based on old technology, VOR locations).

There was no strategic sequencing of, coordination between and prioritisation of airspace changes. Sponsors choose when, if and how, they progressed on airspace and what the objectives were. The CAA made decisions on each change as it was proposed, on a first come first serve basis.

There were no mechanisms to force airspace to be changed if a sponsor is not forthcoming, not matter how critical that change was. Neither the CAA nor Government can force an organisation to sponsor an airspace change to completion, nor to sponsor it to a level of quality and coordination, nor to hold parties to account for access for other users (including General Aviation) and noise performance.

Policy

- DfT's updated Air Navigation Directions to the CAA at the end of 2017 updated and changed the requirements for the CAA's airspace strategy.

- DfT policy proposals in the Aviation Strategy consultation 2018 set out:
  - Support for modernisation.
  - A possible noise threshold.
  - A legislative mechanism for forcing airspace to be changed. This part of the consultation closed in April 2019 and a Bill has been drafted.

- DfT SoS tasked NERL with assessing the feasibility of modernisation in the South East. It was assured by the CAA. Both reports were published by the DfT in December 2018.

Strategy

- Reviewing new Air Navigation Directions, the CAA determines that the Future Airspace Strategy needs a fundamental update.

- New Airspace Modernisation Strategy (AMS) sets 15 initiatives that will deliver airspace modernisation through new operational concepts, new design and new technologies. Initiatives each address specific DfT or international policies.

- The CAA takes on two new roles:
  - Joint co-sponsor of modernisation, with DfT.
  - Delivery, monitoring and oversight function to be run by a new Oversight team.

- The AMS was approved by the CAA Board and published in December 2018.

Co-sponsorship

In our new co-sponsorship role, DfT and CAA published a new governance framework in an annex to the AMS. On 2 November, the co-sponsors wrote to NERL commissioning an airspace change masterplan.
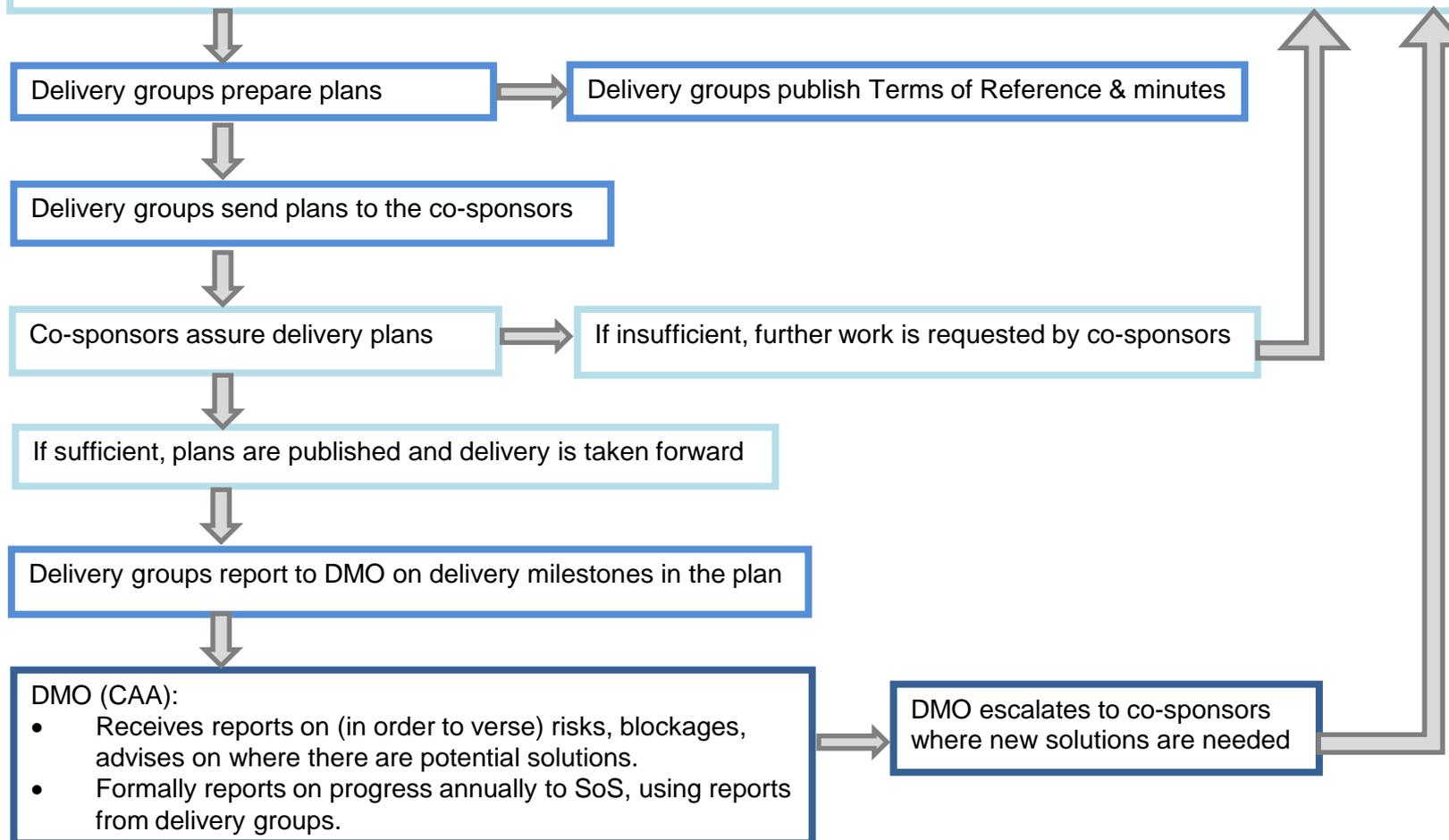
Delivering the AMS Initiatives: flow diagram

