

# WIZARD WISDOM NEWSLETTER

here to inform, entertain and have fun revolving around the Aviation World



Happy Holidays

## A DIFFERENT KIND OF DOCTOR: HOW MEDICAL AI IS HELPING THE AVIATION INDUSTRY FIGHT COVID

**SOURCE:** APEX- FERGUS BAIRD

More than 22,000 Etihad Airways passengers have completed a Medicus AI COVID-19 risk assessment since the service launched two months ago. From the data compiled from the self-assessments, 86% revealed a “very low” probability of COVID risk and two 2% revealed a “very high” probability score.

This artificial intelligence uses the exact reasoning that doctors use when looking at an individual’s health data and interprets data in real time with a personalized user experience. It also keeps up to date with the latest medical guidelines issued by the federal governments of a vast number of countries. This kind of technology has been applied in airports, for example, as an AI called “Thermal Gateway”, which detects fever in 0.4 seconds using a thermal imaging system, making it easier for airlines to quickly screen for possibly COVID-19 cases. This is non-invasive, only requiring passengers to walk through the gate and be automatically scanned.

The technology provides airlines with ways to detect and control COVID-19 in airports and provides data on surges, mapping and patterns of the incoming of infected passengers. While technology cannot guarantee passengers that it is safe to fly during the pandemic, non-invasive health checks and intelligent analysis may be significant for airlines and airports to start rebuilding their confidence.

## IS THE AVIATION INSURANCE MARKET READY FOR A COVID-19 VACCINE?

**SOURCE:** INSURANCE JOURNAL – PAUL WOODLEY

As the development of a COVID-19 vaccination gather speed, the aviation industry will need to decide how the product can be safely and efficiently distributed to people around the world. IATA has suggested that approximately 8,000 Boeing 747s will be needed in order to deliver the billions of doses required to vaccinate the global population. Because of this huge responsibility, the aviation insurance companies must now plan for the unique risks that are created from undertaking one of the greatest logistics operations in human history.

The pharmaceutical industry relies on air transport for its speed, reliability and efficiency delivering life-saving, time-sensitive and temperature-controlled substance. The lack of equipment and chemical and medical expertise of individual stakeholders means that airlines are faced with many challenges in the delivery of pharmaceutical equipment. Traditionally, these drugs are handled by carriers with experience and knowledge in moving pharmaceuticals. The scale of delivering the COVID-19 vaccine to billions of people around the world will require the participation of almost the entirety of the global fleet, meaning carriers and ground handlers with no experience handling these substances will be forced to act without prior knowledge.

## RYANAIR EXPECTS AIR PASSENGER NUMBERS TO BOUNCE BACK IN 2021

**SOURCE:** THE GUARDIAN

Ryanair expects air passenger numbers to bounce back to near normal levels by next summer, defying industry predictions that it could take years for growth to return after the pandemic. The airline’s chief executive, Michael O’Leary, said passenger volumes should reach 75-80% of pre-Covid levels in 2021, especially if a vaccine was developed by the spring. Ryanair keeps optimistic, with a new fleet of aircraft arriving and a plan to offer low travel rates in the future to stimulate travel. O’Leary says that he is very skeptical when other airlines say that it will be 2035 until the volumes of travelers get back to normal, and in fact, calls it “rubbish”. Travelers are becoming impatient, with TravelSupermarket saying 54% more people had searched for holidays in the 24 hours since the vaccine news, compared with the previous Monday. On the Beach, which organises about 1.5m package holidays a year, said online traffic had jumped 25% but there had not yet been a notable impact on bookings.

O’Leary believes that one reason why the pandemic got so widespread is the mishandling of the first lockdown by the government, and says that mass testing should have been in place much earlier on. Testing at airports, he said, would be too late, and it is much better for passengers to test before they arrive at the airport. Despite the hard times, O’Leary remains optimistic that the aviation industry will bounce back, as wanderlusters are becoming anxious to travel and he believes there will be more traffic than before the pandemic once the vaccination is released.



### **THE CIVIL AVIATION INDUSTRY EXPECTS TO NEED 264,000 NEW PILOTS OVER THE NEXT DECADE**

**Source:** CAE

The retirement of pilots, and early retirement due to COVID-19 pandemic have caused a need for new pilots to join the workforce. As air travel will begin to increase during the years following the pandemic, the industry will still experience a challenge filling cockpit with experienced pilots. This is all while commercial and business aviation markets are expected to continue growing, and over 11,000 additional business and commercial aircraft will join the active civil aviation world fleet during that period.

