So long, farewell
Celebrating the life of the Boeing 747 – the Queen of the Skies

Deal or no deal? The impact of Brexit on the airline industry

The power of the mind How to maintain a positive mindset

Preparing for redundancy Taking the next steps and making plans
So far, 2020 has been an unpredictable year. In the past six months, the world has repeatedly closed and opened its borders, leaving many of us with whiplash. Staying on top of COVID-19’s global impact and how it is being responded to has become a difficult task. With two-week quarantines being imposed in a range of places, and air bridges collapsing all around us, the aviation world continues to suffer.

Many people have lost their jobs, and we are far from the end of the tunnel. It is difficult to remain positive in such an environment, but the resilience and camaraderie that the pilot community has shown during these tough times has been astounding. I am proud to be a part of an industry where its members meet adversity with such unwavering solidarity.

In this issue, Louise Pode discusses the psychological impact of this challenging situation and the best way to manage your mindset among the uncertainty. We’ve also included some pleasant distractions, with the role of aircraft in upcycling and a glimpse through the clouds into the sunshine of the Caribbean with Robin Evans.

Looking at aviation through different eyes, Adam Johns considers a goalkeeper’s contribution to aviation safety, and we take a scathing look at what Hollywood gets wrong about aviation. In this issue, we also take a moment to say goodbye to the beloved Queen of the Skies, the Boeing 747, and Adam Crehan-Clarke discusses what ‘net zero’ carbon emissions could mean for the aviation industry.

We love hearing from our readers, so if you have any personal stories you’d like to share, please don’t hesitate to send them to us – email TheLog@balpa.org. We’ve taken the decision for this issue to remain in the digital format, and we hope you continue to enjoy The Log on your iPad or tablet. Finally, stay safe and stay united!
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Upfront
The latest in aviation and industrial news from around the world

Executive President’s welcome
I had hoped that, when the time came to pen this foreword, there would be some happier news to report. Alas, it was not to be. We remain at the mercy of COVID-19 chaos.

The predictions at the beginning of the pandemic are becoming depressingly accurate, and the level of despondency around our industry is as palpable as the lack of government assistance. I feel it is necessary to acknowledge the debt of gratitude we have to our rep community for remaining resilient and delivering when our members needed them most. I doubt there has ever been a bigger peacetime challenge to our industry.

The restructuring of the industry creates unending consequences, such as the untimely retirement from passenger operations of the UK’s 747 fleet. You can read more on the retirement of this industry icon on page 34.

It’s easy to forget that, not long ago, Brexit represented one of the UK industry’s biggest challenges (and still does). We are now three months away from the end of the transition period, with what appears to be little progress. As you would expect, it remains high on our agenda.

We cannot afford to ignore other factors that are likely to reshape the future of our industry. Coronavirus, Brexit and carbon emissions are all featured in this issue. They represent some of the biggest threats to our industry and are very much on the Association’s radar. Hopefully, by the time the next edition comes around, we will see glimpses of a brighter future.

Stay safe,
Paul Naylor, BALPA NEC Executive President and easyJet captain

‘Full Brexit’ looms
Hands up if you thought the Brexit conundrum was solved. No such luck. At the time of going to press, there is still a crippling level of uncertainty about the UK’s future relationship with the European Union (EU) after the Transition Period, which ends with the year.

BALPA has called on the government to provide much-needed clarity for the aviation industry. It is still not clear if any agreements will be in place for the air-travel industry to continue to operate between the UK and the EU from January onwards – and, if there are, on what terms? There are also still unanswered questions about pilot licences and employment rights.

No deal is not an option for aviation: there is no World Trade Organization fallback for this sector. At the very least, there has to be an air-transport agreement in place for flights to continue between the UK and the EU.

BALPA would ideally like to see much more than such a bare-bones agreement. We would like to see mutual recognition of pilot licences, and clarity around the ability of UK and EU pilots to fly aircraft registered in each other’s jurisdictions, and on employment rights for temporary basing.

We had hoped the UK Government and the EU would have reached some sensible arrangements by now, at least in absolutely key areas, such as air travel. This industry is in an incredibly fragile state right now. We have already seen some airlines raising red flags to their staff about these issues. Any further damage caused by political posturing or flexing of muscles could be fatal. Enough. We need an agreement – and we need it now.

VIRGIN ATLANTIC SECURES FUNDING
Despite no help being forthcoming from the government, Virgin Atlantic has secured £1.2bn in financing, which should mean the airline will get through the coronavirus crisis and do so in a strong position. However, this good news is allied to bad. The airline announced that it will need to make more staff redundant across the business, but BALPA reps have engaged with Virgin management. They have ensured that no further redundancies will be needed among the pilot community, thanks to the agreements and mitigations from the first round of consultation.

Our efforts to protect jobs across our other airlines continues, as every job lost to this crisis is a tragedy.

BALPA URGES AIRPORT TESTING
We have joined the rest of the aviation industry in highlighting the damage being done to air travel by the government’s 14-day quarantine policy. Apart from anything else, it’s a moveable feast, so passengers can’t book with confidence. Adopting airport testing could be part of the solution. We’ve urged Transport Secretary Grant Shapps to urgently change the government’s approach.

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The tabloid newsroom is a frightening and unforgiving place, but it was where I cut my teeth as a young journalist. A thick skin was the most valuable asset you could possess. I was nicknamed ‘the child’ of the office, and mocked for my lack of showbiz know-how and understanding of politics. These days, I prefer to go by the name of Jordan, and it’s a pleasure to join The Log.

Now based in Manchester as a first officer on the Boeing 737-800, my route to the right-hand seat has been far from dull. The two professions are surprisingly similar: deadlines for content submission; scrambling to make a CTOT, endless research into new stories, hours spent in the books during a type-rating. And the gossip!

Graduating from university, I freelanced for a number of inflight magazines before settling as a print and digital sub-editor at a national tabloid, where the bright city lights and absurd newsroom culture took just five years to sap the drive and passion from my eye-opening career as a hack.

To bridge the gap between media and aviation, I flew as cabin crew for 12 months, testing my suitability for a life of 3am alarms and sporadic shift patterns, before committing to the challenge of flight training (and the hefty price tag that usually accompanies it). Qualifying from FTA in Brighton, I found my first flying job as a pilot assistant for the Isle of Man air ambulance, before landing the job I’m so very fortunate to hold. To merge my two careers into one is a fantastic opportunity, especially now the role of our union and its support networks are more important than ever.

My background lies in publishing but, like many of you, I got the flying bug at university. A few years later, I found myself with my head — quite literally — in the clouds. A Surrey girl born and bred, I studied English and worked in the editorial team for Penguin Random House in London until my flying journey began. I had fun working with crime fiction and action thrillers, meeting and corresponding with some brilliant authors, but I still craved an adventure of my own.

My route into the air began with the mighty Grob Tutor in the University Air Squadron, which I’m sure many readers will be well familiar with. After that, I studied in Coventry and New Zealand with L3 CTS to get my MPL, before finally settling in Cheshire to fly from Liverpool John Lennon Airport. I’ve been in the aviation game for nearly two years now, and am currently flying the skies of Europe as a first officer with EasyJet (although not as much as I would like these days!).

I’m a lover of all things vintage and am an absolute fangirl of the 1940s Amy Johnson clan, the Air Transport Auxiliary. When I’m not battling with Bose headsets and victory rolls, I spend a lot of my time writing, and currently contribute to www.aircraftcompare.com.

The Log has always been a household name for me and, after years of pinching it out of my father’s flight bag, it now rests in my own — or at least on my iPad at the moment. It is an absolute pleasure to be contributing to this issue, and I’m very excited to be part of The Log’s wonderful team.

In uncertain times, planning for retirement needn’t be turbulent.

Set course for
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INDUSTRIAL ISSUES

11

Know your rights

By Terry Brandon, BALPA National Officer

Taking holiday while on furlough and help with childcare

Q: Do I have to go to work if my children cannot go to school or childcare is not available because of COVID-19?

If you need to stay at home to look after your children, you are legally entitled to unpaid dependant leave. However, many BALPA members will be entitled to paid dependant leave because of agreements our Company Councils have negotiated with their airline.

Q: Can furloughed workers take a holiday?

The government’s advice is that workers on furlough can take holiday without disrupting their furlough. The notice requirements for an employer requiring a worker to take leave or to refuse a request for leave continue to apply. Employers should engage with their workforce and explain reasons for wanting them to take leave before requiring them to do so.

Our advice is to explain your situation to your employer, and we would expect your employer to be reasonable in accommodating your circumstances.

Clearly, we are not out of the woods yet, but it has been inspiring to see the BALPA community respond in solidarity with one another.

Q: If my employer requires me to work when my children cannot go to school or childcare is not available because of COVID-19, can I refuse?

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Regarding your question, the employer should be reasonable in accommodating your circumstances, but they can require you to work if the work is essential.

Our advice is to explain your situation to your employer, and we would expect your employer to be reasonable in accommodating your circumstances.

Currently, with reduced flying programmes, it would be unreasonable right now for any airline not to support a request.

For an explanation of the legal position and advice on how you should approach your employer, email the Log@balpa.org.

Thank you to all our reps

Our industry has had to face more challenges than possibly any other profession or sector. Many employers looking to achieve a ‘land grab’ by introducing permanent measures to a temporary problem have quickly faced a robust challenge from our Company Councils.

The threat of redundancy has never been more perilous for our members. At the time of writing this article, countries are again assessing their borders and quarantine arrangements, and at least one airline is simply ‘hibernating’ to see it through the remainder of this year.

BALPA reps have received updates and regular briefings from their National Officers to assist in understanding the issues, employment rights and employer obligations pertaining to redundancy. The pandemic is no excuse to not challenge employers. Every employer-led proposal should be tested to ensure that protective clauses are included.

Examples of issues on which our Company Councils have insisted include part-time working, enhanced redundancy payments, temporary pay reductions and, if required, ring-fenced hold pools for those the employer does make redundant.

Q: If I’m required to work while my children cannot go to school or childcare is not available because of COVID-19, can I refuse?

Employers are entitled to require you to work, but they should consider whether any restrictions the worker is under – such as the need to socially distance or self-isolate – would prevent them from resting, relaxing and enjoying leisure time, which is the fundamental purpose of holiday.

Holiday pay, whether the worker is on furlough or not, should be calculated in line with current legislation – see the standard guidance, based on a worker’s usual earnings. The underlying principle is that a worker should not be financially worse off through taking leave.

Our advice is to explain your situation to your employer, and we would expect your employer to be reasonable in accommodating your circumstances.

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With aviation decimated by the COVID-19 crisis, we are in a tough spot right now — for the industry, our elected reps, BALPA, airline managers and every pilot. It truly is unprecedented — there is no denying it.

This crisis has made everyone face tough choices. None of them are easy. In fact, some of the choices we’re facing now — both as individuals and as a community — may end up being the hardest we’ll ever have to make.

I wanted to reflect on the sheer breadth of the decisions before us, the weight of these decisions and their impact. Many of you have made or will be making a range of personal decisions. Do I want to stay in this airline that is changing beyond all recognition? Should I take voluntary redundancy or part-time work, or another mitigating measure that reps have negotiated? How do I even decide?

For those facing redundancy, will you try to stay in the industry or find a new career? Talk about a heart-breaking decision. For our trainee members — will you stay in training, or do you see no point, and cut your losses?

Challenges ahead

Our BALPA reps and officials face incredibly difficult challenges trying to respond. Should they negotiate, accepting the airlines’ requests for redundancies, or walk away? How much do we agree or disagree with the redundancy selection matrix? How do we fight against base closures?

