In search of seamless skies

Martin Rolfe, CEO NATS and Chair CANSO Europe, explores the near and medium-term challenges for ANSPs in Europe.

We are at a hugely exciting point in the history of our industry. There are, undoubtedly, many challenges ahead. But those who are excited by the aviation industry (I presume most of us!) and by the pioneering spirit it encapsulates and engenders, will, I hope, feel the same sense of excitement I do about having the opportunity to tackle these challenges and to prepare our industry for what lies ahead.

Of course, the number one priority for CANSO Members in Europe is, and always will be, keeping the skies safe, and we do this very well. I think it is important that we continue to remind people too that this does not happen by chance.

Last year saw around a billion passengers rely on our service in Europe and circa 36,000 flights safely criss-crossing Europe’s skies on its busiest days. That only happens thanks to a huge amount of hard work and dedication from a lot of talented people across all organisations and the wider industry.

But I also think we have a fundamental role in driving forward the wider industry of which we are part; finding new ways to make the airspace work as safely and efficiently as it can for both today’s users and for future users. The challenge for ANSPs across Europe is to ensure we continue to keep the skies safe but also to help the industry of which we are part to grow and to evolve, finding new
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ways to ensure safety as traffic grows, to improve environmental performance and to find solutions to accommodate demand for new uses of the airspace.

Reflecting on what CANSO Members in Europe have achieved to date, Single European Sky ATM Research (SESAR) deployment is continuing and, with the coordinated efforts of the SESAR Deployment Manager supported by European Commission funding, accelerating. New airspace concepts are being implemented which are helping us to optimise the use of our busy skies.

There are extended arrival management horizons operational at places such as Munich, Reims and Heathrow, with many more to follow, helping to provide enhanced and more consistent arrival sequences by sharing information across borders. New precision area navigation (p-RNAV) approach procedures are in place across the continent, including Dublin, Stockholm Arlanda and Paris CDG, improving the design and organisation of our busy terminal manoeuvring areas and reducing workload on controllers.

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We are also seeing new ways of working gaining traction, helping to push us towards the realisation of a virtual Single European Sky. Whilst the European Commission’s Functional Airspace Blocks have not perhaps driven us as far down the seamless airspace route as was desired, there are new collaborations that are providing additional impetus – from the COOPANS systems grouping through to the Gate One and Borealis Alliance ANSP initiatives.

Tailored approach

As we look ahead to the year, at a technical level, extensive research and development continues through the industry-leading public-private SESAR research programme. There will be many more simulations taking place this year helping take new concepts one step closer to being ready for operational deployment – from wake vortex separation optimisations that will enhance runway throughput, through to testing new means of organising controllers that will better match demand to capacity, reducing congestion and improving traffic flows.

Alongside this and with the input of its Members, the SESAR Joint Undertaking (SJU) is currently finalising its recommendations to the European Commission in terms of the concepts whose implementation will be mandated via European law through Common Project 2, the follow up to the European Commission’s Pilot Common Project.

CANSO in Europe is turning much of its focus to preparing for the next regulatory reference period – RP3 – which covers the period 2020-2024.

We have been working hard to ensure the Commission recognises that continued cost cutting each year by pre-set percentages, without consideration of local implications, is not sustainable and that a more tailored approach to target setting and measuring performance and value is required. We hope they have listened.

We are also heavily engaged in discussions about the future institutional make-up of aviation in Europe. The end of 2017 saw agreement reached within the European Union’s institutions and member states for a revised “Basic Regulation” covering the European Aviation Safety Agency (EASA).

This legislation enhances the common European Union safety rules for civil aviation and extends EASA’s remit to safety-related aspects of security – most notably cybersecurity – and environmental protection.

It also introduces the principle of proportionate and risk-based rule-making, designed to reduce bureaucracy and enhance innovation – a key development for CANSO Members.

Preparing for drones

But it is not just measures to help us better manage today’s civil aviation industry we have to think about. We are also thinking hard about the future of our industry and the evolving and emerging demands being placed on airspace. Arguably one of the most
significant changes to the EASA Regulation is the inclusion of the first-ever EU-wide rules for civil drones.

This followed the publication in summer 2017 of the blueprint for what the European Commission has badged ‘U-Space’, the provision of lower level airspace for drones, especially in an urban environment. The blueprint actually goes beyond just the urban environment and aims to enable complex drone operations with a high degree of automation to happen safely in all types of operational environments.

Work is now underway across Europe to prepare for this. From SESAR-led research projects such as CORUS (Concept of Operation for EuRopean UTM Systems) and PODIUM (Proving Operations of Drones with Initial UTM) through to national efforts, most ANSPs are recognising the need to engage with these challenges and are considering how they need to evolve to meet the demand for this new use of airspace.

Trying to think about what role ANSPs will have to play in these emerging markets and how we need to respond to new technologies will continue to form a major part of CANSO’s work in the months and years ahead, as I am sure it will in all parts of the world.

The next few years are undoubtedly going to be challenging ones for all of CANSO’s European Members as traffic levels grow, new technologies enter operation and different airspace users fill our skies. But within CANSO, we must continue to use that challenge as an inspiration, to reflect on the opportunities we have and to recognise that we are very lucky to be involved in such an exciting industry at such an exciting time.

And we must use that inspiration to ensure that we continue to both keep the skies safe every day and help grow and evolve the industry of which we are such a fundamental part.

Martin Rolfe is participating in the conference of World ATM Congress 2018. Find out more at worldatmcongress.org