The immediate financial choices facing air navigation service providers are destined to have a direct impact on airline operations and passenger services for years to come

Many of the World's Air Navigation Service Providers (ANSPs) are facing a collapse in traffic and revenues as a result of the Covid pandemic. To make matters more complicated, ANSPs are in the midst of implementing the ICAO Global Air Navigation Plan (GANP) agreed by governments and designed to increase capacity, safety, efficiency and environmental performance. The Single European Sky (SES) launched in 2004 and now effectively the European regional version of the GANP also includes investment obligations associated with the SES charging scheme.

In Europe, falls in ANSP revenue are set against the background of a sustained period of traffic growth that has resulted in positive returns for ANSPs and steady reduction in their user charges over the past five years. An important feature that has now been brought into focus, is the Traffic Risk Sharing (TRS) formula, which shares the risks of large variations in traffic between ANSPs and airspace users. This will reverse the trend of reducing user charges. Without urgent government action, airlines face the prospect of substantially increased ANSP charges from 2022, while ANSPs face catastrophic revenue shortfalls in the near term. The decisions taken to address these challenges will have long term consequences for air transport.

The financial integrity of the civil air transport industry is at risk as never before.

The impact of the Covid-19 global pandemic on aviation is profound. While declines in air passenger traffic are plain to see, the specific impacts to individual airlines, airports and ANSPs present a highly complex and interdependent situation which is difficult to untangle. Further, the location, duration and extent of any recovery for aviation is beset with enormous challenges, most of the solutions for which are currently unknown and unknowable.

Public confidence in air travel has been substantially eroded. The pandemic uncertainty has already led to the financial collapse of airline and airport companies, prompting in some cases the financial support of the state. More bankruptcies are expected by analysts. Several governments, as well as the European Commission, have already indicated their intention to associate both green and digital enhancements as a condition of state provided capital injection. Meanwhile, ANSPs around the world are as their airline and airport colleagues, facing a huge shortfall against planned annual revenues. Cost savings are essential.

The chances of a return to pre-pandemic traffic levels for ANSPs are slim. Changes in travel habits are likely for some time, with reduced demand for travel according to IATA, until 2024 or beyond. The impact on business travel demand of the now routine virtual meetings, using on-line services such as Teams, Zoom and Skype, has yet to emerge. Certainly, digital alternatives to travel have been accelerated to a new level of acceptability as one societal response to the pandemic. Leisure travel too can expect changes in habits and demand as prospective travellers, airports and airlines adjust to new risks, regulations, restrictions, screening processes and the economic realities of increased unemployment.

History has shown that when compared to airlines and many airports, the impact for ANSPs of past crisis events has had a longer-term effect. For instance, a full decade after 9/11, the number of flights using US airspace had not recovered to the levels seen prior to 2001. Similarly, across Europe,

the annual number of flights seen in 2007, before the global financial crisis, did not fully return until 2017.

If this pandemic has a similar impact (IATA believes it will be worse), by 2030, Europe could very well be handling airspace demand levels no greater than those seen 20 years beforehand, potentially undermining justifications for airspace capacity investments.

Difficult choices for air traffic management service providers and suppliers

Although having an inherently international nature, air traffic has been traditionally managed at national level in a fragmented and monopolistic environment, the realisation of a strategic path to a globally harmonised system has proven elusive in spite of much effort to modernise and streamline it. The air traffic management system remains safe, but fairly costly. It is also hampered by heterogeneous working practices and is constrained by air route networks that, in the main, are based on national borders rather than air traffic flows. Transformational projects are subject to delay and, based on previous performance improvement trajectories and audits, this has sometimes led to uncertainty that some transformational plans will ever be achieved.

In its 2017 report and recommendations, in effect a report card for SES, which began in 2004, the European Court of Auditors concluded that "the SES initiative addressed a clear need and, has led to a greater culture of efficiency in ATM. However, European airspace management remains fragmented and SES as a concept has not yet been achieved. Navigation charges have not been substantially reduced, and ATM-related delays have started to increase again. The SESAR project has promoted co-ordination and is gradually releasing technological improvements, but has fallen behind its initial schedule and has become significantly more costly than anticipated".

Cost cuts and strategy decisions made by ANSPs, airlines and airports, as a result of the global financial crisis in 2008, apparently did not take sufficient account of the return of demand for capacity, leading to the emergence of traffic hot-spots and since 2017, increasing delays. Insufficient resilience provisioning exacerbated this challenge. When the demand came, the available resilience in the system could not always cope with the extremes of demand, especially in peak season.

ANSPs around the world will be seeking opportunities to trim their costs. What is cut and where, will have real consequences for capacity and delivery of long-term plans. This is significant, the adjustments made ten years ago by ANSPs as a result of the 2008/9 global financial crisis, including the investments made since, have not led to the planned and expected outcomes in at least some cases.

The decisions made now will reflect national priorities and national policies, a consequence of the need for government financial support and the inevitably glacial pace of international aviation policy making.