### **QATAR AIRWAYS LAUNCHES VOLUNTARY CARBON OFFSET PROGRAMME FOR PASSENGERS**

**Source:** Business Traveller – Tom Otley

Qatar Airways has launched a voluntary carbon offset programme for passengers, with a new partnership with the International Air Transport Association (IATA) and Climate Care. With this programme, passengers can voluntarily offset the carbon emissions associated with their journey at the point of booking.

The programme is built on a partnership with IATA's carbon offset programme which "provides the assurance that the credits bought to offset these emissions are from projects delivering independently verified carbon reductions as well as wider environmental and social benefits.

All contributions received will be directed via Climate Care to the Fatanpur Wind Farm project in India. This project has installed 54 wind turbine generators with a combined output of 108 MW to generate and supply clean electricity to the Indian National Grid. This ensures that fossil fuels are not financially supported and carbon emissions are not being created. In fact, this project avoids 210,000 tonnes of emissions annually. Not only is this programme helping the environment, Climate Care Director of Partnerships, Mr. Robert Stevens, said that it: "provides employment, delivers improved education through providing materials and expertise to nearby schools; and supporting a mobile medical unit – enabling improved healthcare to the local community".

### **ENHANCING THE CUSTOMER EXPERIENCE THROUGH DIGITALIZATION**

**Source:** TIACA – Johanne Cadorette

In August, Air Canada celebrated the 5-year anniversary of the launch of an innovative electronic booking experience for air freight similar to that of booking a passenger flight. Their goal in launching this e-Booking system was to simplify the booking experience and to make it fun and modern.

Accessed via Air Canada Cargo's website, the e-Booking portal is a one-stop shop for creating bookings and managing cargo shipments on Air Canada. In a few clicks, customers can book freight, have a dashboard view of the current bookings on Air Canada and track shipments. Some additions have been made throughout the years based on customer feedback such as booking specialized shipments, uploading multiple bookings, request a rate, address book, templates and a more robust track and trace.

More than 4,000 users not book using the e-Booking tool. In 2019, over 100,000 transactions were conducted on e-Booking, a 43% increase over the previous year alone. While Canadian users top the list, e-Booking is used around the world for exporting and importing goods. Technology is constantly improving and being created in the aviation industry in order to simplify processes, avoiding waiting in lines and making booking faster and more efficient, thus providing a better way to promote people using their services.

**SIX HABITS OF PEOPLE WHO KNOW HOW TO BRING THE BEST IN OTHERS**

**Source: Fast Company – Stephanie Vozza**

Richard S. Wellins, co-author of *Your First Leadership Job: How Catalyst Leaders Bring Out the Best in Others* argues that the most important job as a leader; even more than writing mission statements, setting goals, or increasing revenue, is inspiring your employees' results.

“As a leader your focus changes; your number one priority is to bring out the best in others,” says Wellins. A study done by the management consulting firm in which Wellins is the senior vice president, DDI, found that 98% of employees who have good leaders are motivated to do their best, while only 11% of employees with ineffective managers felt motivated to give their best. Being able to bring out the best in others is a skill that involves just 10% natural inclination; the other 90% has to be deliberate, says Wellins: “It needs to be practices, reinforced, and used day to day.”

Six daily habits that Wellins believes can help you bring out the best in others are:

1. Focus on the person’s strengths
2. Empathize
3. Give recognition
4. Connect to the right people
5. Don’t micromanage
6. Create safe environments

**FRANCE AND ITS NEW ENVIRONMENTAL ECO TAX ON AVIATION**

**Source: business traveller – Hannah Brandler**

Airports are facing the prospect of drastic environmental taxes, which are higher than what was initially proposed in 2019, as the French government is aiming to reduce its greenhouse gas emissions by 40 percent by 2030. The tables below show the difference between the initial and the most recent environmental taxation plan for the aviation industry, and it is obvious that the taxes for the new proposal is significantly higher than that of the initial one.