As an Association, how will we ensure that we can carry on supporting you as our workload increases, but our income reduces? The elected pilots on our NEC have to make hard choices to ensure BALPA remains viable.

And our airline employers are looking at massive impacts on their operation and finances as recovery forecasts get pushed back further and further. An important choice for them is whether to choose to work with us to minimise the catastrophe, or use it as an opportunity to force terms and conditions changes. Too many have chosen the wrong path.

A choice for the Government was whether to support this industry — which was first in and will be last out of the crisis — or not. Well, the decision has clearly been made and they have chosen not to. Not only that, but they’ve also gone further in making choices that will worsen the recovery for aviation, such as the ever-changing and catastrophic quarantine policy. For those who saw my evidence to the Transport Select Committee or have seen our other media work, you will know that BALPA has been imploring the Government to help aviation avoid what I’ve termed a ‘death spiral’ and huge job losses. Even in behind-the-scenes discussions with ministers and officials, it is all too apparent that other transport sectors take priority over aviation.

Tough choices

No doubt there will be varying degrees of sympathy for those who have tough choices to make. I don’t think any of us will be sparing too much concern for the Government or for airlines, but I know that you will share with me enormous respect for the pilots who have selflessly taken decisions to help colleagues during this crisis, such as applying for voluntary redundancy or going part time.

For those facing redundancy, will you try to stay in the industry or find a new career?

I have seen the incredible pressure and strain our reps and staff have been under in this crisis. Each one is trying to do his or her best for our members under the worst possible circumstances. No-one welcomes having to sign agreements that will make colleagues redundant. No-one. And no-one should be under any illusion that it is easy. They know they will face criticism. They know there will be a backlash. They know that the decisions they take will mean making one group or other feel let down, yet they do it on behalf of the members as a whole.

Each of us needs to recognise the tough choices that others are facing. We need to support each other. I have seen plenty of that within this community. I have seen selflessness and touching concern for our colleagues’ welfare. And we need to be ready to ask for help when the choice before us looks simply too hard to make.

There is also plenty of anger around. That is completely understandable, but use it wisely, and direct it appropriately.

And hope that the day will soon come when our choices become easier and our community happier. I am confident it will — I just don’t know when.

If this feature resonates with you, or you have any concerns, email balpa@balpa.org or call us on 020 8476 4000
Worried about the future?
We are here to support you!

With the aviation industry contracting daily, many have found themselves unemployed. For some, this will have been after only a short spell at an airline, and for others this may be after a lengthy career in aviation. We know that this can be an incredibly stressful time, regardless of the stage you are at in your career. These are unprecedented circumstances and you may be overwhelmed with the options and choices ahead of you. Whether you decide to seek other aviation employment or are searching for something new, we have put together a collection of support guides and resources to help you navigate the coming months.

The BALPA RAG aims to provide you with a focal point during this stressful time. Serving as an impartial body, we offer support and employment opportunities to all via our newsletters, and provide structured assistance to suit individual needs. We are actively tracking down employment opportunities by approaching employers directly rather than waiting for an opportunity to arise. Take a look at some of our newsletters for current vacancies here – http://bit.ly/BALPArag

Above all, we aim to create a supportive, inclusive and interaction-based community for the exchange of views and experiences. Our members are not alone.

Redundancy Assistance Group
Here to assist you in your next steps, whatever they may be

We are here to support you!

The RAG is more than just a list of jobs. We provide training packages in essentials such as interview techniques and CV writing to help you maximise opportunities when they arise. No matter if it has been two years or 20 since you were last job hunting, it is important to remember that you have a wealth of transferable skills that are desirable to many businesses. We have identified industries currently experiencing a surge of growth despite the economic uncertainty, where your skills in problem-solving, time management and CRM would be a vital asset. For some, now might be an ideal time for personal development. There is a labyrinth of higher education options available out there, but for many, a full-time education course may not be appropriate to their lifestyle. Our webinar highlights courses available on a part-time or ‘evenings and weekends’ basis to suit your schedule.

Leaving your job can be a huge shock. However, having a positive attitude can make the world of difference. On the website, you will find tools to develop resilience and cope with redundancy-related challenges, to help you gain clarity and focus on your way forward.

For advice on arranging flight simulators (and securing a discount), LinkedIn guides or identifying suitable temporary work, log onto the BALPA website and visit the ‘Careers’ section.
Our resident Old Git, Ian Frow, on the brothers Wright and workers’ rights

Full cycle

O rville and Wilbur Wright were successful bicycle makers and skilled engineers. The profits from their shop financed their passion for achieving powered flight. The total development cost was around $1,000 for that first flight in 1903. One of their competitors, Samuel Langley, effectively financed by the state through the Smithsonian, spent $70,000 and failed. He avoided flying his odd construction himself: remarkably wise, since his test pilot nearly drowned on its first manned launch – and crash.

Cycling was a rapidly expanding business in the early 1900s, and it continued to expand until the motor car became affordable and available, initially in the 1930s and then again after the war in the 1960s and 1970s. (At the same time, cycling became the province of the poor and the mildly eccentric, such as OG.)

Today, it is again wildly fashionable, while all forms of motor transport, apart from electric, are under a cloud. Commercial aviation, which grew out of the Wrights’ great project, sits under an even bigger cloud (hopefully temporary). How the wheels of progress do turn. Here is a debating point: what would Wilbur and Orville Wright be building today – bicycles or aeroplanes? And does anyone still own an original Wright-built bicycle?

A disagreement of experts

Before he became boss of the Football Association and went on to ever-greater fame in sports administration, Denis Follows was General Secretary of BALPA. One day, he was heard to mutter: “Put 10 pilots in a room and ask their opinion, and you will get 15 different answers – and then one of the ****will change his mind.”

The arrival of COVID-19 has been a field day for ‘experts’: statisticians, virologists, epidemiologists, behavioural psychologists, and just about any ‘ologist’ that ever existed – perhaps apart from a gynaecologist. That Follows’ comment is as pertinent as ever when referring to the current ever-expanding collection of ‘experts’. These ‘experts’ devise the rules by which the general population is meant to behave. But if they cannot agree with each other and write plain English, what hope is there for the rest of us?

Rules and obedience

A prime principle of aviation is ‘always comply with the checklist/QRH’. However, air

What would Wilbur and Orville Wright be building today – bicycles or aeroplanes? And does anyone still own an original Wright-built bicycle?

Full cycle 2

As the great Industrial Revolution developed, it dragged in country-dwellers to work in the ever-expanding factories and mills in the cities. With honourable – often Quaker – exceptions, the owners were both driven and somewhat careless of their staff’s welfare. With the advent of the trade unions, workers’ rights and conditions steadily improved. During the 20th century, the improvements were generally substantial, although early commercial aviators had to fight for their right salary scales and safety standards. When government-owned airlines were in the ascendant in the 1950s and 1960s, they made no money, but their staff were generally well cared for. Recent events in aviation raise concerns that the cycle has turned again, with some of those 18th and 19th century industrialists reincarnated as airline executives.

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The above text is an excerpt from a larger document. The full document is not provided.
back in the 1950s, checklists and written emergency procedures were quite a novelty. There was one hoary old captain who used to recite: “Rules are for the guidance of the wise and the blind obedience of fools.” And, even in modern aviation, that can – very rarely – still be true.

The Qantas A380 engine failure event in Singapore was solved by the crew ignoring the automated rules and instructions being blasted at them. The same applied to the US Airways flight that ditched in the Hudson River in 2009.

Somehow, in aviation, in life in general and in the battle against coronavirus, surely there is a place for some of that rare commodity – enlightened common sense?

For want of a definition
Here is a quiz question: what does ‘ppm’ stand for? Ignorance of its meaning nearly caused a disaster.

The inside of an aircraft’s fuel tanks is a happy breeding ground for all sorts of interesting growths that are controlled during routine servicing by adding a carefully calibrated quantity of ‘biocide’, defined in ‘ppm’, into the tanks. This procedure was unfamiliar to an engineer on a night shift and, working through his checklist, he puzzled about the meaning of ‘ppm’ in the instructions. Somehow, the internet’s definition led to him adding 37 times the recommended dose to the aircraft tanks.

There were difficulties starting the engines on two of the first three sectors following the maintenance. Troubleshooting procedures were carried out without identifying the problem. Around midnight on a January day, after more starting problems, the aircraft set off on a short positioning flight. At 500 feet, number one engine began “banging and surging” with the aircraft “yawing and fishtailing … all over the place”. The cabin crew reported tail pipe flames. Having declared a mayday, the crew turned back, and shortly afterwards the number two engine indications began to fluctuate.

By carefully nursing both engines, the crew landed safely. The pictures of the engine combustion chambers are interesting.

Aviation is cursed with abbreviations, and maybe all us clever pilots and ex-pilots know what ppm stands for (parts per million). But does everybody know the meaning of every aviation abbreviation?

Drone on
The monthly AAIB* bulletin makes for interesting Rocking Chair reading during lockdown. For some months now, there has been an expanding section dealing with drone accidents and incidents. This tends to convince a sceptical Rocking Chair pilot that these devices have some way to go to match manned aviation safety standards.

Undaunted by the statistics, a Chinese company has now flown an ‘autonomous passenger drone EHang216’ over Yantai City. Maybe the AAIB should send more monthly bulletins to China?

*Air Accident Investigation Board
Over to you

Do you have something to share? We’d love to hear from you!
Email us at TheLog@balpa.org or contact us on social media

WHAT WE’RE SHARING

On quarantine
The CEO of @HeathrowAirport is absolutely right. The PM needs to get a grip of the quarantine chaos which is harming the aviation industry beyond measure and hampering the recovery.
BALPA @BALPApilots

Coronavirus: Boris Johnson told to ‘get a grip’ by Heathrow Airport
Copyright: Sky News

On COVID-19
COVID-19 has hit aviation hard and unprecedented measures have been agreed by BALPA and other unions to try and help companies survive. Staff have done their bit so it’s a real slap in the face to see the bosses queuing up with their snouts in the trough.
BALPA @BALPApilots

Pilots union says ‘Fat Cat’ bonuses for airline bosses are an insult to staff losing jobs and taking pay cuts
Copyright: BALPA

On aviation support
Great support for the aviation sector and specifically for sector workers across the House of Commons in today’s backbench debate. Thanks to @HuwMerriman for securing the debate.
BALPA @BALPApilots

On weapons
Well this is extremely concerning. But a side question is: why was the British Foreign Secretary not flying on a British airline?
BALPA @BALPApilots

Dominic Raab’s bodyguard ‘left gun on plane’
Copyright: BBC

The Log reserves the right to edit letters and tweets as necessary. Submission implies an acceptance of this condition.
Breaking the chain
With the end of 2020 just around the corner, it’s anyone’s guess what the impact of the UK leaving the EU will be on the aviation sector

By Captain Martin Chalk, Log Board member

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The impact of the UK leaving the EU will be on the aviation sector, and it will inevitably restrict the freedoms currently available to the industry. For decades, the vast majority of negotiations on international air transport have been agreed independently of any other sector and have sought to broaden the economic opportunities to offer services. It places the UK in the position of removing itself from the wide-ranging air transport agreements between the EU and virtually every significant air transport market in the world, thereby forcing the UK to renegotiate all of these in a very short timescale. Another significant challenge is that, under such enormous pressure – and with a lack of both human resources and time – the UK government is conducting all of these negotiations without much involvement of the industry.

