

Livery Dinner Speech – Crispin Orr, Chief Inspector AAIB

Master, Liverymen, ladies and gentlemen it is truly an honour for me to reply on behalf of the guests, all, I must say, much more distinguished than I! I will try to heed the advice of my Scottish grandfather who said that like a skirt, or a kilt even, speeches should be just long enough to cover the essentials but short enough to be interesting!!

Thank you Master for your kind words of introduction and if I may, I would like to echo the thanks and praise to Paul and his team for organising such a fantastic occasion. During my military career I enjoyed many a fine Dinner night, in some wonderful locations, but nothing can compare with this. But I suspect we won't be burning the piano afterwards!

Master thank you for your most thought provoking address. Yes it has been a year full of surprises. And some of you may be surprised that an ex-Army helicopter test pilot has been appointed as Chief Inspector at the AAIB. I certainly was! But it is not without precedent because in 1915 Capt George Cockburn RFC was appointed to be the very first Inspector of Air Accidents in the UK and probably the world. I am truly honoured to have the opportunity to follow in his footsteps and all those in between, who have done so much to enhance aviation safety by making sure we learn from each and every aviation accident.

As the Master said a few minutes ago, we are living in interesting times, not least in aviation with the relentless increase in demand for air travel, rapid advances in aviation technology and the extraordinary proliferation of drones. The boundaries continue to be pushed in all directions with the development of solar powered air vehicles that will operate for days above the jet-stream, with the resurgence of vast airships and the prospect of non-stop commercial flights from this fair city to the land of kangaroos, to pick on just a few. Higher, faster, further, leaner – the boundaries continue to be pushed back and it is an extraordinarily exciting time. As the operational environment is expanding and evolving, this poses major challenges for operators and regulators, but also for us as accident investigators, and I will mention just three: computers, humans and that special breed of humans, lawyers...

Drones

At the AAIB we continuously look at how we can enhance our capabilities and in the last few years have been pioneering the use of small drones to capture high resolution 3D imagery of complex and sometimes inaccessible accident sites swiftly and safely. The potential applications for unmanned systems seems to be limited only by one's imagination and the proliferation of lost cost devices has introduced some major challenges for our congested airspace. I have spent a lot of the last 4 years investigating accidents involving drones including some very sophisticated military 'remotely piloted air systems', as they prefer to call them. The main difference between investigating them and conventional aircraft accidents is the obvious one – there is no pilot on-board and much of the piloting function is undertaken by computers. And whereas we know what pilots have been trained to do and the mistakes they may make, it is extremely difficult to get the designers of these RPAS to disclose what the computers have been programmed to do, and they don't always know how the system will react in any given set of circumstances. So it can require extensive analysis of the data to determine what went wrong and what needs to be fixed. We should not be seduced by the manufacturer's claims of reliability, nor those who argue that unmanned systems don't pose any risk to life. There are limits to the ability of machines to adapt to the unexpected, to make effective decisions in a highly complex and sometimes irrational environment.

So Honourable Company of Air Pilots, you may be pleased to know that from where I am sitting, what some might suggest is the inevitable demise of the human pilot is greatly exaggerated and somewhat premature!! Aviation I would suggest for many years to come will and must remain an essentially human controlled activity, whatever Mr Amazon, Uber and Google might think.

Human factors

But it is also fair to say that as technology gets ever more sophisticated and reliable, the humans in the system (including pilots and maintenance personnel), are both the strongest defence but also sometimes the weakest link in the chain. Human factors play a substantial role in most of the accidents that the AAIB investigates. And when we establish that human error played a part in an accident, that is not the end of the investigation, it is the start of the investigation. Why was that error made? Why did that action make sense to the operator at the time? And often we will find that the root causes lie in organisational factors, latent systemic issues that set individuals up for failure. So you as the senior and most influential people in the industry have a very important part to play in setting the conditions for success for the next generation of aviators, through training, education, the sharing of knowledge and experience. And critically by perpetuating a just and engaged safety culture throughout the industry that enables us all to identify and learn from the mistakes others have made so that we don't have to make the same ones ourselves. Which brings me to my third challenge.. the lawyers..

Protection of sensitive information

The final challenge I would touch on is the protection of sensitive information. AAIB conducts independent and impartial safety investigations whose sole purpose is the prevention of accidents and incidents. We do not apportion blame or liability, and we need to maintain a very clear separation between our safety investigation and any other judicial proceedings that may be required. We depend on a full, frank and confidential engagement with those involved especially the pilots. Accordingly the protection of sensitive information from disclosure is enshrined in international standards, and both EU and UK national regulation. The strength of this protection was tested in the High Court last year in connection with two different cases and I am happy to report that the principle was firmly upheld by the Lord Chief Justice who said it was 'almost inconceivable that statements given to the AAIB could properly be the subject of an order for disclosure...' This was very good news and means that pilots can continue to talk to us with openness and candour, safe in the knowledge that their statement will be protected and only used for safety purposes.

Conclusion

So in conclusion, it is an exciting time for aviation, with lots of challenges before us. Master toasted 'onwards and upwards' – amen to that.. and as the Chief of the AAIB I would also like to wish you all 'safe and happy landings'!! Makes my life easier. We must never stop learning, striving to be better, sharing ideas and best practice ... an agenda which is very much part of the raison d'être of the Honourable Company of Air Pilots. Promotion of aviation safety is at the heart of what the Company stands for, and long may that be the case.

And so I would like to invite all the guests to be upstanding to join me in the traditional toast "THE HONOURABLE COMPANY OF AIR PILOTS, MAY IT FLOURISH ROOT AND BRANCH FOREVER"