Jetstream

2019 AND BEYOND

GLOBAL AEROSPACE

INSURE WITH CONFIDENCE

Letter from the CEO:
What a Difference a Year Makes

Nick Brown
CEO, Group Chief Executive

Over the past 12 months, aviation has been in the headlines for all the wrong reasons. If you were someone who believed everything you read, you might well have concluded that the industry has done nothing over the past decades to improve safety nor to reduce emissions, and indeed that aviation makes no contribution to the global economy whatsoever. There is even now a term to make those who travel by air feel guilty: “flight shaming.”

To be frank, it has not been a great year to be in the aviation and space insurance business either: overall market loss experience has been the worst in nearly 20 years—a perfect storm when combined with rates only just coming off historical lows.

Of course, on all sides of the industry we are used to dealing with crises and working through the issues that confront us. With that in mind, we take a look at some of the current challenges in this edition of Jetstream. How should we view recent entry into service problems experienced with new products? How do we get the next generation of pilots into aviation careers? How can we manage the unpredictability of jury trials in the U.S.? What’s next for the space market?

We also take a look at the exciting prospects for advanced air mobility (a vision of the future of aviation first dreamed up in those black and white sci-fi movies), and we try to get a feel for how automation is going to develop in our sector of the insurance industry.

This year, I predict that the story on aviation in the eyes of the media will turn positive again and I hope and believe that the setbacks of 2019 will seem like ancient history. Here’s to an uneventful, peaceful and prosperous 2020!

Space Insurance Update:
Enabling a Rapidly Evolving Industry

The space market has been very competitive over the last 15 years and we have seen a dramatic fall in premium rates.

In the last two years, there have been at least three large claims, such as last July’s failure of a Vega launch vehicle carrying an Earth observation spacecraft for the United Arab Emirates—one of the largest single losses at EUR368 million. Other recent total losses include Chinasat-18 (USD250 million) and Worldview-4 (USD183 million).

The Changing Space Insurance Landscape

Fifteen years ago, the annual market premium allowed for three maximum-value total losses before profitability waned. By contrast, the entire 2018 market premium was only 70% of the maximum single exposure. This imbalance proved to be unsustainable given the loss experience, and not only are premium rates rising again now, but certain coverage restrictions are returning under space policies.

More Challenges on the Horizon

Recently in the commercial geostationary orbit (GEO) communication satellite market, which has been the mainstay of the space insurance market in the last 35 years, orders have declined. However, the rapidly changing demand in satellite applications has led the space industry to move from large GEO communications satellites to new concepts and technologies.

THE NEW-GENERATION GEO spacecraft use electric propulsion for orbit raising. This technology allows for larger payloads, more onboard digital processing and more flexibility. Constellations of smaller spacecraft in low Earth orbit (LEO) and medium Earth orbit (MEO) is another industry trend.

We have already seen the launch of the first six OneWeb spacecraft with the rest of their initial constellation of 600 satellites to be launched soon. SpaceX has also launched 60 of their 30,000-spacecraft constellation, Starlink.

In response, over 100 start-up companies are entering the small launch vehicle market. The traditional launch services providers such as United Launch Alliance, Arianespace and Mitsubishi Heavy Industries are also developing new launch vehicles to compete with SpaceX and Blue Origin.

WITH COMMERCIAL PASSENGER SUB-ORBITAL LAUNCHES imminent, human spaceflight will become more commonplace. The “NewSpace” arena also has projects ranging from active debris removal and artificial shooting stars missions to lunar gateway and space hotel concepts as well as human lunar and Mars missions.

Space insurance has always been an enabler of new projects, providing both hull and liability coverages. Despite the market and technical challenges, space insurers will continue to support the industry going forward.

Aviation Advances:

Addressing Rising AOG Levels Related to Aircraft Technology Advances

The commercial air transport industry is experiencing an unprecedented level of long-term AOG (Aircraft on Ground) issues resulting from mandated groundings and multiple Airworthiness Directive (AD) regimes, affecting both variant and new type power plants. To understand the reasons behind this, we need to consider where the industry is in terms of the large transport aircraft development cycle.