The current negotiations

Under the UK’s membership of the EU, there is no restriction on the routes flown by UK-based airlines between any/all of the airports of countries in the EU, wider European Free Trade Area (EFTA) and European Single Aviation Area. Airlines of the EU must be majority owned and controlled by any combination of EU states and/or citizens of those states. As an EU member state, the UK was part of hundreds of Air Transport Agreements that enable any EU airline to take advantage of a network of routes across the globe. The EU has passed a regulation for UK airlines that, after the end of this year, enables a short period of direct UK to EU flights only for passengers and flights between any two EU states for all-cargo aircraft. There is, as yet, no agreement that enables EU or UK airlines to operate to or from, through or within each other’s territories beyond these initial few months. Here, we critically evaluate the published opening positions of the UK and EU beyond this initial period.

The main questions:

1. Which airlines are we talking about? Who designates an airline as one of ‘their home’ airlines – and what qualifies as being a UK or an EU airline?

The EU position is that airlines must be majority owned and effectively controlled by states or citizens of the individual negotiating parties that is, UK airlines must be majority owned and effectively controlled, and have their head office and be licensed in the UK. Any EU-based ownership of UK airlines must total less than 50% when aggregated with all non-EU/UK ownership. EU airlines are expected to comply with the same rules, but across the EFTA states, most UK-based airlines do not qualify for this clause. British Airways is owned by a Spanish company, International Airlines Group (IAG), which has diverse ownership. EasyJet is a public company that would need to be split into separate UK and EU airlines beyond the end of the year to continue to offer the same network as last year. There are few, if any, pure UK airlines under the EU definition. The UK position envisages any service being sold on beyond the other. For UK airlines, this would preclude operations within the EU or from the EU to other countries, except via the UK; for the EU airlines, it would block direct operations from the UK to other countries, such as the USA.

2. On which routes can UK/EU airlines fly, on which can they sell tickets, and on which can they code-share?

The EU and UK positions foresee only third and fourth freedoms for UK and EU airlines, for both passenger and cargo services. The EU position considers the EU as a single territory, so UK airlines would not be able to carry passengers, cargo, or mail from anywhere in the EU to other EU states. On the other hand, UK airlines would be able to fly to or from the UK and within its territory. EU airlines are expected to comply with the same rules, but across the EFTA states, most UK-based airlines do not qualify for this clause. British Airways is owned by a Spanish company, International Airlines Group (IAG), which has diverse ownership. EasyJet is a public company that would need to be split into separate UK and EU airlines beyond the end of the year to continue to offer the same network as last year. There are few, if any, pure UK airlines under the EU definition. The UK position is similar for EU airlines, but does not include ownership or actual control restrictions for UK airlines, which are just those headquartered and licensed in the UK. Although this solves the problem created by the current diverse ownership of UK airlines, it is unbalanced and inconsistent, and is unlikely to be accepted by the EU. It will also not be accepted by many other countries around the world when we negotiate with them. The main reason is that it would allow the UK to designate any airline that applies for a UK Air Operators’ Certificate (AOC), thereby giving them access to the other country’s markets. This would potentially give UK, Middle Eastern or other third-country airlines access to the EU market through the UK.

3. On which routes can UK/EU airlines fly, on which can they sell tickets, and on which can they code-share?

The EU and UK positions foresee only third and fourth freedoms for UK and EU airlines, for both passenger and cargo services. The EU position considers the EU as a single territory, so UK airlines would not be able to carry passengers, cargo, or mail from anywhere in the EU to other countries, except via the UK; for the EU airlines, it would block direct operations from the UK to other countries, such as the USA. Under EU proposals, there would be no wet lease of aircraft with crew from the UK beyond the usual restricted ‘exceptional needs for a temporary period’. Cargo airlines make extensive use of fifth and seventh freedom rights, none of which are envisaged by either side, and of wet lease, which the EU would heavily restrict between the EU and UK. The UK proposal allows unrestricted wet lease between EU and UK airlines – but, combined with a lack of ownership and control provisions

Airlines must be majority owned and effectively controlled by states of the negotiating parties
3. How can EU/UK airlines behave towards their pilots/staff? Where can employees seek employment protection rights and union support?
The UK position is to assert the individual negotiating parties’ rights to provide for employment protections as each sees fit. The only commitment is to ‘cooperate’ on social matters, and there is no effective enforcement process of what little protection is envisaged.

The EU position is more comprehensive than any air transport agreement I have ever seen. First, there would be a non-regression clause from all labour rights currently in place. Then, if both parties agreed further measures – either together or separately – these would become subject to non-regression. Second, the measures must be enforced effectively by domestic legislation and inspection bodies; and, finally, it is all subject to the full enforcement mechanism of discussion, conciliation and arbitration. The EU position mandates the involvement of industry, including trades unions.

4. How is the industry to be regulated with respect to safety and security?
Both sides see the restoration of the UK CAA as the sole regulator of UK civil aviation, with the CAA leaving the EASA. Both sides add an appendix on aviation safety, although the EU proposal is significantly more comprehensive than the UK one.

5. What wider issues might affect members, such as taxation, social security, licensing and medical issues?
The UK proposal is a classic civil aviation-only proposal, whereas the EU proposal sits within the far wider trade deal. Areas such as competition and mutual recognition of licences, tax and social security are covered by the EU.

The politics
So far, we have analysed the opening negotiating positions. My reading of these is that the UK has taken relatively incoherent positions on a number of issues where the EU is never going to accept an unbalanced agreement to the UK’s obvious economic benefit. The EU has decided to be punitive and has taken up a relatively restrictive position on the access issues – full ownership and control requirements, and only third and fourth freedom traffic rights – while, at the same time, introducing some of the strongest articles around social, competition, environment and enforcement provisions. There is also a clause preventing individual EU member states from agreeing further access for UK airlines individually, which EU states would normally veto from the EU position. From an EU industry perspective, there will be concerns about less access to the UK market. If the UK were to achieve some of its more liberal clauses, there are serious concerns about route access, unfair competition and the undermining of social protections from UK and third-country airlines/capital.

From a UK perspective, if the restrictive market access and ownership requirements proposed by the EU are accepted, there will be a loss of jobs to EU airlines. If the UK government also takes a hard line on a no-deal option, no-one will be able to guess what the impact might be of a lack of a legal footing. What would be the responsibility of the aircraft commander without a bilateral agreement in place? Would airlines be insured to operate to/from the EU? How would the politics develop after a failure to agree? If anyone tells you they know, I would call them a time-traveller!
Net gains: goalkeeping and aviation safety

What can we learn from goalkeepers when it comes to safety in the air?

By Adam Johns, Safety Consultant
very day in aviation, pilots, air traffic controllers and other frontline personnel perform countless correct judgements and actions in a variety of operational environments. These judgements and actions are often the difference between an accident and a non-event. Ironically, data on these behaviors are rarely collected or analyzed.

This is how a 2019 NASA paper entitled Human Performance Contributions to Safety in Commercial Aviation begins. It’s an important idea to think about. What NASA and many others are saying is that without humans – and our unique capacity to adapt to a changing situation – successful outcomes in systems such as aviation would not occur at the rate they do. Technology and automation are critical components of the aviation system, but only humans are truly capable of adapting.

The unseen contribution

When you fly a commercial aircraft, things can very occasionally go quite badly. Things can also go better than expected. But the vast majority of the time, things go normally. More often than not, operational outcomes are unremarkable. You arrive roughly on time without any serious threats, errors or incidents. No heroic piloting to save the day, just run-of-the-mill operations. But do we ever stop to ask ourselves how this happens? Why are the vast majority of operations unremarkable? Is it because there are no threats faced and no errors made? That’s unlikely, since humans are fallible and errors are inevitable. Threats are pretty common, too, especially when operating in challenging airspace, inclement weather, with an inexperienced crew, or with technical defects. Or all of the above. So, what is happening when nothing happens?

Confession: I’m not a commercial pilot (although I did hold a PPL once upon a time) – I’m a career safety professional. In my spare time, among other things, I like to play football as a goalkeeper. You may now be wondering what catching footballs has to do with flying planes. In the context of the opening quote, quite a lot, actually. As a goalkeeper, you are the last line of defence. If you make a mistake, you will likely let in a goal. These mistakes are highly scrutinized. If you lose the game, you’ll probably be made a scapegoat and may even be dropped. At the other end of the spectrum, you could pull off an amazing diving save in the last minute and secure victory for your team. You’re likely to be celebrated as a hero. The line between success and failure is thin.

But these two stories only represent the extremes of what a goalkeeper can do. The vast majority of the time, the keeper isn’t flogging a shot or tipping a ball round the post. Most of time they are influencing the game through their voice. Since a keeper is idle for most of the game, they give the team the capacity to observe, and thus organise, coordinate and generally boost team confidence.

The goalkeeper’s lot

In 2010, England goalkeeper Rob Green was vilified after letting in a soft goal against the USA at the World Cup through his voice. Since a keeper is idle for most of the game, they give the team the capacity to observe, and thus organise, coordinate and generally boost team confidence.

These so-called ‘non-technical skills’ mean the difference between an average keeper and an excellent one. The more a keeper organises their team through constant effective communication, the less likely the opposition is to take a shot (which represents a threat), thus reducing the need for the keeper to make a save (opening up the possibility for error).

To the untrained eye, this non-technical performance is completely overlooked. The layperson tends not to notice the role that the keeper plays when they aren’t making saves. More still, despite the myriad data collected in football, no-one notes the amount of times a goalkeeper influences the game without touching the ball. Only obvious contributions are recorded. The goalkeeper’s role isn’t just a defensive one, though. When they have possession of the ball, they have the chance to directly contribute to an attack and assist their team scoring with a big kick or throw. This adaptability between stopping goals at one end and immediately helping create them at the other is crucial to the team’s overall success.

Now let’s return to flying. Can you see the similarities with how we think about flight safety? We collect data that focuses on incidents, near-misses, threats and errors in order to make the system safer. But, by doing so, we’ve completely ignored the hidden work that pilots do every day to ensure a safe outcome. With the exception of a periodic Line Operations Safety Audit (LOSA), the communication, organisation and management of threats and errors – and recovery from them – are missed in our routine data collection processes. Since we only collect data about negatives, the presence of safety is naturally defined as the absence of negative events.

Seeing the whole picture

At my former employer, Hong Kong-based Cathay Pacific, we decided to change how we defined safety. Rather than see it as the absence of negative outcomes, we decided to view safety as the presence of capacities to be successful. But if you’re going to define safety by its presence rather than its absence, you need new ways to measure it. Capacity is a tricky term, and can refer to having the necessary time, resources and technology to complete a task, I’m talking specifically in terms of people, and the unique capacity they bring to a situation. With the goalkeeping analogy, we’ve already understood that most of the job goes unseen and unrecorded. When it
Everything we do in aviation safety should be to further learning, and that requires curiosity

Within the OLR, one very deliberate part of the process design requires the team conducting the review to consider system-level learning before individual-level learning. With the right processes in place for understanding the ‘what’ and the ‘how’, every operational event presents an opportunity to learn something about the system. Whether it’s the SOPs, the automation, the training system, the command upgrade process or how you recruit, the system always contributes to – and influences – an event’s likelihood.

In the OLR, only when the learning at the system level has been completely extracted can individual learning be addressed. However, when considering the performance of individual pilots, a just culture is needed to create the psychological safety for them to be accountable for their own learning. Once the system context is understood, the pilot is asked, ‘What do you think you need to learn and improve following this event?’ This is a very important step but, of course, the company can supplement the pilot’s desired actions with its own.

In one case, a pilot asked to have use of the simulator to practise responding to the scenario in which they had found themselves in the real world. The pilot regained his confidence, and the confidence of management, and was in full control of his own learning throughout. A win-win. This is where the concept of a restorative just culture comes in: seek forward-looking accountability on all parties to learn from an event, rather than simply seeking to hold people to account for their past actions.

