DOING AWAY WITH NATIONAL BORDERS WILL BE KEY TO SOLVING THE CAPACITY CRISIS

Jan Klas

Director General, Air Navigation Services of the Czech Republic (ANS-CR)

Executive CEO Committee Chairman, Civil Air Navigation Services Organisation (CANSO)

Air Navigation Services
of the Czech Republic

EUROCONTROL's recent Challenges of Growth study has outlined some of the huge capacity problems facing European aviation. How can we start trying to solve these issues?

We need to make significant and qualitative changes to the way in which we provide aviation services. I think there should be a proper balance between enablers and incentives. Technology is an enabler of course but alone it is not enough. I don't think we can meaningfully implement both technology and new concepts of operation in an environment which is still constrained by national borders.

I know many people believe this not important but in my opinion we must remove these borders and start creating an environment that would be supportive to this change.

Another important enabler is the institutional framework in which we operate. We are at a crossroads and it's important that all the relevant forces take a positive and constructive approach rather than spend time blaming each other. We must first address the capacity problem and define a really good, capacity-driven strategy for the next five years.

Even a small rise in annual demand of 3% or 4% is creating a mushrooming of delays. We seem to be in a capacity crisis.

It is bizarre how we seem to fall into the same trap time and time again - always addressing one major priority while at the same time creating an environment for the next crisis. In a very short time the priority has changed from cost to capacity. But insufficient capacity has been main trap for decades.

Some of our major airline stakeholders think this is an excuse but it's not. We need to get out of this never-ending cycle – the very strong pressure on cost-cutting during the last performance period has created obstacles to building adequate capacity. Now we need a capacity-driven strategy for the next five years and all the major stakeholders should work constructively together on building it.

Over the next five years we may again experience some drop in traffic but we should still continue with this strategy because we need the capabilities to address traffic growth and even a little bit extra to allow us to have the resources to provide a qualitative change.

For me this means removing existing national borders and applying new concepts of operation – only then will we be able to really efficiently use the technology which is now available. Technology itself will not solve the capacity problem or deliver significant efficiency in the way we provide services.

But isn't that why we have functional airspace blocks (FABs)?

In my personal view I think we need a slightly different approach – more of a combined top-down and bottom-up approach. FABs were clearly started as a bottom-up initiative but I think the big problem is that there has been a lot of inconsistency in the way the FABs were defined. Some were developed because of the good cooperation between neighbouring ANSPs while others were politically driven. They have not been consistent in their size and complexity.

I still think, though, that our FAB is relatively reasonably structured in terms of the geographical scope. But we can't compare it to the Functional Airspace Block Europe Central (FABEC), for example. And French or German airspace alone, I think, is large enough to undertake considerable consolidation without trans-border cooperation.

The initiative by the European Parliament and Commission to define the optimal European airspace is, in my personal view, a very good input for a redefinition of the way we organise FABs, or regional initiatives, as I prefer to call them.

There are other issues which will need to be resolved through SES 2 Plus or SES 3 – a strong institutional and business model that should support this kind of qualitative change in Europe. The performance system is supported by bonuses and penalties and I do not think this brings any positives to the ATM world; for example, in the Czech Republic we've been performing quite well during the last couple of years but still my main concern is that we will not be punished for our performance. During the years where we created additional capacity and our charges were below the European average our income was higher. Sometimes it rose so much we had to decrease our charges and income accordingly – which meant that when very unpredictable traffic increases arrived they created short-term capacity problems.

This is not a way to organise a business. For those ANSPs who could not comply with the performance criteria a penalty has had to be paid. But by whom? States would not be willing to pay so the ANSPs have had to cut additional costs – reducing capacity further.

Whatever we do, should we not try to improve the relationship between the major stakeholders?

Yes. But I understand the airlines' frustration and I know some of them believe that they can only change things if they use very, very strong words. That is something I do not like. I do not want to criticise my customers because I'm always trying to understand their views but I think it's detrimental to their objectives.

The objective is to provide good services for a good price in a context of quite dramatic growth. As European ANSP CEOs we share this objective. But these words are not fair to the community of controllers because the majority of them are working at their limits. I would like to thank all of them because summer 2018 was very difficult for many controllers and they did their best.