**Initial Proposal (€)**

<b>Economy Class Tickets</b>	<b>1.50</b>
<b>Business Class Tickets (domestic flights and those within Europe)</b>	<b>9.00</b>
<b>Business Class Tickets (outside of European Union)</b>	<b>18.00</b>

**New Proposal (€)**

	<b>New Proposal (€)</b>
<b>Economy Class Tickets</b>	
Flights Under 2,000 km	30.00
Flights Over 2,000 km	60.00
<b>Business Class Tickets</b>	
Flights Under 2,000 km	180.00
Flights Over 2,000 km	400.00

Not only are the proposed taxes much higher, but other measures suggested by the Convention Citoyenne pour le Climat (CCC), are:

- Banning the construction of new airports and expansion of existing ones,
- Banning domestic flights of under four hours if there is a low-carbon alternative by 2025,
- Adding further taxes on fuel for recreational flying,
- Guaranteeing that emissions are offset by financing carbon sinks, and;
- Supporting the development of biofuels.

These measures would generate €4.2 billion in taxes and reduce emissions by 3.5 millions tonnes per annum, which equates to less than one percent of France’s total emissions. These new measures are a blow to the aviation industry, with airlines still grappling with the effects of the COVID-19 pandemic which has dropped passenger numbers in France by an astonishing 80%. It is estimated that the increased taxes would cut the number of air travelers by 14-19 percent, leading to 150,000 job losses, and cost the French economy €5-6 billion in lost GDP. So far, the idea is being called ludicrous by IATA, stating that France cannot afford to put these taxes into place. As of now, the plan is undecided and will be debated in parliament at the beginning of next year.



**STATEMENT BY MINISTER GARNEAU ON MEASURES TO PROTECT CANADIANS FROM THE IMPACTS OF COVID-19 ON THE AIR TRAVEL SECTOR**

**Source:** *Transport Canada*

On 8 November 2020, the Minister of Transport, Marc Garneau, issued the following statement:

"The pandemic has hit the air sector harder than any other and it is facing a delayed and slow recovery. With passenger levels still down almost 90 per cent, air carriers and airports have been forced to take drastic measures to remain viable. Broad-based government supports like the Canada Emergency Wage Subsidy have helped to mitigate the severe impact on employees in the sector.

"However, we have heard from many Canadians who have been negatively affected. When this unprecedented pandemic broke out in the spring, Canadians who had already booked travel ended up stuck with vouchers for trips they could not take instead of getting refunds. They found themselves in a situation where they have given thousands of dollars in interest-free loans to airlines."

"The air sector cannot respond to these challenges on its own, given the unprecedented impacts on its operations. To protect Canadians, the Government of Canada is developing a package of assistance to Canadian airlines, airports and the aerospace sector. As part of this package, we are ready to establish a process with major airlines regarding financial assistance which could include loans and potentially other support to secure important results for Canadians. We anticipate beginning discussions with them this week.

"Before we spend one penny of taxpayer money on airlines, we will ensure Canadians get their refunds. Regional connectivity is important to Canadians travelling now and in the future. We will ensure Canadians and regional communities retain air connections to the rest of Canada, and that Canadian air carriers maintain their status as key customers of Canada's aerospace industry. Any assistance the Government of Canada provides will come with strict conditions to protect Canadians and the public interest."

**PUTTING HEALTH FIRST THROUGH INNOVATIVE PARTNERSHIPS**

**Source:** *Toronto Pearson*

Air travel has taken a big hit since the beginning of the COVID-19 pandemic, with consumer demand for air travel still rapidly decreasing. Toronto Pearson Airport has created an initiative called the Healthy Airport initiative that is founded on the belief that the aviation industry has the ability to adapt in the face of a challenge.

Introduced in June, Toronto Pearson's Healthy Airport initiative aims to mitigate the risks associated with the pandemic so that passengers can feel confident when travelling. Pearson is taking a science- and data-based approach, and they're working hand in hand with airlines, government, innovation partners and others to combat COVID-19. Just a few of the actions they've taken over the past few months include:

- Partnering with BlueDot to help us dynamically understand Pearson's personalized risk to COVID-19 and 150 other dangerous infectious diseases in near-real time.
- Installing CleanSlate UV disinfection units in the terminals, which are disinfecting passengers' devices in just 20 seconds without the use of any chemicals.
- Sponsoring the McMaster HealthLabs COVID-19 study in partnership with Air Canada, which has seen more than 11,000 passengers enroll since it launched on September 3, 2020.
- Utilizing a number of UV light applications throughout the airport to disinfect high-tough surfaces and even the air you breathe.