Much more can be written about the design of the OLR and how it is helping Cathay to understand the full pilot contribution to safety. But, for now, it’s important to highlight that the sole focus of the process is to facilitate organisational learning. Everything we do in aviation safety should be to further learning, and that requires curiosity. We won’t achieve true learning with a narrow focus on threats, errors and undesirable events. Instead, we need to broaden our attention and data collection efforts to understand how these things are normally well-managed by crews.

This is particularly important when it comes to making interventions in the system. Whether it’s changing regulations, SOPs, training, or adding in more automation, if we don’t understand the full human contribution to safety, then we’re likely to make changes that result in unintended consequences.

Humans are the only part of the system that have the capacity to adapt to complex and changing conditions. Pilots, like goalkeepers, continuously anticipate surprise, monitor for it, respond to it and learn from it. For those with organisational safety management responsibilities, understanding how safety is created every day should be core to their role. Look for what’s happening when nothing’s happening. ■
Back in February, we were living in innocent bliss. There were rumblings about some virus in the Far East, but, for the most part, it seemed like a normal February in the UK: a bit wet, a bit dreary, and largely unremarkable. Quite remarkably during this month, however, a group of UK airlines and aviation companies committed to ‘net zero’ carbon emissions by 2050.

The UK Sustainable Aviation Coalition launched its roadmap to net zero on 4th February, an event soon overshadowed by the COVID-19 pandemic. As we return to a ‘new normal’, however, it is time to take a look at this net-zero 2050 plan and what it means for us in aviation.

Although aviation is a minority source of the UK’s total greenhouse gas emissions, we are one of the highest-profile, largely because of our high energy use per mile, which makes aviation one of the least efficient methods of transport. The reducing cost of entry to aviation has also allowed more people to enjoy the benefits of air travel, increasing our share of emissions dramatically. No-one can deny we need to take action. The big question is: what does net zero even mean?

**Achieving balance**

It means there is a balance between the greenhouse gases put into the atmosphere and the amount removed. This can be achieved by reducing emissions or improving removal rates via forests, oceans or artificial carbon-capture techniques.

Net zero is different from gross zero, where we produce zero excess greenhouse gases. This is the ultimate goal, but is neither attainable nor practical at present. If we reach a net-zero point, however, this should buy us time to innovate our way towards a gross-zero global community.

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**Emissions impossible?**

Time is running out for aviation to make the changes necessary to become net zero by 2050 – but can it be done?

By First Officer Adam Crehan-Clark, BALPA member
The net-zero plan, bear in mind this was a pre-lockdown (estimation) that passenger numbers in the UK would increase by 70% from 2019 to 2050. This compounds the problem, because not only do we have to get our current emissions to net zero, but we also need to get our future demand to net zero. As such, a Herculean effort is required to reach this target.

The main initiatives being proposed, and their 2050 emission savings, are:
1. Market-based policy measures (a CO2 emission tax) as an offset of 25.6 million tonnes of carbon dioxide (MtCO2).
2. Improvements in aircraft and engine efficiency = 23.5 MtCO2.
3. Sustainable aviation fuels (SAFs) = 14.4 MtCO2.
4. The tax in item 1 reducing passenger demand by raising the average ticket price = 4.3 MtCO2.
5. Airspace modernisation = 3.8 MtCO2.

The fear of the UK Sustainable Aviation Coalition is that aviation can’t innovate in time. Green technology solutions exist in almost all other fields, but the physics around biofuels and electric-powered commercial aircraft prevent us from changing the aviation status quo for the better. The CO2 emissions, especially if funding in these areas isn’t vastly increased.

Also, the average lifespan of a commercial jet is just 12 years, so if we are to reach our net-zero goal via new aircraft types, we need to enter them into service now.

The current generation of Neo, Max and composite aircraft are great steps forward, they don’t go far enough by themselves. As a solution, in 2018 the International Civil Aviation Organization (ICAO) adopted the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). This is a global scheme to encourage biofuel development and introduce a structured, fixed carbon-emission tax (called ‘carbon pricing’).

The money raised would go to potential eco projects, including wind and solar energy, clean-cook stoves, methane capture, forestry and other emissions-reducing schemes. It will also help prevent deforestation and fund reforestation. However, this money cannot be used to fund innovation in aviation efficiency. The $210tn per year would vastly accelerate electric aircraft research but, under the net-zero/CORSIA plan, it must go towards offsetting carbon emissions instead – potentially pushing us further away from the real goal of gross zero.

Originally, the idea was to take in 2019 and 2020 data to understand the CO2 output, but the current 2020 emissions are so low that it would skew the baseline away from a potentially realistic target. So, the principle now is just to take 2019 as a baseline.

Fueling the debate Another ICAO measure to cut the sector’s environmental impact is to encourage alternative fuels. We don’t yet have a standard of alternative fuel technology; current eligible concepts range from high-efficiency fossil fuels to bio-fuels from livestock. Known as Sustainable Aviation Fuels (SAFs), the two most promising technologies are ethanol-based fuels derived from the run-off of heavy metal plants (for example, steel mills) and the processing of livestock waste into a biofuel.

Virgin Atlantic flew Orlando to Gatewick on a flight powered entirely by a SAF in 2018. In the future, however, it’s more reasonable to expect 50/50 mixes of SAF and kerosene than 100% SAF flights. Efforts are also under way to make sure that CO2 emissions aren’t just passed upstream. Livestock are notorious CO2 emitters; the agricultural industry contributes about 10% of the total greenhouse gas output globally. As with other fuel sources, such as hydrogen, current processes of generating the fuel have the potential to negate the savings, usually because of economies of scale.

Building a new SAF jet-fuel plant can produce a lot of CO2 emissions and may output a small amount of fuel, but we can produce kerosene at great volumes and improve on existing technologies. This makes the ratio of fuel burn to fuel-creation emissions much lower.

One of the more frustrating obstacles to net zero is airspace. Anyone who’s spent time in the London TMA will understand the situation of stacked and circling aircraft, laid over and under departures routes. Pilots are often left hoping for a quick breakaway to climb to get over in-bound traffic, which sometimes doesn’t happen until well outside of the London area.

The frustration is that we have the technology to rewrite the airspace. With performance-based navigation ubiquitous across most of the latest generation of aircraft, complex routes relying on NDB or VOR tracks seem outdated, especially when they’re flown with a GPS overlay! A plethora of aircraft could, realistically, today – at thrust-reduction altitude (obstacles permitting) – turn on a direct heading to the final fix at their destination. This direct-to route could also help our traffic management systems judge arrival times more accurately. Estimating fuel burns, arrival times and delays would become easier, and the knock-on effect would be a reduction in the dreaded mid-summer, two-hour-plus slot delay. This would also affect APU fuel usage, and mean continuous descent approaches could be performed almost all the time with far greater ‘track miles’ to go accurately.

Political issues So, technology is not a problem; the first actual problem is political. Eurocontrol’s Single European Sky project is trying to create one block of airspace the right across Europe, which would allow for direct-to-fix routes, as there would be no more agreed handover points between sectors. In the current political landscape, however, who knows if this vision will be implemented?

Another problem is the complexity of TMAs. Redesigning them would be like planning a 12-lane superhighway across London, but bullocking the existing roads while drivers were still using them.

With careful planning and meticulous work, we can do it. However, there is reluctance to pile the huge amount of work hours and cash into such a project if an hour away, in a neighbouring capital city TMA, all arrivals come in level at 2300 feet on excessive tracks.

Pilots often shoulder the brunt of sustainability projects, with supplementary SOPS around reduced flap, landing, reduced engine taxi, and so on – but the tides are turning. What saves more fuel: reduced engine taxi or airspace redesign? It’s probably the latter – but which is easier? Almost certainly the former. It is becoming clearer; however, that to get to net zero by 2050, we need major operational changes – and the time for these is now. Flight-crew technique can have a positive impact on emissions, but it is a drop in the ocean compared with wider potential savings.

All this begs the question: with CORSIA and the UK’s net-zero goals so reliant on carbon pricing, is the correct pressure being brought to bear? Will we get to 2050 and just pay the difference to net zero, is the correct incentive being applied to tackle climate change seriously?

Will airframe manufacturers, air traffic management systems and airlines invest in new aircraft or air traffic management systems? Will they invest to pay off their future carbon tax bills? Will we face a situation where airlines pass on the entire cost of net zero to passengers through higher fares? Having the conversation now is important. The ongoing pandemic will eventually be over, but climate change will be present and our future for a long time to come.
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Redundancy: your six-point plan

Planning for redundancy is never a cheerful time, but being prepared can make it a little easier

By Darren Williams

We make no apology for re-running Darren Williams’ recently published article (first seen in the Winter 2020 issue of The Log). The crisis of redundancy has struck pilots particularly hard in these strange and difficult times. For many, job loss has already happened. For others, the very real threat remains – and it is conceivable that the loss of employment as happened. For others, the very real threat remains – and it is conceivable that the loss of employment as

Review these six guidelines and consider taking action where necessary. And good luck.

1 Assess your budget requirements

Losing your job will mean your income reduces dramatically. While this sounds obvious, it is very important to consider exactly what this means. In most instances, your outgoings will remain broadly the same, so it is important to budget carefully in the short term. Look at your outgoings and try to split them between ‘must have’ and ‘nice to have’. Clearly, mortgage payments and energy bills – as well as food and insurances – must take priority. Take the opportunity to consider how important gym membership, or the full Sky TV package, is for the moment. These things can be started again once things improve, and small savings now could make all the difference.

2 Your savings/redundancy payment

If losing your job was part of a redundancy package, you may have received a redundancy payment. You need to have been employed for a minimum of two years to receive redundancy; the first £39,000 is paid tax free, with any excess taxed as income. It may be best to avoid blowing this on kitchens, holidays or a new car; this lump sum – and any further savings you have – will be needed to manage your budget. You may have an expectation of picking up a new job

Try to budget early on to ensure your lump-sum investment lasts as long as required

easily, but this may not happen. Surely the kitchen can wait until the new job is found. In our previous article (“Throw off the financial shackles”, Autumn 2019), we highlighted the need for a rainy-day fund equating to at least three months’ income. Redundancy is unquestionably classed as a ‘rainy day’, so this asset should be used to support you. Do try to budget early on, however, to ensure your lump-sum investment lasts as long as is required – and don’t forget to top it back up again once you are in employment. It served you well once, and may need to do so again.

3 Debt management

Debt can cripple you. Credit card debt is especially expensive, so take the opportunity to pay it off if you can. If you can’t, contact the credit card company and explain your position – they can often be very helpful. It is also important to contact your mortgage provider if you have one. They may offer a payment holiday, or may simply increase the term of your loan to reduce your monthly payments.

4 Claim what you are due

If you have been made redundant, you can claim Jobseeker’s Allowance (or Universal Credit, if it has been rolled out to your area). When all is said and done, you have paid plenty of National Insurance (NI) for this very reason. It only pays around £79 a week, but it will at least provide a small element of guaranteed income. It also ensures you gain NI credit for the purposes of state-pension provision.

5 Potential early retirement

If you are over 55 (the earliest age at which you can draw a personal pension), you may think about early retirement. Losing your job may have been thrust upon you, but it may be that the redundancy provided and other assets you have are sufficient for you to consider retirement.

6 Try something different

You may see redundancy as an opportunity to try something completely different. Start your own business, train for a new role, or throw yourself into the voluntary sector. This change of circumstance may be the push you need to grasp the ‘training’ nettle. If your resources allow it, this may be the chance to write that book, build that car, lower that handicap or paint that landscape.

