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When I think about ‘staying in the loop’, three different perspectives come to mind. As a former controller, the first and most obvious one is how the controller makes sure that she or he is still in the loop of what’s going on in a dynamic operational situation. Working in busy London airspace on Heathrow approach, I remember clearly the feeling of being in the loop in terms of the operational situation, and my need to be in the loop. We had many techniques to stay in the loop and therefore to stay in control. These were passed on from controller to controller. Things still work that way today, and much of it is based on the systems, procedures and training we have built in over decades..

The second thought about staying in the loop is about how we design our future technology. One of the core goals of our work today is to balance the unique strengths of human controllers with the strengths of technology. This isn’t a new dynamic, but it’s becoming more nuanced as technology offers new capabilities to improve how humans and machines work together.

So when we think of staying in the loop, it’s not about removing people but about keeping them connected in ways that let them use their expertise more effectively. A lot of this comes down to how automation is designed. Before I joined skyguide, I saw at NATS how the iFACTS project delivered benefits for controllers and the organisation. The iFACTS support tools allowed controllers to handle more traffic comfortably and safely, providing controllers with decision making support while highlighting potential future aircraft conflicts. iFACTS enabled controllers to look ahead to test the options available, and gave more time to make decisions. In projects at Skyguide, we’ve followed the same approach, a great example being our stripless system.

The key point for me is that controllers were in the loop of the design process from the very start. By engaging controllers in this way, automation is not imposed on them. Instead, they’re helping shape the tools they’ll eventually use. Automation must not be something done to them: it’s something done with them. This is essential for building trust and for creating systems that fit well into real-world operations.

In Skyguide, I saw the impact of this collaborative, co-design approach again recently during a simulation exercise where controllers managed unfamiliar airspaces with the support of new software. Geneva controllers managed Zurich airspace, then Zurich controllers managed Geneva airspace. Some were sceptical at first, feeling certain it wouldn’t work, but by the end, they told us, “Actually, this could work.” They were able to adapt because the system was designed with the expertise of controllers who had foreseen many of the practical challenges and opportunities. To me, this is the essence of staying in the loop: designing technology that genuinely supports people rather than taking their place.

As we look forward, with increasing traffic levels, we will likely reach a point in air traffic control where automated systems have a greater role in routine operational safety, just as automated systems can hold a plane steady when conditions are stable. On the ground, air traffic controllers today cannot step back in the same way. Automation should not only keep people in the loop; it should also allow them to step in when necessary. In our field, this is not just a safeguard; it’s an expectation. Today’s society is reassured when humans are still a central part of the process. But this is a design challenge.

A third critical aspect of staying in the loop is building strong connections among the people within our organisations. Safety-critical roles depend not only on the quality of the tools but also on the communication among teams and in the organisation. We rely on both formal and informal channels to keep everyone aware of the current state of operations. It’s essential that controllers and engineers feel safe to report issues, trusting that their voices will be heard. This openness underpins a lot of what we do.

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As a CEO, my role is to stay in the loop by listening and learning from the people doing the work. Senior managers must stay in the loop by going to the sharp end regularly to hear from controllers, engineers, and others about what they’re experiencing. Sometimes this feedback comes through informal channels – direct messages from employees telling me, “I don’t think you know about this, but you should.” These messages can uncover issues that might be

lost in middle management, but they're critical. I consider these insights one of the greatest gifts anyone can give me because they bring us closer to the real experiences and concerns of our team. They help untangle 'work-as-imagined' from 'work-as-done'.

In our industry, staying in the loop is as much about human-human connection as it is about people and technology. While automation provides powerful support, it's the people in the loop who bring judgment, adaptability, and a sense of responsibility that machines cannot replicate.

We all need to be involved in balancing and connecting these loops. That's the only way to keep air traffic management strong and meet the needs of everyone involved.

Alex was born in 1968 and educated in the UK; he has a Swiss mother and British father. He obtained his private pilot's licence in 1986 and his ATCO licence in 1996 (Heathrow approach), after studying French and German at Exeter University. He moved around a number of NATS sites from 2003 until 2009, being in charge of air traffic services at Farnborough Airport, Manchester Airport and Area Control Centre, West Drayton Centre (where he oversaw the move of the centre and its associated 500 families to the south coast of England), and Swanwick Centre. In 2009, Alex became Director Strategy and Investment and later also Director International Affairs. In July 2011 he left NATS to take up the role of Chief Operating Officer at skyguide, Switzerland. He was appointed CEO of skyguide from 1 July 2017. He is passionate about safety and finding ways to innovate in ATM to improve the customer experience, and to leverage true diversity to improve our services. Alex lives near Geneva with his wife and son.

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