Dear readers,

This edition considers the range of tools, both airborne and on the ground that fall under the heading "safety nets". Such systems do need to be designed and installed carefully, so as to avoid too many alerts or alarms and to ensure that operators do not rely too much on automation. However, with the right design, fine tuning and training, there is no doubt that safety nets make a major contribution to aviation safety, for example by reducing CFIT (controlled flight into terrain) and also mid-air collisions.

Designers and users of these systems face considerable challenges in the coming years – in order to respond to changes in ATM and also to take advantage of the increasing capability of the available systems. We are already seeing an increase of traffic in Europe and EUROCONTROL's latest forecast is for traffic to grow at an average rate of 2.5% p.a. over the next six years. This means that by 2021 we could be seeing over 1.7 million more flights than in 2014.

Those flights will be operating much more in free routes airspace, with a significant increase in the availability of FRA anticipated over the next few years – as regards days of the week, hours of the day and flight levels. Together with more sophisticated trajectory management and flow management techniques (such as 'Target Time Over'), this will have significant implications for the flow of aircraft across Europe.

Other areas where we can expect significant change include the use of RPAS (Remotely Piloted Aircraft Systems) and the use of remote towers. At airports, we can expect to see more sophisticated control of aircraft (for example, through more interactive runway and taxiway lighting) and also of ground vehicles. Runway excursions and incursions remain a serious safety concern and a particular challenge for the aviation industry.

However, in all this change, we must continue to recognise the importance of the human being. People are fallible but also able to enhance safety in ways that systems cannot begin to replicate – just look at the Hudson River incident. Safety nets need to work with humans and to support their decision making.

The articles in this edition cover a wide range of topics and reveal just how much progress is being made in this area and how much informed debate is needed to determine the best way forward. In this respect, the views on the issue of downlinking TCAS Resolution Advisories are particularly interesting. I am sure that you will find this edition both relevant and interesting.

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has worked in Air Traffic Management for his entire career. He has been Director General of EUROCONTROL since 1 January 2013.

Since taking up his functions at EUROCONTROL, he has initiated the development of a Vision and Strategy, including the development of Centralised Services as part of the SESAR deployment concentrating on how to support controllers with new technology which increases safety.

Before joining EUROCONTROL, Frank Brenner was General Manager Operations for FABEC, Vice Chairman of EUROCONTROL's Performance Review Commission and a member of the Performance Review Body. Trained as an air traffic controller, he has held a number of posts at DFS including Head of ATM Operations, Director of Operations at the Business Unit for Aeronautical Data Management and Director of DFS's Control Centre Business Unit. operational posts.