So, is this the end of something or the start of something? That depends on your individual circumstances, but it is important to remain active, talk to your family – as it will affect them, too – listen to advice, and continue to plan. Clearly, your budget and savings will have a big say in your next move, and this could be a difficult time. But getting your finances (especially debt management) in order is a very wise thing to do, and will help you in the next stage of your life plan.

If you have any tips to share, we would be pleased to hear from you. Email TheLog@balpa.org

Six-point plan

1 Assess your budget requirements

2 Your savings/redundancy payment

3 Debt management

4 Claim what you are due

5 Potential early retirement

6 Try something different

The European Commission has given notice of its intention to postpone the implementation of certain Implementing Regulations scheduled for 2020. Commission Regulation (EU) No. 965/2012 (EASA Air Operations Regulation) is expected to have its implementation delayed by six months from 14 August 2020. The amending Regulation enabling this should be published shortly.

https://publicapps.caa.co.uk/docs/33/SafetyNotice2020009.pdf

SN-2020/013 Returning Aircraft to Service from ‘Extended Parking’

A significant number of aircraft have been ‘parked’ (extended downtime) with only routine maintenance. When returning such aircraft to operational service, there are additional hazards that should be considered. This Safety Notice is to advise operators and all concerned of measures and precautions to be considered to safely return aircraft to normalised operation following the COVID-19 shutdown.

https://publicapps.caa.co.uk/docs/33/SafetyNotice2020013.pdf

SN-2020/015 Effective Change Management for Organisations During COVID-19

The importance of effective change management is now more vital than ever. The purpose of this Safety Notice is to promote the importance of utilising a Safety Management System to manage change. It makes recommendations on approaches to take as the return to normal operations has commenced.

https://publicapps.caa.co.uk/docs/33/SafetyNotice2020015.pdf

SN-2020/173 COVID-19 Exemption: Revalidation of Class Ratings endorsed on UK Flight Crew Licences

ORS4 No. 1417 This exemption applies to UK CAA-issued national pilot licences for aircraft, to assist licence holders who have experienced difficulties in completing pilot training and checking during the COVID-19 pandemic. Licence holders whose ratings are due to expire soon may be unable to meet the normal revalidation by experience requirements before that expiry date is reached. This exemption provides flexible revalidation requirements.

http://skywise.caa.co.uk/covid-19-exemption-revalidation-of-class-ratings-endorsed-on-uk-flight-crew-licences

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A 34-year love affair with the 747

By Ian Frow, Log Board member

In late 1967, I was rostered as part of a crew to collect a new 707 from Boeing in Seattle. It should have taken five days, but took infinitely longer. The one duff engine causing the delay was eventually replaced by BOAC’s spare engine in San Francisco. Between SFO and SEA, this engine was dropped, luckily with only minor damage. By the time Boeing engineers, Boeing lawyers, the insurers and BOAC and its lawyers had sorted out the issues, it was three weeks before we flew G-ATWV home.

Boeing were extremely hospitable – they lent us a car, and gave us a number of trips to various parts of its empire, including the first of the three great hangars at Everett where the first 747 wing was being built. The eight-acre hangar was just about complete. At one end was a machine straddling the wing with its chord vertical. On this machine sat a man controlling it or, more correctly, controlling the computer that controlled the machine. This behemoth was drilling the wing – stupid boy.

The training captains had a remarkably free hand and had us flying low-level circuits or setting the radio altimeter to 500ft or thereabouts, and flying down the Firth of Clyde ‘on the tone’. We also climbed to height to do high-Mach runs to demonstrate what a delightful plane it was at high-speed – began with the construction of that wing. The economics of the 70s meant load factors were often poor and, as the network expanded, it was not unusual to fly to Chicago with only 20 or so passengers on board. But because of the freight-carrying capacity of the 747 (and a good contract), those flights still broke even even made money.

Interesting failures

In 1976, I was one of the fortunate long-term right-hand seaters to make the transition to the left hand seat, still on the 747. Engines were not then as reliable as the ETOPs-clearanced varieties now in use, and I had one or two interesting failures. On one occasion, the back end of the engine spectacularly came apart approaching Istanbul en route to LHR. Until we slowed down, the aircraft was vibrating so badly that the instruments were difficult to read, so I chicked out and diverted to Istanbul. Many passengers were bound for the pre-wedding festivities of Prince Charles and Lady Diana Spencer. They were not best pleased to spend a long day marooned on board at that marvellous city’s airport.

The 747 was truly groundbreaking, and cheap long-haul flying – until recently, available to all – began with the construction of that wing. The economics of the 70s meant load factors were often poor and, as the network expanded, it was not unusual to fly to Chicago with only 20 or so passengers on board. But because of the freight-carrying capacity of the 747 (and a good contract), those flights still broke even even made money.

The 2707 project possibly saved the 747 programme by making Boeing work out how to manufacture in titanium

The training captains had a remarkably free hand and had us flying low-level circuits or setting the radio altimeter to 500ft or thereabouts, and flying down the Firth of Clyde ‘on the tone’. We also climbed to height to do high-Mach runs to demonstrate what a delightful plane it was at high-Mach numbers. How much did all that cost? By the end of training, we were confident in handling the 747 in all usual and unusual circumstances.

Initially, the route options were limited. It was either New York with a Bermuda shuttle or to Nairobi with a stop, followed next day by a Johannesburg slip and back again next day to Nairobi. The northbound flight out of Nairobi at 5,500ft stretched the abilities of the early 747 to its limits. On all too many take-offs, the end of the runway seemed awfully close and often it was necessary to make a fuel tech stop in Athens.

The 747 was truly groundbreaking, and cheap long-haul flying – until recently, available to all – began with the construction of that wing. The economics of the 70s meant load factors were often poor and, as the network expanded, it was not unusual to fly to Chicago with only 20 or so passengers on board. But because of the freight-carrying capacity of the 747 (and a good contract), those flights still broke even even made money.

Interesting failures

In 1976, I was one of the fortunate long-term right-hand seaters to make the transition to the left hand seat, still on the 747. Engines were not then as reliable as the ETOPs-clearanced varieties now in use, and I had one or two interesting failures. On one occasion, the back end of the engine spectacularly came apart approaching Istanbul en route to LHR. Until we slowed down, the aircraft was vibrating so badly that the instruments were difficult to read, so I chicked out and diverted to Istanbul. Many passengers were bound for the pre-wedding festivities of Prince Charles and Lady Diana Spencer. They were not best pleased to spend a long day marooned on board at that marvellous city’s airport.

The high-bypass engines demonstrated their sturdiness on an earlier Nairobi take-off. I was the handling pilot in the right-hand seat when, just before the rotate call, a flock of large-wingspan kites, common to Africa, decided to lift off the runway, too. They disappeared from my sightline...
behind the captain and it seemed an age before there were two substantial bangs as both port engines surged. Continuing with the rotate, I found that full right rudder and aileron were not quite enough to stop the inexorable enthusiasm of the aircraft to fly upside down. Fortunately, the outboard engine almost immediately recovered from its surge, and started giving power followed 10 seconds later by its inboard colleague. We were blessed with the presence of a flight engineer who went into his engine health check routine as we pilots shakily continued our departure. Having found no obvious problems, the decision was made to continue to Johannesburg where the engineering back up was substantial. In Jo’burg, both engines were examined and borescoped, but no damage was found. However, they did find one white feather!

**Gender balance**
In the late 80s, British Airways had at last recruited female pilots. By then, I was a training captain and supervised Lynn Barton, one of the first three, on her first and third 747 passenger-carrying trips. Her appearance on the flight deck caused a certain amount of interest, especially among the female cabin crew. She, and all her female colleagues that I subsequently trained on the 747 over the next 10 years, had little difficulty flying the monster, proving brute strength was not required.

**Famous faces**
The flight deck of 747 is relatively roomy, which meant that – in pre-locked door days – it was possible to entertain all sorts of interesting people. Flying into Johannesburg in 1992, Nelson Mandela – before he became president of South Africa – joined us for more than an hour and stayed for the landing. He was interesting, charismatic, and enthusiastic about the future prospects for all the people of his country. Then there was the famous opera singer who sat in for the arrival into New York and remarked as she left the flight deck: “Well, I’ve seen you lot at work, now you can come and hear me screech my head off!”

The only royals I flew were the Princess of Wales and her two princes. The boys came up for the departure from San Francisco but, after they had left us at the top of climb, the northern part of America produced a remarkable selection of wicked cumulonimbus for the next three hours. By the time we had finished slaloming around them, with the seat belt signs on, the royal party was asleep and stayed that way until the descent into London. Thus, that flight deck crew and I have the unusual record of having spent 10 hours sitting some 20 feet ahead of one of the world’s most famous women of her time, without ever meeting her!

Having first flown the 747 in spring 1972, I stayed on it, with pauses between airlines, until spring 2002, some 30 years. Including the Seattle experience, plus a few other involvements before she came into service, I could claim that the Queen of the Skies was a part of my flying career, and also a love affair for 34 years.

During those years, I was also involved with BALPA’s Concorde evaluation and had the pleasure of some handling time on that unique aircraft. It was a great privilege to have flown the fastest commercial aircraft, used mainly by the rich and famous. But perhaps it was even better to spend many years flying what the architect Norman Foster has described as “the greatest building ever flown” – the aircraft that really opened up the world to all.
An afterlife for retired aircraft – in your home

By Captain Robin Evans, Senior Log Contributor

There are three parts to material greening: reduce, reuse and recycle, all increasingly practised in aviation and beyond. Newer generation airliners employ increased production efficiency and recyclability: 3D printing and carbon–fibre separation, for example. The constant drive for commercial lightweighting ensures that assets are as light as they can be.

In autumn 2017, BALPA featured the trade in aircraft end-of-life treatment at Air Salvage International (ASI) in Kemble. After a lifespan of around 15-20 years, market forces drive airliners towards a ‘jet cemetery’ such as ASI. This is where the embedded value of components exceeds the asset as a whole, and usable parts are harvested. Recent events have only accelerated the depreciation of types such as the A380 and 747. Parts are harvested. Recent events have only accelerated the depreciation of types such as the A380 and 747. Components exceed the asset as a whole, and usable parts are harvested. Recent events have only accelerated the depreciation of types such as the A380 and 747. Parts are harvested. Recent events have only accelerated the depreciation of types such as the A380 and 747.

Leap of faith

Only a pilot’s eye would notice the unusual object sitting outside a otherwise ordinary industrial unit near Bury St Edmunds. ‘The breaker’s torch was not the end of the line for this A320 fuselage section. Delivered to TACA El Salvador, it flew for Izmir Airlines and Atlantic before arriving here via ASI.’ It was a huge leap of faith to buy our first plane,” says David Palmer, DappR Aviation founder. “We wanted a whole fuselage, not a scrap of it.”

Selecting the parts

The pilot’s eye also spies turbine burner cans and 747 landing gear doors in the workshop. Others are less obvious: David reveals a pair of gleaming metal arms – Tornado or Merlin parts, for instance – with Spitfire parts existing, but very hard to source, otherwise kept for airworthiness. “I’d rather see it flying, but if it can’t…”

Leap of faith

Grand Designs Live. Inside the hangar, another is under way: after an electrical fix and finishing touches, it’ll roll out of the door and into a customer’s garden. Up close, I can’t resist patting the huge, arching gluelam (glued laminato) beam that frames the glazed frontage.

Selecting the parts

The pilot’s eye also spies turbine burner cans in the workshop...
designing furniture in a delirious fit. Six-feet tall on an arcing, wheeled chassis, it blends chair, console and screen with a covering of chains and turbine blades. Everyday items such as seating and tables are popular, often incorporating slabs of treated wood or coloured resin. The metal/wood combination is a particular specialism: bar stools sitting atop rudder jack screws. Elsewhere, an upended Rolls-Royce Avon casing has a retro gaming machine rising out of a wooden top. Leading edges often recur, concealing kitchen bench up rights or wrapping around TV cabinets.