Governments across the world have already provided emergency loans and grants to shore up airlines, airports and ANSPs. It is not yet clear what strings have been attached to the financial aid, it seems likely that improvements in environmental performance will be one area subject to political scrutiny. Despite wide ranging green programmes, this is one area where the 'old normal' was not good enough. The industry can and should do better.

Individual ANSPs have a very limited ability to improve environmental performance of flights. On average each flight in Europe is sill 49km longer than a direct flight (European Commission) about 4

minutes of flying for a jet airliner, which with vertical flight efficiency improvements, is an unresolved topic of a range of existing long-term efficiency initiatives.

Elsewhere determining exactly how airline and airport operator policies contribute to delays and inefficiencies is difficult to determine at a system level. Key Performance Indicators (KPI) to consistently measure airline and airport performance in particular, are not widely available.

Europe's busiest airports represent a large proportion of arrival delays by scheduling more flights than the runways can efficiently handle in all operating circumstances, increasing delays in the air and on the ground. The Performance Review Report provides data. For instance, Heathrow arrivals were subject, on average in 2018, to 7.7 minutes of additional arrival manoeuvring (Airborne holding and sequencing in arrival traffic). Taxi delay to departing aircraft is also extensive at some airports and symptomatic of a schedule that appears to have insufficient resilience built in. This is a characteristic of many large hubs.

Policy makers and regulators could press for improved resilience in airport capacity declarations. Delays, should reduce as a result, environmental performance for subject airports should improve significantly, and, EU 261 passenger delay compensation risk will be reduced.

Conclusion

Covid-19 has undoubtedly had a fundamental and irrevocable impact on Air Transport, devastating the industry. It has also provided an unprecedented opportunity to better align stakeholders on shared issues, both national and international, some of which have lacked real progress for years, and, to inject pace into strategies reflecting refreshed policy goals. The reduced size and extent of air transport activity globally will have a profound impact on ANSP revenue generating ability, budgets will reduce.

Overall, ANSPs as national nodes in a global network of airspace managers are unlikely to be able cut costs uniformly, or to do so without compromising the goals and objectives of the ICAO Global Air Navigation Plan and the Single European Sky which were already being stretched buy other factors. Cutting ancillary activities alone will not deliver sufficient savings, and cutting technology plans tied to harmonised international network services, will require careful planning and agreement.

It is also clear that the long-term progress towards these goals and objectives has until now not been achieved as expected. Perhaps some of the goals are unachievable, or unrealistic. If so, now is the time to seriously consider eliminating the associated activity.

Policy makers and regulators should stimulate increased collaboration among aviation stakeholders for the development of pandemic recovery plans that enable cost reductions and investments that support the realisation of both short and longer-term objectives for the industry, without perpetuating unachievable or unrealistic programmes. Government must be part of this collaborative effort to ensure that policy ambitions are supported with clear objectives and cost benefits that can be understood, agreed and pursued across the industry. The need for collaboration and an accelerated pace of change has never been greater.

Environmental imperatives are an example of an area in need of improved collaboration. A better balance of real capacity, reflecting a sensible margin for system resilience, with overall demand is needed. This will require compromise. Whether by airports wishing to make the maximum use of scarce runway resource, airlines scheduling unachievable turnaround times to maximise aircraft

utilisation, or ANSPs accepting an ever-increasing demand on an airspace system that is (was) already over-stretched.

Governments and stakeholders could for instance consider:

- Introduction of national and international policies and technology tools, to reduce congestion on the ground and in the air, and to improve system resilience and efficiency, especially related to major hubs.
- Incentivising reduced used of congested airspace, through distribution of traffic more evenly to make better use of underutilised runways and airspace. Differential airspace charging for congestion hot-spots could be introduced.
- Focus on KPI that reduce both extended arrival routings and departure delays, which should have a profound impact in reducing both aircraft noise and emissions, especially at the airports that have been the worst affected.
- Cross industry focus *and* accountability for improvements to environmental performance, monitoring and reporting.

By taking such steps, not only could the environmental performance be improved, benefitting the communities, airlines and airports concerned, the associated airspace congestion would also be partly relieved, reducing pressure on ANSPs facing complex investment decisions and helping to ensure that essential airspace modernisation continue.

As Rahm Emmanuel, President Obama's Chief of Staff said, "Never Let A Serious Crisis Go to Waste". Meaning "that it's an opportunity to do things you think you could not do before."

I couldn't agree more.

Graham Lake
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About the Author

Graham Lake FRAeS has spent more than fifteen years in international aviation policy advocacy based in London, Geneva and Washington DC, as well as a period as Director General of CANSO, the Trade Association for Air Traffic Management providers based in Amsterdam.

He co-authored independent reviews of airspace and airport operation in context of the management of aircraft noise at London Gatwick (2016) and at Toronto Pearson Airport (2017). As well as undertaking in 2019, for a sovereign investor in the UK's Air Transport System, a comprehensive study of Airspace Capacity in Europe.

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