SINCE THE AIRBUS A330 AND BOEING 777 entered service in the early 1990s, there have been few major changes in the design of contemporary passenger aircraft. The arrival of the Airbus A380 was a step change in size, however the technological advances were more organic. It was not until the arrival of the B787 and A350 that we experienced wholescale change in terms of structure and systems. The power plants on these aircraft, built on the pedigree of the B777/A380 engines, incorporate the latest design of gas path components.

When these types entered service, the industry was going through an upward growth cycle. Demand since the downturn in 2008 was at an average of 6% per year. This continues through the present day, with future predictions indicating the industry will require in the order of 40% more aircraft by 2028. This puts pressure on manufacturers to produce ever-more-efficient aircraft in greater numbers to keep pace with potential increases in fuel price and the downward pressure on ticket pricing.

WHILST AIRFRAMES WILL HAVE THEIR PART to play in this, it is clearly the engines that will have the greatest effect. This has led to the NEO (New Engine Option) concept whereby the latest technology engines are married to contemporary airframes. Airbus were the first to see the potential in this, quickly followed by Boeing and Embraer.

Pratt & Whitney, CFM, Rolls-Royce and GE have all developed engines for installation on current airframes such as the Airbus A320 series / A330, Boeing 737 Max / B777X and Embraer E2. These engines are a mix of developed variants and completely new types. The greater efficiencies offered by the engines encourage airframe manufacturers to improve the overall payload range performance of the types, again placing greater pressure on engine manufacturers to achieve their projected targets in terms of reduced weight and fuel burn reduction. This is also true of B787s and A350s with the development of longer-range models.

The Operator/Manufacturer Power Shift

THERE HAS BEEN A PERCEPTIBLE SHIFT in the balance of power between operators and manufacturers. Twenty years ago, manufacturers would be driving the development of the product internally, based upon commitments by airlines to purchase and operate the types. The volume of aircraft being produced was less in total terms and the delivery rate lower. In the current, highly competitive market place, operators are putting pressure on manufacturers to produce more efficient and attractive aircraft in shorter timescales at challenging delivery rates.

It is this industry pressure that drives the need for manufacturers to develop older types to the limit of what is viable and introduce new types to achieve a step change or paradigm shift. This inevitably increases the risk that reliability and durability issues may arise when airlines begin to operate these aircraft. Many of the types are developed as variants in order to be attractive to operators, and the regulator's oversight and certification of the type is on that basis. This is not the case with completely new types such as the Pratt & Whitney Geared Turbo Fan (GTF), which spent a considerable period of time in the design, testing and development phases before achieving type certification. With a variant, the regulator will be, to an extent, guided by the manufacturer as to the differences between the new and previous models. Their role in this regard is apparently being reconsidered in the aftermath of the B737 Max accidents.

Checks and Balances That Ensure Suitability and Safety

Whilst there is inevitably a need for the regulator to rely on the manufacturer's knowledge and testing of its product, as they themselves generally do not have a deep technical understanding of that product, there are tried and tested checks and balances that they can apply to assess the suitability and safety of the product in terms of certification.

This will become more important as technological advances result in more significant changes such as the advent of hybrid /electric power, different fuel sources and airframe configurations. Fail-safe design and robust system redundancy are key to the airworthiness of any type. The means of achieving them may change with technological developments, however the principles remain the same.

The Many Factors Affecting AOG Levels

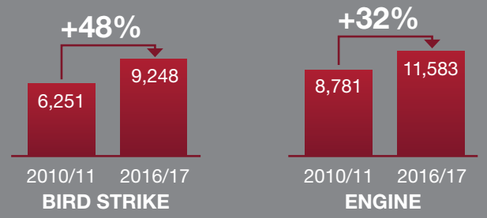
With the above in mind, it is apparent that the increasing number of groundings and long-term AOG issues currently being experienced are the result of an accumulation of factors within the same timescale. The development potential of existing types reaching their limits, new types entering service with inevitable teething problems, the high rate of deliveries achieved in a short period of time and operators having less flexibility in their schedules due to higher utilization are factors that have all played their part in the overall problem. If each had occurred separately, it may have been containable to a specific aircraft or engine type. With them coinciding, the effects on the industry and on manufacturers have been significant.