The amount of reused material varies according to what works for the product. David points out a pair of helicopter doors bearing decals and scars of use in the field. “These are pieces in themselves already.” Some supplementing may be required with materials never intended for recombination. David explains their rule: “All parts on display must be original.” Alongside sits a trio of seats, “95% original, some added wood just protects your flooring,” he observes. A galley trolley reveals subtle input: wine bottle racks, with a wooden tray concealed in the top for your lemon slicing.

For more complex projects, they work with local trades: two ejector seats sit nearby, leather cushions fitted by a local upholsterer. Emily reveals that when fitting them out, they discovered a slight warp as evidence of their firing in anger.

Meeting the brief
Besides exploring, there was another reason for visiting Aladdin’s Cave. With the builders in, I would soon have an office space and set David and Emily a challenge. I sketched out a banker’s lamp, the angled hood made from a piece of leading edge, buffed to a retro sheen: could they make one? Except for some dimensions of the alcove it would fill, the brief was open. Emily soon fired back a picture of the leading edge she’d sourced and we were under way.

The shade is a section of BAe 146 horizontal stabiliser leading edge, the upright a helicopter gearbox shaft. Connecting the two are welded sections of oil piping concealing the wiring; Emily explains she used household plug chain to feed this through. It was PAT-certified with a switch and plug, the effect completed by a base of burnished wood. Emily says this was the trickiest style of lamp yet attempted: the finished item was the third version. “If we’re not happy with it, the client doesn’t get to see it,” she says.

It’s ideal: solid and subtle. While its edges are smooth, as befitting a character piece, it bears signs of honest wear. Pilots and engineers instantly identify the shade, others consider it an abstract piece of industrial origin. In cost, it was a few months of BALPA subs, more than average, but I’ve been through enough lamps, all fallen by the wayside. The aviation build quality speaks for itself. Furthermore, it was a unique piece with a backstory, that I helped design.

Diminishing market
Returning to aircraft salvage, the BAe 146 parts market is diminishing. Five years ago, about 1,400 specific parts were highly marketable. Now, there’s around a third of that. Continued type withdrawal, with fewer operators needing to maintain smaller fleets, saturates the market. So, if you have an affinity for the 146, or just want part of a retiring type in your home (747 fans take note), now is the time.

Emily and David reinforce the idea that, instead of discarding an almost-functional item, with a little ingenuity you can salvage something from it. And, if you can’t, you now know those who can. Their skills helped bring you the words you’ve just read: how’s that for the leading edge of illumination?
Mind over matter
How to maintain a positive mindset when faced with challenges
By Louise Pode, resilience and positive psychology coach, Director of ProAbility Ltd

“Whether you think you can or you think you can’t... you’re right” – Henry Ford

The airline industry has had to deal with some significant challenges over the years, but nothing like COVID-19 and the effect it is having on our lives. In particular, it’s had a huge impact on the livelihood of pilots as airlines announce redundancies on a scale never experienced before. So many have already faced redundancy with Monarch, Thomas Cook and Flybe before the recent impact of COVID-19. As if this was not enough, there is virtually zero recruitment for pilots. The global profession now faces the challenges of sweeping redundancies, loss of vocation, status, identity, lifestyle – is it any wonder you may be feeling anxious? COVID-19 has influenced our physical wellbeing, curtailing freedom of movement, socialising and our ability to work, and also poses an overwhelming threat to mental health. The emotional effects maybe hidden – increased uncertainty, insecurity, vulnerability and isolation are all detrimental. In aviation, since the Germanwings incident of 2015, the requirements to safeguard mental health are now firmly enshrined in airline safety culture and medicals. However, first aid is best administered by recognising the symptoms in yourself or those immediately around you. Feeling strong emotions is part of the mental process of dealing with the enormity of the situation. Conversely, when the feelings of panic and anxiety become overwhelming and ongoing, it serves no purpose. As pilots, you have strategies for dealing with pressurised situations, emergencies and complex problems, but do you know how to manage your mental health and wellbeing? As with emergency procedures in the simulator, you need clarity of mind and decision-making models to find your way forward. Making sense of how you feel and why is fundamental, and the first step in managing your mental health and wellbeing.

Making a change
The Change Curve model (see Figure 1), developed by Elisabeth Kubler-Ross, adeptly illustrates human emotional reaction to change and is so relevant to our responses to the impact of COVID-19. It describes a journey of three stages.

Stage 1: shock and denial
There must be many of you out there who experienced this first stage when you received notification of either redundancy or the company going bust. Shock is our first reaction to change. It puts you on high alert, intensifying your senses as you search to understand the situation. You desperately search for information on what is happening, why it’s happening, how it will affect you and what your choices are, so you can start to process its enormity. There are so many unknowns here that you might have felt overwhelmed and paralysed by the impact on your colleagues, family, financial security and future. After the initial shock has passed, denial is experienced, characterised by a focus on the past and an urge to return to the status quo. It feels like a surreal event as you attempt to process the challenges. To overcome the denial, you seek information from any source – your employer, peers, and support groups – who may not have the solutions. Think of all those reasons to feel hope that you’ve been looking at over the past few weeks – such as hepa filters, travel corridors, increased bookings – as reasons for why people might want to fly again.

Stage 2: anger and depression
During this second stage, morale plummets and anxiety levels peak, you are at the bottom of the curve. The financial impact, change in lifestyle,
and loss of status and self-worth becomes a reality. It can be hard to express your feelings and depression sets in as you acknowledge what you have lost. Many of you have been in the aviation community for years and are specialists in your own field, trained to a high level, within a structured environment, in a role that you love and in which is suddenly taken away. It is much more than financial loss. A sense of being out of control compounds feelings of anger and despair. We all cope in different ways as our usual anchors in life are taken away from us, there is no right or wrong way here. Your reactions are a normal emotional response to the magnitude of change you are experiencing.

Stage 3: acceptance and integration

The final phase is acceptance and integration as, over time – after anger, depression and anxiety - a more optimistic and positive mood begins to emerge. This is the time to focus on using problem-solving models such as TFORDEC (Time, Facts, Options, Risk, Decision, Execute, Check) or DODAR (Diagnose, Options, Decide, Act or Assign, Review) to explore available options that can be analytically assessed. Using these to move you through the curve to acceptance, they will enable you to collect the facts, and diagnose where you are and where you want to be. This will enable you to start to create order out of the chaos you're experiencing and set goals.

At this stage, you stop focusing on what you have lost and accept that change is inevitable as you look to the future. There is an appreciation that life is going to be different and you begin to work with the changes – rather than against them – and learn to adapt. This is where a new-found optimism and acceptance emerges as you have had a chance to reflect, and find ways of improving your resilience. It is important to recognise you have choices, that there is always more than one option.

As highly skilled pilots, you have a vast skill set that is transferable to other sectors. Recognising and accepting this clarity of purpose enables greater optimism. You focus on new opportunities, and can look to the future knowing real progress can be made.

As individuals we react differently to change and not all of us will experience every phase. Some people may spend a lot of time in stages 1 and 2, while others, who are more accustomed to change, may move swiftly into stage 3.

For those more prone to anxiety and depression, the challenge is to make sure you don’t get stuck in either stage 1 or 2. Those are the phases where you can become overwhelmed by the enormity of the events. The challenge is how to shift your mindset from anxious to logical and move through the change curve and step up to the challenges ahead. Here are some counter-measures to work through to enable you to change your mindset and build resilience.

Develop your self-awareness

Understanding yourself and your emotions is the first step in regaining control and overcoming your stress and anxiety. You will be more able to develop your resilience and overcome your challenges, rather than be defined by them.

It is important to set time aside and reflect on how you are feeling. There are numerous symptoms of stress and anxiety including:

- Psychological signs, such as irritability, low self-esteem, poor memory, over-analysing and poor concentration
- Physical signs including poor sleeping pattern, muscle tension, fatigue, change in weight, headaches, skin irritation and increased blood pressure
- Behavioural changes including erratic behaviour, over-working, being louder than normal, and difficulty getting things done.

When you recognise your symptoms of stress, it is important to consider your triggers and mitigate them. Often it can be the small things that tip the balance – you can be dealing with major changes in your life, but a misplaced comment can cause a powerful counter reaction. How can you anticipate and manage those stress triggers, so they don’t increase your anxiety?

Once you are aware of your symptoms and triggers, you can create a tool kit of coping strategies to stop them from escalating. It could be exercise, using health and wellbeing apps or listening to your favourite music to help create calm.

Regain control

Feeling out of control enhances stress and anxiety. By taking steps to regain control, you will start to feel empowered and more positive. Use the skill set you have refined as a pilot to remain calm in the face of adversity.

- Control those things that are within your circle of influence
- Prioritise what you would like to achieve
- Create a weekly routine
- Set goals
- Prioritise and write down your goals to give you clarity of accomplishment and gives you a sense of purpose
- The key aim is to work towards a goal that creates a feeling of accomplishment and gives you a sense of purpose. Priorise and write down your goals to give you clarity and commitment.
- Make your goal really come to life. Visualise it and anchor it by immersing yourself in your feelings of success.
- How will you know when you have achieved it? Put yourself in that moment and imagine how you feel.
- Write down an action plan to achieve each goal. Imagine how good you will feel when you achieve a goal in which you have emotionally invested and earmarked as important to you.

Manage your mindset

Your mindset is fundamental to how you manage your challenges. A negative or ‘glass half empty’ mindset will give you a very different experience to those with a positive, resilient mindset. Your thoughts directly influence how you are feeling and how you behave, which creates your reality. Once you draw a conclusion about yourself, you are likely to look for evidence that reinforces your belief and discount anything that is contrary to it. If you think you are going to be successful, you will feel like a success. Then, you will behave like you are successful. In the way you think, hold yourself and communicate, which reinforces your belief that you are a success. Of course, the converse is true and you need to guard against reinforcing self-limiting beliefs such as “I do not have the skill set to have an alternative, successful career”.

Henry Ford had a close understanding of the impact of mindset when he said “Whether you think you can or you think you can’t... you’re right.”

So, how do you influence your mindset? By changing your focus, the language you use to yourself and your physiology. We can switch our mindsets by thinking about a situation that creates anxiety and notice how it immediately impacts on our emotions. Conversely, reflect on a time when you felt on top of the world and notice how different you feel. When you have challenges to overcome, you need to be able to create that positive mindset on an ongoing basis to be resilient and enable you to think clearly on your way forward. When you are immersed in negativity such as redundancy, your mind will default to picking up on everything negative around you, filtering out all the positives. To shift your focus away from this you need to consciously and deliberately...
Creating goals and adding structure and routine to your day will give you a sense of purpose and direction

- Identify positives in your life and acknowledge them to yourself. A great way of developing a positive focus is to identify goals for yourself to achieve – this gives you a sense of purpose. Deflect your thoughts away from your personal challenges and focus on your goals and helping others who are struggling with their situation.

  The second step is changing the language you use to yourself – your inner voice. Your inner voice can doubt your ability and reinforce your lack of confidence creating anxiety. If you had a friend who spoke to you like your inner voice, you would have dropped them a long time ago.

  While you cannot eliminate your inner voice, you can take control and manage it. Talk to yourself with compassion, be kind to yourself, and use positive language to tell yourself you can do this and you are going to find a way through.