The co-sponsors:
- Develop the legislative and policy framework for airspace modernisation (DfT)
- Develop the strategy for airspace modernisation including initiatives to deliver it (CAA)

To deliver the airspace modernisation initiatives, the co-sponsors:
- Publish a governance structure setting out the groups that will deliver each initiative, and their membership
- Commission work from delivery groups or a lead in a delivery group, including a delivery plan for each initiative the group is delivering (one example being the southern masterplan that ACOG is asked to prepare, to be led by NERL)
- Ask delivery groups to prepare Terms of Reference and publish them. Terms of Reference must include how the group will engage all the entities listed under the engagement column in the governance structure.
- Ask delivery groups to publish minutes for their meetings.

Delivery groups prepare plans → Delivery groups publish Terms of Reference & minutes

Delivery groups send plans to the co-sponsors

Co-sponsors assure delivery plans → If insufficient, further work is requested by co-sponsors

If sufficient, plans are published and delivery is taken forward

Delivery groups report to DMO on delivery milestones in the plan

DMO (CAA):
- Receives reports on (in order to verse) risks, blockages, advises on where there are potential solutions.
- Formally reports on progress annually to SoS, using reports from delivery groups.

DMO escalates to co-sponsors where new solutions are needed

Updates on the initiatives

| Initiative	Further information on tracking and updates on recent progress
4: airspace change masterplan	NERL (whilst ACOG is still being stood up) has submitted Iteration One of the masterplan. The co-sponsors are assessing this iteration of the masterplan but will not be considering this version for acceptance into the CAA's strategy. At the same time, the co-sponsors are considering the policy and regulatory process requirements for accepting the masterplan, and will engage with stakeholders on this guidance in due course. More information to follow.
7; 8; 14: satellite navigation	Performance Based Navigation (PBN) will be delivered through the airspace changes captured in the masterplan. Airports outside the masterplan that still need to deliver PBN will be tracked directly through an online mechanism to be set up by the CAA. Same applies to ANSPs.
9; 10: airspace classification review and reform	Internal CAA teams are preparing engagement and programme plans to track their policy development activities. The description of 9 and 10 is being redrafted to reflect the relationship between the initiatives. At the request of the SoS, the CAA is setting up a new airspace classification review and reform project; more information to follow.
11: electronic conspicuity	Internal CAA teams are preparing engagement and programme plans to track their policy development activities. An internal programme board has been created, looking at technical and legal requirements of mandating the use of electronic conspicuity in target blocks of airspace. The CAA's response to our call for evidence and future plans was published on 15 August (CAP 1837).
12; 13: spectrum and datalink	Internal CAA teams are preparing delivery and engagement plans. 12 involves Ofcom and CAA work on spectrum and is easily tracked. To know whether 13 is being implemented, CAA teams will track datalink use. If issues arrive, the 'virtual group' (relevant communications and/or engineering contacts in NATS and airlines) will be contacted.

Design: an airspace change masterplan (1)

- Co-sponsors DfT and CAA tasked NERL with preparing a coordinated implementation plan for airspace changes (or *airspace change masterplan*), including its programme management – starting with Southern England.

- The southern masterplan is to build on the feasibility report and coordinate 17 airspace design changes. NERL sets up a new unit (Airspace Change Organising Group - ACOG) to coordinate and write the plan.

- The purpose of the masterplan is to set out *where* airspace change could be taken forward to provide benefits, to consider potential conflicts, trade-offs and interdependencies, and set out a preferred implementation plan. The masterplan will *not* include the detail of individual airspace designs or solutions.

- The CAA proposes to enshrine this new strategic airspace role for NERL, in its economic licence.