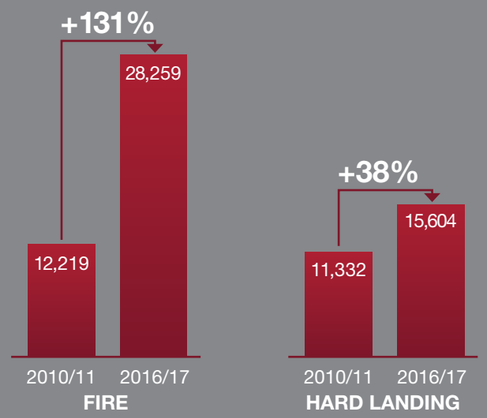
> *Operators are putting pressure on manufacturers to produce more efficient and attractive aircraft in shorter timescales at challenging delivery rates.*

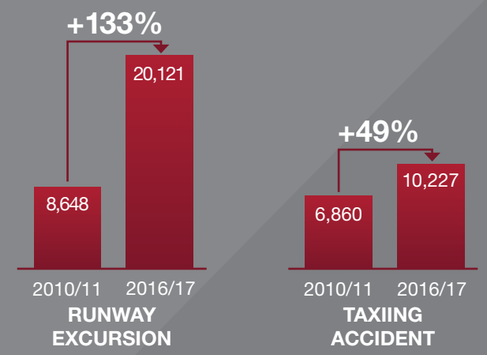
It is inevitable that the problems, both airframe and power plant related, will be resolved and the aircraft will achieve the reliability and operational performance that was originally intended. This may take some time and will lead to disruption for airlines and manufacturers continuing into the near future. Looking forward, perhaps the industry needs to reassess its expectations of technology in terms of what is possible within certain timescales when trying to achieve even higher gains from mature models and uneventful entry to service with new types and technologies.

Increased Claim Severities in the Data

Average claim size has been on the rise since 2010. Common causes include:







Source: Global Aerospace

Repair Cost Inflation: What Is Going On?

In recent years, western economies have enjoyed incredibly low levels of price inflation overall. Certain costs have bucked the trend, however, as you will know very well if you have tried renting an apartment in London or San Francisco. Another of these "outliers" appears to be the cost of repairing aircraft hull damage. So, how big is the problem and what are its causes?

EARLIER THIS YEAR, Global's actuaries looked at the cost of larger partial hull losses from our airline portfolio over a six-year period (2010/11 to 2016/17). They found that for all loss causes (e.g., bird strike, runway excursion, taxiing incidents), the average size of the claims rose between 32% and 133% depending on the type of loss. By way of comparison, the U.S. Consumer Price Index (CPI) rose by about 10% in the same period.

Understanding Repair Cost Increases

This trend is just as apparent in our general aviation business. To understand the reasons behind it, it is necessary to look at the way aircraft and components are manufactured today and the way in which practices in the industry have changed.

FOR OLDER AIRCRAFT, the issue is often the availability of spare parts because manufacturers today keep very little parts inventory on hand. This means a replacement part may have to be remanufactured at very high cost. Additionally, the availability of certified refurbished parts has become much more limited as many manufacturers are reluctant to accept repairable damaged parts in exchange for discounted new parts.

ON MODERN AIRCRAFT, however, the biggest factor pushing up costs is technological progress. Most people are aware that repairs to components made from composite materials can be much more complex and expensive than was the case for those made from traditional materials like aluminum. In fact, where the damage requires special tooling or proprietary bonding techniques, there may be no option available for repair other than to contract with the OEM. As an example, a wing tip repair on a "classic" metal airliner would not typically exceed USD50,000. The same repair on the latest carbon fibre wing tips can easily cost USD1.5 million.

Composites, of course, have brought significant weight, performance and efficiency gains, and their use in fuselage parts and control surfaces is increasingly becoming the norm. Fundamental changes in the design and manufacturing of power plants have also driven impressive performance improvements, but with the downside of increased repair costs.

For a start, newer engines are being built to tighter tolerances, which means that it takes less damage to cause an internal component to fall beyond the repairable limits set by manufacturers. In older designs, this might have meant replacing a disc from the compressor, for example. But in many newer engines, compressors are cast as a single unit, which means that the entire unit has to be replaced even if the damage is only in one stage. In some of the latest jet engines, even the fan set is made as a single unit, which means that replacing one or two fan blades following a bird strike is no longer an option.