  The final step is to manage your physiology to put your body in a calm state. When we are stressed and anxious, we develop symptoms such as muscle tension, headaches and increased breathing rate. It’s a powerful physiological response to our stress. It is well recognised that deep breathing increases the supply of oxygen to your brain and stimulates the parasympathetic nervous system, which promotes a state of calm. Exercise is also effective as it changes your breathing rate, shifts your focus and creates endorphins and a sense of achievement. Mindfulness, meditation, relaxation and yoga calm your mind.

Stay connected
The support networks that you have created with friends, colleagues and family are hugely beneficial. While many WhatsApp groups in the pilot community were originally set up as a way of information sharing, they soon evolved into a supportive environment where pilots could voice their anxiety and concerns. These are invaluable connections creating shared experiences during the enormity of the crisis you are experiencing. To have a forum where you can be heard, listened to and acknowledged, and provide support to others, creates a sense of stronger together. Use LinkedIn and your personal connections to explore other potential avenues of employment. Surround yourself with people who motivate and inspire you.

  These are unprecedented times in the aviation world that will impact your mental health. While the situation can be overwhelming, by taking small steps you can start to regain some control. Developing your self-awareness by reflecting where you are on the Change Curve and acknowledging how you are feeling will enable you to identify coping strategies to maintain your mental health.

  Using a systematic approach to creating goals for yourself, adding structure and routine to your day, will give you a sense of purpose and direction. Managing your mindset through your focus, language and physiology to create resilience and positivity will enable you to think logically and with clarity, so the road ahead to your future becomes clear.

Louise Pode SRP BSc (Hons) MSc is a resilience and positive psychology coach, and Director of ProAbility Ltd (www.ProAbility.co.uk). Louise is currently running resilience coaching programmes specifically for pilots. If there are aspects of this article that resonate with you and you would like to discuss them, she would be delighted to hear from you. Email louise.pode@ProAbility.co.uk.
**Donate to the BALPA Benevolent Fund**

The BALPA Benevolent Fund (BBF) is a registered charity that provides support to those in financial need – former or current pilots, flight engineers, helicopter winchmen, navigators in commercial aviation; and current or former employees of BALPA or its subsidiaries, their families, and anyone else dependent on them.

As a registered charity, the BBF can benefit from the tax benefits that are available to UK charities, while also helping to reduce the tax liabilities of donors.

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If you leave an amount in your will to charity, this will automatically be taken off the value of your estate before inheritance tax is calculated. Therefore, for anyone with an inheritance tax liability, there is an immediate saving of 40% of the value of the gift.

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Donating through Gift Aid means that the BBF can claim an extra 25p for every £1 that you give, at no cost to you. Payments can be made on a monthly basis or as individual payments by standing order to:

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Sort Code: 60-83-01
Account number: 20209386

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Boost your donation by 25p of Gift Aid for every £1 you donate. Gift Aid is reclaimed by the BALPA Benevolent Fund from the tax you pay for the current tax year. Your address is needed to identify you as a current UK taxpayer.

In order to Gift Aid your donation you must tick the box below:

- I want to Gift Aid my donation of £________________ and any donations I make in the future or have made in the past four years to the BALPA Benevolent Fund.

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There are two main ways: through gift aid or inheritance tax planning. You need to make a Gift Aid Declaration (see below) and return a photographed or scanned copy to tonigirdler@balpa.org or post it to: Administrator of the BALPA Benevolent Fund, BALPA House, 5 Heathrow Boulevard, 278 Bath Road, West Drayton, UB7 0DQ.

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Postcode ___________________________
Date ___________________________

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- Want to cancel this declaration
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Present and correct

It’s never too early for a bit of Christmas spirit!

1. Billingham Weekender travel bag, £395
   Perfect for a couple of nights away, this stylish bag is made from strong, weather-proof canvas and reinforced with top-grain leather to last a lifetime of travelling. It also features a comfortable shoulder pad and contoured leather handles. Available from www.billingham.co.uk

2. Kodak Smile camera, £99.99
   Say “cheese” with this retro instant-print digital camera, which allows you to shoot, preview, edit and print images. Pictures print in less than a minute, so there’s no need to wait! Available from www.currys.co.uk

3. Electra Loft 7i green-tea ladies’ bike, £700
   Make your ride count! This lightweight commuter bike has been designed with functional minimalism in mind, featuring clean lines and straight bars. It can also handle the rigours of the streets. Available from https://electra.trekbikes.com or independent retailers nationwide.

4. The Chameleon board game, £25
   Six players. One word each. Someone isn’t who they say they are – but which player is it? This award-winning game will have everyone trying to prove their innocence. Available from bigpotato.com

5. Humax FVP-5000T Freeview Play Recorder, £199
   This smart TV box allows you to view live TV, on-demand, catch-up and streamed TV without paying any subscriptions. You can also record up to 1,000 hours of your favourite shows, movies and sports – perfect for busy people on the move. Available from Currys, John Lewis and Argos.

6. Stormy stars mug, £19.95
   Shine bright this festive season with this gorgeous, hand-painted earthenware Emma Bridgewater mug, which would look perfect in any kitchen. Available from John Lewis or online at www.emmabridgewater.co.uk

7. Personalised book-cover print, £25
   We love this retro print featuring your family’s favourite books – or simply choose your own top tomes. Each book cover can be customised with a different name at the top, and the colours can be changed, too. Available from www.notonthehighstreet.com

8. Dualit barista kit, £109.99
   Love your morning coffee? Consisting of four essential elements, this stylish barista kit features a tamper, milk-frothing jug, thermometer and knock box, which work together to help create the tastiest cup of coffee from your own home. Available from www.dualit.com

   Good lighting is essential for the best selfie (or video call, for that matter). This LED light is designed to improve facial lighting to add that professional touch to your snaps or your live video calls, and simply sits on your desk. Available from www.prezzybox.com

10. Set of 10 wooden-star battery lights, £10
    Give your home a warm glow this Christmas and add a bit of sparkle with these indoor festive lights. Try stringing them around your mantelpiece or up your staircase for cozy winter chic. Available from www.homebase.co.uk
HIT OR MISS

What Hollywood gets wrong about aviation

By First Officer Tori Bottomley

Having had so much time off during the pandemic, I’ve spent an alarming amount of it watching streaming services such as Amazon Prime and Netflix – and what better way to keep current than with an aeroplane movie? But the cockpit does not look the same to Hollywood producers as it does to pilots, chiefly in the sense that we are governed by SOPs and the laws of physics. So, join me as I don my anorak and try to find the economy, business and first class of Hollywood’s aviation movies.

7500, 2019
Genre: Action thriller
Rating:

As you might expect from the title, this film involves a hijacking. Departing from Berlin, it starts slowly, but realistically. Checks are done, a brief is given, and the RT is mostly there. So far, I am impressed with the attention to detail and authentic portrayal.

As they roll down the taxiways, the pilots are told there will be turbulence on take-off. There is no reaction to this or the risks involved. As a member of a profession that is risk-obsessed, this bothered me – but I guess an audience can only tolerate so many SOPs before they lose interest.

Being taken alive is one of the many nightmares that keep us up at night, so Joseph Gordon-Levitt’s reactions as first officer Tobias Ellis are understandable. Unfortunately, they are tediously slow. Ellis starts off well and regains control of the aircraft fairly quickly, but he makes the mistake of engaging with and watching the terrorists through the monitor, witnessing horrific acts of violence and delaying their arrival.

This is when I began shouting for him to ‘just do something!’ With a terrorist in the cockpit, a dying captain next to him and people being murdered in the galley, he is not in an ideal working situation, but surely one you would want to be out of ASAP. With the stress of the situation, Ellis appears to lose all sense of time, and any form of decision-making or prioritisation is neglected.

When he arrives at Hanover, there is little planning besides a quick mumbled brief to himself and, of course, when clouds expand and envelop it, but “punching through it”? Surely Vgturb is a more appropriate speed than Vmo! Later in the flight, a loud bang is followed by a loss of vertical control, and they enter a dive. This part of the flight is loosely inspired by the Alaska Airlines 261 MD-83 crash in 2000. After a failure of the horizontal stabiliser trim system, the crew lost control of the aircraft and entered a series of vertical dives as the crew tried to re-establish stable flight. They found themselves inverted and then tried to re-enter the inverted state. The transcript says, ‘gotta get it over again... at least upside down we’re flyin’.’ Less than 20 seconds later, the transcript stops.

The pilot adviser for the film justified the sequence by claiming the aircraft could sustain inverted flight for ‘a little bit’, which I doubt would extend to the minute or so that Whitaker did. Despite this, I found myself wanting to put these inaccuracies aside for what becomes a compelling story with some complex characters.

Flight, 2012
Genre: Drama thriller
Rating:

The question I am left with after watching this film is: can an airliner fly upside down? According to aircraft manufacturers, the answer is categorically no.

A drug-addled captain, ‘Whip’ Whitaker, begins a flight from Orlando when disaster strikes. With no way to prevent a crash landing, he tries to avoid colliding with a highly populated area by flying the MD-80 upside down until they can reach a field. The rest of the film takes us through the court proceedings with NTSB that follow.

Although he saves the day, Captain Whitaker seems like a nightmare to work with. After a worrying entrance that makes the first officer doubt the health of his colleague, they take off into severe turbulence and the captain ignores pretty much everything the first officer says from there on in.

Whitaker then chooses to level off and descend to 6000ft to chase a gap in the weather. His theory, I assume, is to get to the gap below where the weather is better. With no reaction to this or the risks involved. As a member of a profession that is risk-obsessed, this bothered me – but I guess an audience can only tolerate so many SOPs before they lose interest.

Being taken alive is one of the many nightmares that keep us up at night, so Joseph Gordon-Levitt’s reactions as first officer Tobias Ellis are understandable. Unfortunately, they are tediously slow. Ellis starts off well and regains control of the aircraft fairly quickly, but he makes the mistake of engaging with and watching the terrorists through the monitor, witnessing horrific acts of violence and delaying their arrival.

This is when I began shouting for him to ‘just do something!’ With a terrorist in the cockpit, a dying captain next to him and people being murdered in the galley, he is not in an ideal working situation, but surely one you would want to be out of ASAP. With the stress of the situation, Ellis appears to lose all sense of time, and any form of decision-making or prioritisation is neglected.

When he arrives at Hanover, there is little planning besides a quick mumbled brief to himself and, of course, when clouds expand and envelop it, but “punching through it”? Surely Vgturb is a more appropriate speed than Vmo! Later in the flight, a loud bang is followed by a loss of vertical control, and they enter a dive. This part of the flight is loosely inspired by the Alaska Airlines 261 MD-83 crash in 2000. After a failure of the horizontal stabiliser trim system, the crew lost control of the aircraft and entered a series of vertical dives as the crew tried to re-establish stable flight. They found themselves inverted and then tried to re-enter the inverted state. The transcript says, ‘gotta get it over again... at least upside down we’re flyin’.’ Less than 20 seconds later, the transcript stops.

The pilot adviser for the film justified the sequence by claiming the aircraft could sustain inverted flight for ‘a little bit’, which I doubt would extend to the minute or so that Whitaker did. Despite this, I found myself wanting to put these inaccuracies aside for what becomes a compelling story with some complex characters.
Left behind, 2014
Genre: Action thriller
Rating: 🎥

If you could buy seats in the cargo bay, this film would be the equivalent. I’m not quite sure what I was expecting when I saw Nicolas Cage was the lead, but, at a minimum, I hoped it would be entertaining. Unfortunately, I don’t even think I can say that after putting myself through the painful experience of watching it.

Even heart-throb Chad Michael Murray was unable to redeem this performance. Slated by critics as one of the most moronic films ever made, Cage exhibited the level of cockpit familiarity often seen in six-year-old children at an aeroplane museum.