- We expect the masterplan to be delivered in at least two iterations. We received the submission of iteration one on 7 August and will assess it ahead of publication later this year.
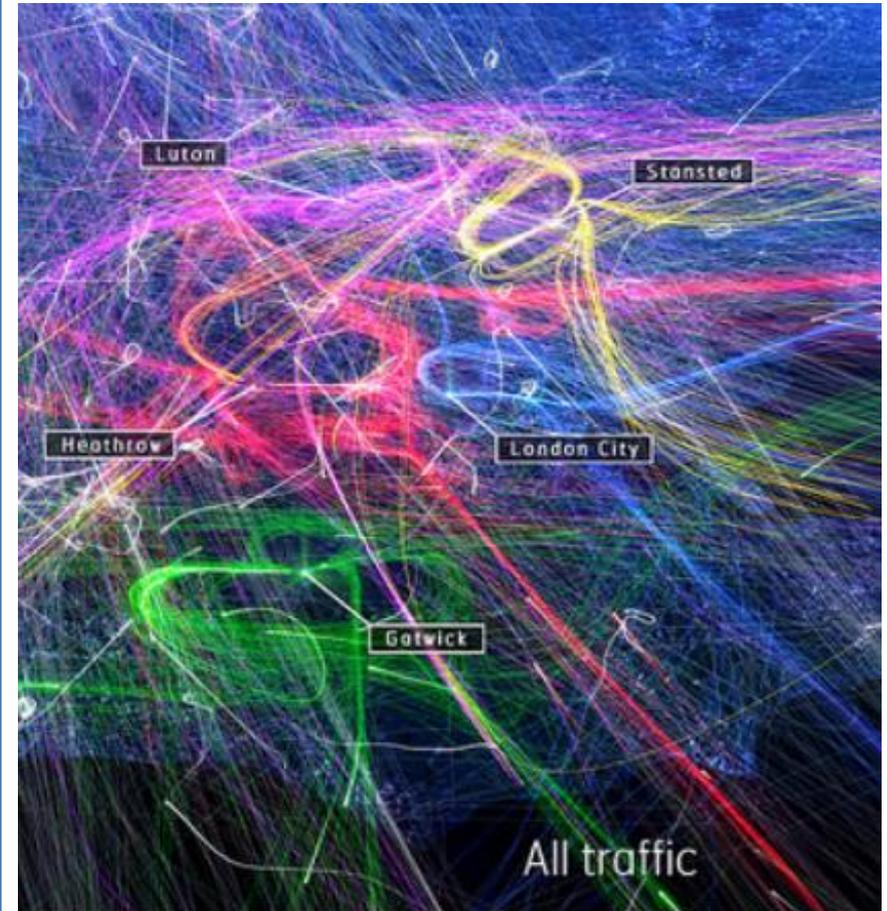
Design: an airspace change masterplan (2)

- The first iteration was delivered to the co-sponsors in Aug 2019 and the CAA/DfT are now assessing the content and considering publication timing. The first iteration will not be accepted into the CAA's strategy.

- The second iteration will be delivered after FASI-S airports reach Stage 2b of the airspace change (CAP 1616) process, likely to be summer 2020. This version will be assessed and considered for acceptance into the CAA's strategy.

- We expect that the second version will set out:
    - The list of airspace changes, in specific volumes of airspace and with identified sponsors;
    - The sequencing of those changes in the coordinated programme plan that sets out when they will happen – and any trade-offs made to determine that sequencing;
    - The interdependencies between those changes – and the reasons for those interdependencies, including any trade-offs taken to determine them;
    - The need for any airspace changes to be grouped together for the consultation stage or any other stages of the CAP 1616 process

- DfT and CAA are preparing a paper which details our proposed approach for assessing and accepting the masterplan and will share with ACOG and sponsors shortly.

- DfT, CAA and ACOG are also considering whether additional policy is required to help resolve conflicts where they may be identified.

- An individual airspace change should not proceed through Gateway 2 unless the sponsor can demonstrate the options developed though stage 2 are the product of the coordination with relevant other sponsors. This coordination should be carried out under the Masterplan. The CAA has written to FASI-S sponsors to reaffirm this.

Next steps

- Co-sponsors will update the governance diagram once the new delivery structure has been shared more widely with relevant groups.

- Co-sponsors and entities responsible for delivering initiatives will set out engagement plans.

- DfT has consulted on the Aviation Strategy and is continuing to develop the detail of proposed policies and legislation.

- CAA is setting up the DMO function – Head of Oversight final interviews next week.

- CAA will start publicly engaging on the airspace classification review.

- NERL is setting up ACOG; has appointed members of the Steering Committee including an independent Chair, and hiring the staff team, including the Head of the unit, Mark Swan, who leaves the CAA to join ACOG in November.

- NERL has sent iteration one of ACOG's southern England masterplan to the co-sponsors. The co-sponsors will assess it and publish both the masterplan and our assessment.

- FASI-S / southern England masterplan airports have started submitting Statements of Need to begin the airspace change process.