Pearson is further providing safety measures by implementing touchless processing by providing the ability for passengers to use their mobile phones to complete steps in departures and arrival processes. They also introduced technology to monitor and control interactions between passengers and staff with the goal of reducing human-to-human contact. The implementation of the Healthy Airport initiative has been successful, as a survey taken in September 2020 showed that 4 out of 5 of passengers surveyed had confidence in the safety and hygiene practices at Pearson.

**FUTURE AVIATION/AEROSPACE WORKFORCE NEWS**

**Source:** *FLYING – Rob Mark*

In late September, the media was buzzing with news detailing the tens of thousands of airline employees who would be laid off on 1 October 2020, without further government payroll assistance due to the COVID-19 crisis. Airlines worked hard to keep as many employees on payroll as possible, but since there were very few people flying, there was no work to do; and even pilots became no longer necessary.

Many young people have realized since COVID-19 began that pursuing a career in aviation was a complete waste of time, and others understand that it is a hard time for everyone, and are not that cynical. The airline industry has had bad and good cycles over history, with COVID-19 being one of the more serious bad cycle. The industry will return to normal, even though it is not known when, and young people should continue to live their dream of working in this industry. The industry has taught us that we need to reach out to young people in non-traditional places, such as big cities. We need to explain all of the wonderful benefits of working in this industry.

Katherine Creedy, an experienced aviation journalist, says that these days the aviation industry may not sound appealing to young people. To them, the industry may seem like an old industrial career that's only opportunity is becoming an aircraft mechanic, which is far from the myriad of exciting, highly skilled, well-paid opportunities in aerospace. Jobs such as researching new fuels, electric aircraft, cybersecurity and dozens of others can be options for young people looking for a lifetime careers. To combat the negative views of careers in aviation, there are organizations working in high schools to show young people the possibilities and exciting opportunities.



### PHYSICS CHALLENGES FOR GREEN AVIATION

**Source:** Physicsworld – Brian Tillotson

Once upon a time, air travel was risky, costly and highly polluting. These days, airlines are the safest way to travel long distances, as well as being cheaper, quieter and more fuel-efficient than their predecessors. The convenience of air travel has somewhat of a downside, though, as more and more people are flying, and more companies are sending cargo by air. Global emissions from flying have been consistently rising, now at 2 percent, despite the fact that the fuel burned per passenger-kilometre has plummeted.

Some airlines are taking the initiative to make their aircraft greener with modern updates, as well as implementing completely new, more fuel efficient aircraft into their fleet. For example, Boeing's 787 Dreamliner which is built with engines that are fatter in the front so that they put less energy into the airstream for the same amount of thrust. This aircraft also has wings that are curved to reduce fuel-wasting drag that is made with materials that are lighter, which reduces fuel burn. These materials may have issues in the production stages and in the use of the aircraft, but engineers have found ways to overcome them. For example, some materials used for aircraft structure can cause a problem if the aircraft is struck by lightning if the material is not compatible with a lightning strike. This may cause damage to the aircraft. Engineers have found ways to combat this issue, such as including sufficient conductive oaths between components, skins thick enough to prevent melting through, and internal sealant over gaps or joints to prevent arcs and sparks.

Another way to make aircraft greener is to invest in electric aircraft. The idea is that jet turbines would boost power for take-off while batteries or fuel cells would provide steady power for cruise. Of course, it would be even better if they could fly purely on renewable energy (such as solar or hydro) or nuclear power, which emit no carbon. Although, completely battery powered aircraft could only work over tens, or perhaps, hundreds of miles, but it cannot go very long distances. Scientists are working their way towards a solution to this problem, and are optimistic.

In essence, the commercial aviation sector is continuing to refine and develop traditional aircraft as it has throughout its 100-year-old history, constantly seeking to reduce costs and lower their impact on the environment. But there are now new directions for the industry too, in the form of super-efficient new airliners that will look quite different, electric-powered rotorcraft that revolutionize urban transport (see box above), and hypersonic aeroplanes that protect the world's environment while shrinking the distance between its people. Within decades, air travel may look very different to now.