Prevention Beats Cure

FOR INSURERS, this inexorable rise in repair costs ultimately must be reflected in the premiums charged for hull coverage, the deductibles that apply or a combination of the two. On the other hand, for aircraft operators, FBOs and ground handlers, investment in loss prevention measures increasingly looks like money well spent, whether in training and awareness initiatives or in the purchase of technology such as proximity sensors on ground service vehicles.

At the end of the day, prevention beats cure any way you look at it.

Claims Update:

So, Your Company Has Been Sued

The phrase “Millions for Defense, Not One Cent for Tribute” is oft cited by clients who find themselves or their company in what appears to be a non-meritorious lawsuit. In these cases, we can become enamored with our defenses and we embark on a scorch the earth litigation. We want to win, we want to tell our story, we do not want to set precedent and we want to make sure the plaintiff and the attorney know we will not give up.

IT IS ALL WELL AND GOOD to put a tough face on what appears, at the outset, a winnable lawsuit. For experienced litigators, however, the vagaries of the U.S. judicial system are matters to contend with. Each state has its own laws and procedures, each court has its own rules and, most importantly, every jury is different from the last and each individual juror is unique.

Therefore, as we begin our journey to defend the lawsuit, we must always be mindful of the twists and turns of litigation: surprise witnesses, adverse rulings and unhelpful documents. Although it is a statement of the obvious, the only way to put on a successful defense or to come to a successful resolution before trial is to be prepared.

Litigation Management

The receipt of a Summons and Complaint is a routine event for some and for others a first-time experience. In either case, there are general steps that should be taken. At Global Aerospace, we have developed an outline of how we, in partnering with our clients, manage litigation.

At the onset, we believe in collaboration with the insured, insurer, retained counsel and broker. Under the common interest doctrine, we are able to share ideas, strategies and reserve information while allowing us to preserve confidentiality. We work as a team to set forth a course of action from date of service to the ultimate resolution—by settlement or verdict—of the lawsuit.

Although many times we would like to try the case until verdict, the risks of trial must be carefully assessed. At the outset, the defendant must establish a Litigation Hold that advises the relevant employees of the pending litigation with instructions not to destroy documents or any relevant data. Early retention of defense counsel with expertise in the matter is critical for early evaluation and protection of privilege.

A COMMON PITFALL IN LITIGATION is the late discovery of documents and witnesses that may have an adverse effect on the defense. Therefore, it is incumbent upon the defendant to self-discover, i.e., to know the documents, identify the company witnesses and understand the pros and cons of the defense.

Assessing the Landscape and Evaluating Our Defense

Understanding the relevant legal landscape requires the defense team to identify key issues in order to evaluate the chances of success or early resolution. Considerations include: jurisdiction, state or federal court, codefendants, choice of law analysis, joint and several liability (a finding of 1% liability exposes us to 100% payment) and pre-judgment and post-judgment interest (this varies by state and can be as high as 12%).

