Technological changes undermine necessity of air traffic management (ATM) monopolies

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Air traffic management services traditionally have been national monopolies, partly because of the high infrastructure costs. The historically national character of ATM has led to the inefficient situation

whereby Europe now has many separate services.

Some argue that Europe needs a single federal ATM agency. Others believe that opening the market to competition would be more efficient than establishing a large monopoly. Economists argue that since new technologies lower infrastructure costs to the point where private companies can invest, the market should be opened to competition.

The EU-funded COMPAIR project studied various ways of phasing in such a change, including institutional and market-design approaches. The consortium was part of the EU's large Single European Sky ATM Research Joint Undertaking, intended to reform European aviation.

Introducing competition

COMPAIR assessed game-changing ideas for introducing market competition into European ATM, according to their potential contribution to Single European Sky goals. The study proposed new market designs, developed a framework for assessing impacts, and studied feasibility using both economic and network modelling.

"Our study identified and assessed four introduction scenarios," says Dr Eef Delhaye, COMPAIR project coordinator. These cover short-, medium- and long-term options, where long-term means after 2050. "We believe each option results in efficiencies for air navigation service providers (ANSPs), with key benefits such as lower costs, an increased technology uptake, and in some cases even decreased fragmentation in European skies."

Investigators noted that the form of ANSP ownership varies among countries and a large variation in the consultation processes of the stakeholders. The project found significant differences in cost and productive efficiency, suggesting a short-term potential for

improvements. The team recommended that such improvements could be achieved by including a wider range of stakeholders on ANSP management boards.

For the medium term, researchers suggested unbundling and tendering. Unbundling could start with separation of terminal air traffic services, followed by meteorological and aeronautical en route air traffic support services, and finally the outsourcing of en route air traffic control. Previous experiences with unbundling terminal control showed that cost reductions up to 40% are possible.

COMPAIR's analysis found that time-based tendering could lead to consolidation among ANSPs. This could mean a less fragmented European airspace, a faster uptake of technologies, and lower charges resulting from economies of scale.

Finally, the long-term recommendation was flight-centric, or sectorless, operations. ATM providers would compete on a per-flight or per-airline basis, instead of regionally. The team also recommended limiting market share to prevent emergence of commercial monopolies.

Studying implementation

Having suggested the options, COMPAIR will now be working towards implementation. The first step will be raising awareness of the potential. Prior to implementation, researchers recommend further benchmark studies. These might examine the aviation industry in other locations, and other European transitions from monopolistic markets.

"The most important implementation step," added Dr Delhaye, "will be to maintain an institutional environment that can support competition, at European and Member State levels." In this context, environment means legal measures, but also the political, administrative and investment

landscape. "Even small steps would be productive," she explained.

European aviation is in transition. The suggestions COMPAIR raised must be evaluated and discussed, of themselves, and in context of broader issues such as airport capacity shortage and the need for an updated European ATM master plan. Whatever form it ultimately takes, Europe will eventually have an efficient airspace.

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