### AVIATION POLLUTION TARGETS SET OUT IN A NEW US BILL

**Source:** biofuels international

The US has introduced an innovative bill that takes a first step toward cutting pollution from aircraft, called the Sustainable Aviation Fuel Act. This comes from the goal for aviation to cut emissions to net-zero emissions by 2050. The bill provides incentives for the production of sustainable aviation fuels that meet international standards. What makes this bill innovative is that the tax credit is keyed to the amount of climate benefit the fuels actually deliver. This encourages fuel developers to produce fuel that meet and beat international standards.

The bill focuses on the life-cycle of the fuel from growing, collecting, and producing the materials, to the emission outputs from burning the fuel during flight. To achieve the bill's tax incentives, sustainable aviation fuels must achieve at least a 50% reduction in emissions compared to conventional jet fuel.

### TSB WATCHLIST 2020 – RELEASE TRANSCRIPT

**Source:** Transportation Safety Board of Canada

For 10 years, the Transportation Safety Board of Canada (TSB) has been issuing its watchlist of key safety issues – the ones that most need to be addressed to make Canada's transportation system even safer. New issues are constantly being added and the Watchlist is always evolving.

The new issue on this year's edition is the risk of **unplanned or uncontrolled movement of railway equipment**. An issue take off of the list was **slow progress responding to TSB recommendations**. Some other important issues on the Watchlist are:

- Safety Management
- Regulatory oversight or surveillance
- Runway overruns
- Runway incursions
- Commercial fishing safety
- Following railway signals
- Fatigue

The TSB will continue to follow up on each of these issues, reporting progress as it happens and bringing attention where it's needed.



### EUROPEAN AVIATION ASSOCIATIONS COMMIT TO NEW ZERO CARBON EMISSIONS BY 2050

**Source: International Airport Review**

Over 20 associations collectively representing the entire European aviation ecosystem have announced a joint commitment to work with policy makers to achieve net zero  $CO_2$  emissions by 2050. This commitment is a part of an analysis that was released on 16<sup>th</sup> November 2020 detailing the ways that aviation can recover sustainable and more resiliently from the COVID-19 crisis. One of the critical components of this commitment is restoring the public's confidence in aviation. Some other important factors are maintaining connectivity, skills and employment and preserving the European internal market and its competitiveness, and ensuring aviation is more resilient to future shocks. EU leaders are also urged to join and actively support an EU Pact for Sustainable Aviation by the end of 2021 to meet sustainability goals. This ensures connectivity between the goals of the public, aviation employees and stakeholders.

In order to further reduce aviation's environmental footprint, the commitment calls for, among others:

- An EU legislative framework to promote the uptake, production and deployment of sustainable Aviation Fuels (SAFs)
- Funding and investments to enable the acceleration of low-carbon aircraft innovations, such as electric and hydrogen
- An incentive scheme for fleet renewal, couples with retirement
- Increased public co-funding rates for Civil Aviation Research & Innovation (lean Aviation and SESAR) through EU recovery mechanisms
- The revision of the Single European Sky (SES) and continuation of the EU Emissions Trading Scheme/CORSIA.

Europe's aviation industry has committed to connecting all parties involved and working towards the goal of carbon neutrality by the year 2050, and to strive for a more socially sustainable, competitive and more resilient sector.

### TAKE CONTROL WITH CHANGE MANAGEMENT

**Source: NBAA**

The COVID-19 pandemic has forced every segment of business aviation to reconsider the definition of operational excellence. Things that were once considered routine are now almost impossible to do. Upping the operational excellence of a business paired with a worldwide pandemic is not going to be easy to do, but it is possible. By using the proven principles of change management, organization can minimize the impacts of change on people, passengers and operations.

Change management typically can be employed in situation that introduces new processes to an operation. "Thankfully, change management is designed for a problem like COVID-19", says David Rya, vice president of aviation for a West Coast Part 91 operator. "As we adapt to the changes that need to be made because of the pandemic, change management fits right in. It's important for our industry to know that we have many tools to help us get through this, and change management is one of those tools."

"I think with COVID-19, we'll see change management plans active for multiple years," says Ryan. While each change management plan is temporary, their impact can be lasting. The plans will consist of every party involved in the aviation industry, such as flight crew, ground handlers, pre-flight suppliers, cleaner, trip planners, etc. Ryan considers COVID-19 pandemic to be a chance for the aviation industry to upgrade risk mitigation, safety, new operations and procedures, build new facilities and be prepared for any other threats to the industry.

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