The premise of the film is that, during a flight from New York to London, a biblical rapture occurs and half the world’s population vanishes into thin air, including some of the passengers and crew. Cage, who was about to cheat on his wife with the cabin manager, captains the aircraft after the first officer vanishes and somehow manages to save the day, despite doing nearly everything wrong.

The captain arrives at the airport without a briefcase or luggage, despite going on a long-haul flight with a layover. Furthermore, although operating single-pilot for the majority of the flight, Cage leaves the cockpit multiple times and wears his headset for less than a minute during the entire movie. When he eventually loses the autopilot, he still does not interact with the controls, and thrashes the throttles around like an impatient toddler.

HF radio communications can be tough at the best of times over the Atlantic. Luckily for Cage, he is met with silence instead of a sassy reply when he uses the wrong phraseology. However, with the controllers and the pilots of an oncoming aircraft “missing in action”, Cage soon finds himself with a TCAS alert. Of course, he takes no action until it is too late, and they have an airborne collision. The impact punctures a fuel tank and damages the elevators, which is met with little more than a shrug when finally noticed by the pilot.

When the fuel leak is also discovered, he decides to just “see what happens” instead of undertaking any kind of procedure, even though they are flying over the Atlantic Ocean. Thankfully for the passengers, not all of the fuel is lost and they reach a landing site. With no way to see it, though, he asks his daughter to illuminate the threshold of a makeshift runway, leading him to fly a fuel-soaked aeroplane through a line of flames before he hits the tarmac.

To summarise: I wasted two hours of my life so that you don’t have to. Next time this is playing, I sincerely hope I am left behind.
**Book reviews**

Our pick of the best flight-related tomes this issue

**Adventures in Aviation**
by Wing Commander Roy Gamblin (published by Vanguard Press, £14.99)

This review required a long gestation period, simply because I slowly and enjoyably read Roy Gamblin’s book from cover to cover. I think that summarises well the quality of this autobiography.

Many pilots feel the need to write about their lives in aviation (me too!) and, sadly, their writing abilities never quite match their undoubted flying skills. This book is the exception, one that will appeal to those who have spent most, if not all, their career in civil aviation. I make that point because a large chunk of the author’s time was spent in the military, and yet his experiences in Oman, Norway and, of course, the UK were fascinating – as was Gamblin’s account of his civil career on Jetstreams and the aromatic old 146.

Thoroughly recommended.

Review by David Keen, Log Board member

**Never Answer to a Whistle**
by Michael Howard (published by Griffin Publishing, £10)

This is a very entertaining personal account of the author’s life and his experiences in aviation. It tells of how he got his foot on the ladder in the 1970s, and went on to fly a variety of private jets throughout Africa and other interesting places – including a few close shaves with authorities, and flying on the edge of legality and the flight envelope!

The book offers an alternative perspective on how someone built up their flying hours, from a single-engine flight instructor who joined Britannia and flew 737s, 757s and 767s.

This book covers everything but the airline career, which is summarised in just a few sentences. It is definitely worth a read this winter.

Review by Matthew Martin, Log Board member

Would you like to review a book for The Log? If so, simply email TheLog@balpa.org
Pilots of the Caribbean

The Caribbean treasure where the rum is strong and the Wi-Fi weak

By Captain Robin Evans, Senior Log Contributor

The jeep grumbles on, passing the occasional clapboard church against a backdrop of soaring forest and banana trees. The interior is pictorial, it makes sense that various scenes from Pirates of the Caribbean were shot here. I'd asked for a local rum shack to say farewell to St Vincent, and been promised something unique.

The multi-island nation of St Vincent and the Grenadines (SVG) to its citizens) sits just west of Barbados, tucked between St Lucia and Grenada in the southern Caribbean arc. If traditionally outrun by these touristic heavyweights, it packs a lot of character into an unspoilt rum punch.

Sheltered just off the beaten track, SVG has served as a bolthole for island-hopping yachts and the super-rich. However, their secret is out; a new airport as a bolthole for island-hopping yachties and the rich.

The Grenadines are three large islands, plus a string of 400 smaller ones: Lara, Bequia and Mustique. Known as the 'isles of the birds' by the Spanish, Grenadines derive from pirates who hid among the sheltered coves.

They had the right idea: discovering the real SVG is impossible for cruise-ship daytrippers, but ideal by live-aboard catamaran. Mine is called Duet, and is skippered by Canadian-Vincentian Kurt, a marine biologist who easily whips his squad of landlubbers into shape.

Beckoning Bequia

The first port of call for seadogs leaving capital Kingstown is the island of Bequia (‘beck-way’). Port Elizabeth Bay is a treasure trove, fringed with houses in traditional gingerbread style.

Every evening, the boat boys peddle their wares from deck to deck, cold drinks or lobster - if you name it, they'll find it. If going ashore, a popular stop is the waterside Frangipani Hotel, named after the flower - ‘See you later at the Frangi.’

If this is the true Caribbean, devoid of resorts and high fences, paradise can also be raw. Bequia is one of a handful of spots worldwide that practices indigenous subsistence whaling, a cultural heritage dating back to the 19th century. The tiny quota (typically one whale annually) is in contrast to the size of their prey: the humpback whale. The rarity and hazard of a catch is unsurprising when still practised traditionally, by rowing boat and hand harpoon.

And so, we head down south to the Tobago Cays, always a perfect place to behold, but a clever screen for the wider world. The only place there was any soul was a local shack where island staff reverted to their jolly selves. Basil’s Bar, rastacap. He tells me how uncut hair and a strict vegetarian code, known as Ital (‘ital is vital’), derive from biblical interpretations (see Genesis 1:29).

Rastafarian spirituality is embodied by the phrase “I and I!” (the first for the Almighty, partly residing within the second: yourself) and ensures Franklin has all he needs. He explains how the original Carib Islander term for people (karibnos) gives us the name of the region we all love.

A few hours’ sail from these simple attitudes lies the most iconic of private islands: Mustique. The eccentric Lord Glenconner masterminded transforming marshy scrubland into luxury villas in the 1950s, creating a private reserve for the glitterati. Princess Margaret accepted the first plot, ‘Les Jolies Eaux’, the first of many exclusive boltholes. Others, owned by Jagger or Hilfiger, are available for rent from US$3,000 to $10,000 per week.

Walking across a millionaire’s immaculate lawn to gaze at an infinity pool was a guilty treat – but as the luxury climbed, the character nosedived. To the outsider, million-dollar Balinese villas are amazing to behold, but a clever screen for the wider world. The only place there was any soul was a local shack where island staff reverted to their jolly selves. Basil’s Bar, Aerial view of the Tobago Cays, always a perfect

On steadier ground, reggae is uniquely infectious, a permanent sign to slow down – after a while, you’re walking with a swagger.
We wake one morning to a Caribbean lilt on the harbour frequency – tropical storm Chantal is coming.

Nature offers plenty of treats: one day Duet is peppered by the frantic smack of clumsy flying fish. They gape, flapping gossamer wings until returned to the sea. Returning from ashore one evening, the dinghy propeller leaves a glowing bioluminescent wake in the inky water. Several shipmates dive in, adding their own.

Evenings were often spent awaiting the elusive green flash as the last rays refract over the horizon, referenced in Pirates of the Caribbean. One day there’s a lazy doze to the gentle rocking of a boat under sail, when Kurt shouts. I run to the bow, where about 20 grey dolphins are surfing our wake. Duet previously felt sluggish, but now carves urgently through the spray. Only one leaps at a time, the remainder arcing in a holding pattern. Occasionally, one completely clears the surface, the world slowing to a crawl for each gravity-defying second. Their splashing falls on outstretched arms, their clicking chatter clearly audible.

The price of this brief siren’s acceptance is entering a huge squall. Still mesmerised, I nearly trap a hand as I winch in the angrily cracking sail; somehow I’m not in the correct state. As if drained by this close encounter, the crew succumbs to sleep and the afternoon ends exactly as it began.

Nature is occasionally less benevolent on the Hurricane Belt. We wake one morning to a Caribbean lilt on the harbour frequency – tropical storm Chantal is coming. All boats flee to the Tobago Cays, a reef-encircled, natural harbour between tiny islands and a honeypot for yachts, storm or not. We spend the evening securing Duet, her cockpit framing the last rays shining through mountains of cumulonimbus. A radioactive sunset seems to come less from the horizon than through the water itself. The night is a sensory attack, the deck lighting savaging eyes and the warm rain sandblasting unprotected flesh. Each boiling whitecap exploding beneath our twin hulls becomes an eerie reverberation that makes Duet shudder. Staggering to the compass proves the epicentre of Chantal is passing, all boats rotating in formation around their anchors.

Rum diaries
Exploring Kingstown between intense downpours (known as ‘liming’ – enjoying downtime for its own sake), I slake thirst in the colonial-style Cobblestone Inn. The local culture is liberated and characterful. Here’s where a local guide is worth his weight in pieces of gold. Attending a local ‘jump-up’ (party) Kurt explains: “Here, the dancing would be considered harassment anywhere else.” Next door, an open-mic comedy night pits between English and the local patois, tricky without a translation.

The public transport is typically Caribbean: minibuses with competing custom paint jobs, soft furnishings and willing occupants cramming in for a jolly commute. There are no cars outside St Vincent – on Bequia and Mustique, they use buggies, while smaller islands retain foot power.

Returning to the jeep-based farewell, we halt at a half-built block shack on a steep ledge. A familiar pulse bleeds through: reggae, a sign of island life as vital as any wave-lapped beach. We perch barefoot on a ledge of crazed concrete and soak it in. A couple of locals throw down dominoes.

As an island metaphor, you’ve a range of choices. How about something a little different for the pilots of the Caribbean?
Seeking a scholarship

Finding funding for aviation training is no easy game

If you are interested in a career in aviation, funding your training will be a big consideration. To help with the costs, one such option is to apply for – and be awarded – a scholarship. Luckily, more options are becoming available to a wider range of candidates, including those with little to no experience.

Scholarship applications are available at various points in the year, and can be found through organisations such as the Air League, British Women Pilots' Association (BWPA), RAF Association, and the Honourable Company of Air Pilots. Awards can range from a few paid flying hours and help towards ground school exams, to adding further ratings to your current licence.

Understanding the system

Since I began my journey, I’ve sought advice both from pilots already working in the industry and past scholarship winners, to gain an understanding of what they are looking for. By attending careers events, visiting air shows, volunteering, becoming a member of aviation organisations and surrounding myself with people who have a similar interest, I’ve found the common theme has been a resounding and genuine enthusiasm for flying.

As a student pilot, I have been researching and applying for scholarships to help ease the financial costs of flying. These are usually found through aviation websites such as Pilot Career News and promoted on social media, so it’s a great idea to follow as many people in the industry as possible.

The applications usually involve answering a number of key questions such as why you want to be a pilot and what you have done so far to achieve this goal. This may be followed by an interview selection before the final award is announced.

You can apply for several scholarships at the same time. Competition is high, especially for private pilot licence (PPL) awards, and it can be challenging to deal with the knockbacks from unsuccessful applications. It is important to keep evolving, asking for feedback, and trying new ways of answering questions to try to attract interest.

Resilience and motivation

I am yet to receive an award and have experienced first-hand how tough the process can be; however, this experience has made me more determined. I can be confident when I say that having the resilience and motivation to keep applying is definitely required.

Finally, being realistic and having passion is crucial for entering a notoriously expensive – albeit rewarding – career. It is one you need to sink your whole heart into, and continue to believe that one day, that dream may just become a reality.

By Alison Field, nextGen member

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