Of course we need to try to mitigate the number of strikes and minimise their impact; it's very unfortunate that these happened to the extent they have. But I say again, most controllers are working at their limits, doing their utmost to provide good, safe services. One concerning issue is that we are accused of using the extreme weather conditions as an excuse for not delivering the required service. Weather conditions have been exceptionally bad recently and I can assure everybody in the aviation community - and beyond - that controllers have been doing a very important job during these difficult times. This is very important for the future because more automated systems are being introduced to increase capacity but many of these tools will not work when a really strong cold front blows in.

How, as an ANSP CEO, can you balance the need to keep your costs as low as possible while finding the money to invest in long-term controller training and capacity-increasing tools?

You have to consider all the relevant trade-offs. For example, this year we were in coordination with the Network Manager and at the start of the year we said we would be able to provide hardly any increase in capacity. But because of the overall network capacity problems we were asked to provide additional capacity. We were able to increase our capacity by 7% but we are at the real limit. This is not sustainable. This is the limit of our system and I think we are already stretching it to the extent we are creating some problems for our people. If we can address capacity problems together with our neighbours, if we are positively motivated to create bigger entities and to provide services unconstrained by national borders, that would be a solution. I know that this problem is more urgent in central Europe than other places but sooner or later we will all have to address the issue and address the priorities from a network point of view.

This is what I expect from SES 2 Plus, or SES 3. It must be supportive of those qualitative changes which are needed. Without it we will hit a capacity wall. You cannot organise airspace efficiently in small blocks.

This might make some of the smaller ANSPs start to feel very vulnerable. What's going to happen to their control over their national airspace?

The institutional set-up must be supportive of qualitative changes. In today's environment it's very difficult to find five or six motivated ANSPs creating one joint venture; somebody will always fear being dominated. Politically it's not easy.

So we should create an environment which would be supportive to those changes which will be a win-win for all,

including the smaller parties. Creating big entities will give everyone the opportunity to create a better service for our customers and support the needs of the whole European network.

But how should we do this? We need to debate this within CANSO and be more proactive in proposing business models. That should become part of this new institutional set-up which would support those qualitative changes, allowing for the next level of ATM service in Europe.

How did you manage to increase your capacity in such a short time frame?

We have been stretched to the limits. We have been trying to implement new concepts and train new controllers. We've made better use of our resources by implementing new ways of looking at how we distribute workloads between controllers working at regional airports and within the ATC centre here, centralising services where we can.

But it's been tough – the drop-out rate of controllers going through training has reached 50%, partly as a result of the air traffic complexity issues we face. But these are short- and mid-term fixes. The problem needs to be addressed in a much wider context.

Are there any capacity-enhancing concepts coming from SESAR which you think will be particularly promising?

There are many interesting projects under development which will definitely contribute significantly to improving efficiency but I am not sure whether any of these projects will really contribute now to adding capacity – which is the most pressing and urgent priority. We need to better organise airspace before we can implement new concepts of operations and efficiently use this technology. We will then be able to use all the aircraft's airborne systems and share all the relevant data associated with a business planning trajectory and pre-tactical steps to de-conflict as much as possible. Technical improvements must go hand in hand with institutional change.

We must have a consistent approach and here I see an important role for CANSO. Perhaps at the moment we are not sure now how to support future conceptual operations with the proper business model but it is very important that the business model is consistent.

One school of thought is that we should create a supranational or European authority providing both service provision and even regulations, to provide services from one place. A utopian view from the past. Another school of thought is that we should create an environment which would be more business-oriented, supporting the forces allowing ANSPs to create bigger coalitions and to provide services irrespective of national borders, providing incentives for them to do so.

Both systems could exist but the worst scenario would be to develop a system combining elements of both.

Of course I prefer the second model because the first one has so many risks and, as we have seen from past events, it simply doesn't work.

How do you think the relationship between ANSPs and EUROCONTROL should evolve towards your preferred model?

We have seen many positive changes since the appointment of the new EUROCONTROL Director General. It's a very open communication which is an important prerequisite for a better relationship between the two sides. I think it's essential that EUROCONTROL should not operate in areas that are the preserve of industry and I think now there is quite a high degree of understanding about this.

I am a supporter of EUROCONTROL's role as Network Manager because the Agency can benefit from being neutral and impartial; the NM should have a more active role in the future. This does not mean giving it regulatory functions but strengthening the link with organisations, such as the Commission, which do have regulatory powers.

I see EUROCONTROL as becoming not only a centre of expertise but also of data for all aviation stakeholders. It's yet to be seen how this data should be structured and distributed but EUROCONTROL is being very proactive in providing data and it's up to us now to give our feedback on how we would like to see it structured and provided, in which format, so we can use it for the benefit of the entire aviation community.

The latest Challenges of Growth study suggests that in 2040 we're looking at 1.5 million flights that won't be able to be accommodated. What in the long term will need to be done to ensure we do have enough capacity to accommodate demand safely and efficiently? The extent of the problem suggests something radical is needed.

The five-year strategy-driven approach should allow us to have the necessary capabilities and resources to address these longer-term problems. It needs to be understood that there are certain limits within the network to how much safety and comfort we can provide. And of course we cannot compromise on safety so it may well be that comfort is something that has to be addressed – in a way that is as positive as possible.

So in congested airspace areas maybe the planning of airport slots will have to be adapted to the future capacity problem. It may well be that instead of allowing free route operations in all parts of the European airspace, we will have to organise it to prioritise capacity; maybe we will have to consider giving the

airspace users the opportunity to choose their optimal profile but then ensure they follow a profile that is optimal for flight efficiency, time spent in the air and delay reduction.

In today's environment we offer free route airspace planning but what is the benefit of this if you have 30, 40, 50 minutes of delay? And when you have to change your flight level three or four times because every ATC centre is operating to its maximum capacity?

We need to start planning from a network perspective, that's the very first step. We may not have to adopt these suggestions because traffic growth may not increase so much in the future. But if traffic does continue to grow this could be a scenario that will need to be considered.

The end user is always the travelling public and I would very much welcome a more constructive dialogue with our airlines to satisfy the needs of the flying public.

Turning now to your own organisation, the ANS-CR, how do you see the next five years unfolding – how are you going to meet some of the challenges we have talked about?

I think we have quite a good reputation domestically and that is important for us because it helps with recruitment.

But we operate in a relatively small environment and airspace demand is quite unpredictable. Over the last two years imbalances in the system have created an additional 20% volume in traffic, with some airlines using longer routes through our airspace to avoid more expensive charges elsewhere.

This is the problem with how the system is organised, along national borders, and it's not a sustainable model for the future. At the same time the performance scheme is also impacting us because it doesn't operate in a clear way.

We are part of the scheme called "Four ACCs" organised by the Network Manager, which allows us collectively to handle 350 movements a day among the four ACCs. But I can't predict what traffic loads will come in the future.

We will of course continue with the very intensive training programme we have started and we will try to improve our technology. We will have to implement a new system with fewer functionalities but which is still compatible with SESAR.

What kind of revenue streams are you developing beyond traditional ANSP business? How far should ANSPs involve themselves in non-core commercial activities?

We do undertake commercial activities but only those related to our core business: training, navigational aid calibration and sometimes consultancy.

We must swim in an environment which is semi-market driven, sometimes fully-market driven; we are sometimes in competition with fully subsidised ANSP rivals and sometimes with fully privatised companies. And I think this has to be part of a wider debate about how to cultivate this part of the business. It may well be that in future CNS/ATM services will be more organised like this and already we see some ANSPs entering markets which until recently were exclusively the domain of ATM equipment manufacturers.

That, in my view, should be part of an interesting debate about how we should cultivate the institutional framework and which sectors should be purely market-driven and which should be regulated.

Our training business has been quite successful and we have just completed a navigational aid calibration contract in Cuba.

So where do you think we should draw the line? Providing personnel to run air traffic control services elsewhere in the world? Providing ATM services in other parts of Europe because you have spare capacity in your ops room?

It's a very good question and needs more thought. My personal view is that instead of intervening within the sphere of traditional ATM manufacturers, it's maybe time for ANSPs, data companies and even private businesses to consider forming joint ventures to provide controllers to centres when they are urgently needed.

I think we need to stay within the sphere of ATM because we shouldn't forget that our core business is still regulated.

What kind of pressure are you under to improve your environmental performance?

I think the most pressing issue is airport noise, particularly at Prague Václav Havel airport. These capacity problems have made it more complicated because there the delayed flights have arrived later than planned. We are trying to help by developing more noise-sensitive night-time approaches and applying collaborative decision-making (CDM) procedures at the airport.