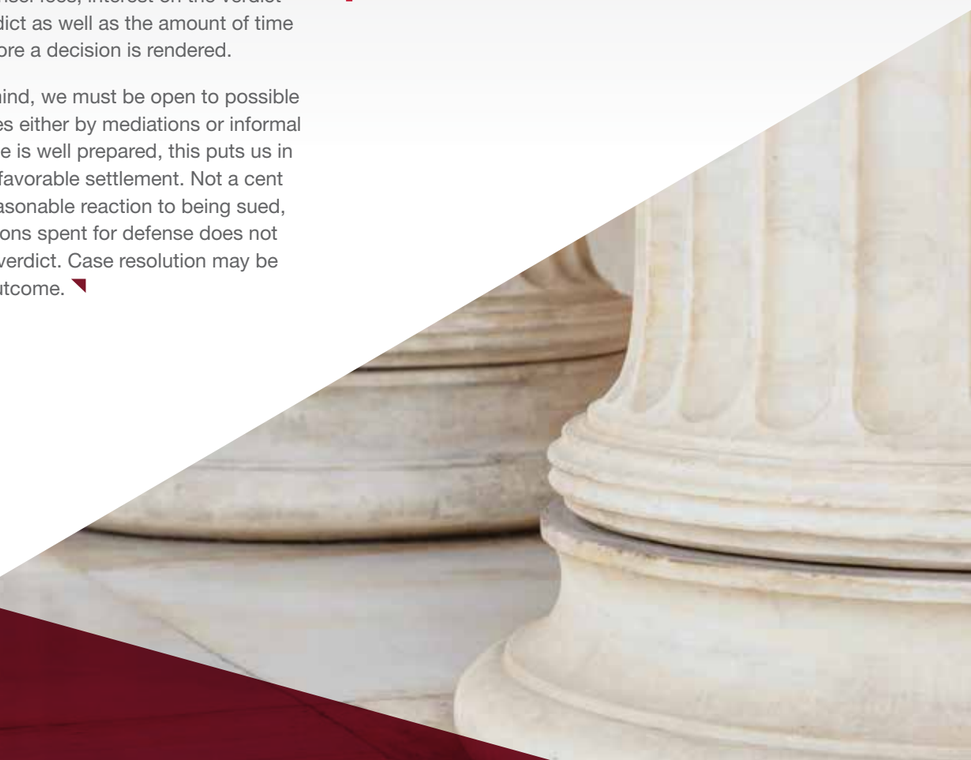
IN EVALUATING LIABILITY AND DAMAGES, a mock jury or a focus group is a great resource. In these exercises, lay people from the same or similar backgrounds of the eventual jury pool are presented with both the plaintiff and defense arguments and witnesses. We learn what jurors think of our defense, our witnesses and our counsel. Most importantly, mock jurors are asked to award damages. If punitive damages are alleged, a mock trial gives us the ability to assess the amount, if any, jurors are willing to award.

Other Costs to Consider

Consideration must be given to the possibility of appeal, regardless of which party prevails. The cost of an appeal includes appellate counsel fees, interest on the verdict and a bond on the verdict as well as the amount of time in months or years before a decision is rendered.

With these factors in mind, we must be open to possible settlement opportunities either by mediations or informal meetings. If the defense is well prepared, this puts us in the best position for a favorable settlement. Not a cent for tribute may be a reasonable reaction to being sued, but the fact is that millions spent for defense does not guarantee a favorable verdict. Case resolution may be the most successful outcome.

We work as a team to set forth a course of action from date of service to the ultimate resolution—by settlement or verdict—of the lawsuit.



Expert Perspectives:

Automation and Aviation Insurance

There seems to be general agreement in the aviation insurance industry—as in most business sectors—that automation can deliver improvements in everything from performance to profitability. But if you go beyond that high-level assessment, what do experienced professionals really think about automation? We posed some key questions to a group of industry experts.

Where does digital sit in your business priorities?

"'Digital' means something different depending on company size. Our larger member companies embrace and build on digital capabilities constantly, leveraging data and offering value-added services to insurers and clients. Pressures on budgets and spending reduce the ability of smaller entities to embrace and utilise changes in digital technologies. Mid-tier members are often the real innovators, as they have the budget to invest and the size to deploy technology effectively."

JAMES LIVETT
Associate Director
London & International Insurance Brokers' Association

What's next for your business with technology?

"All our members have digital somewhere in their priorities. Some are leading the way and others are being more cautious. Many members are collaborating with start-ups to look at new innovations. We have members exploring a wide range of advances including augmented reality, AI, blockchain and analytics. It's clear that many of our members see new technology as having the potential to be truly transformational."

LOUISE DAY
Director of Operations
International Underwriting Association

Can technology ever replace people in your business? If so, where?

"I don't think we'll ever see technology completely replace humans in the insurance industry, especially in roles that require subjective judgment and experience for claims management and underwriting. I do think there will be a shift in the types of skill sets that will be required in the future. It's entirely possible that a background in IT instead of one in accounting or law might become the new standard as companies implement automation and AI."

JEFF BRUNO
President and Chief Underwriting Officer
Global Aerospace

Aviation Talent Shortage:
The Time to Act Is Now

Aviation is an industry that hires, trains and supports some of the brightest, most skilled and dedicated people working today. It has to, in order to ensure that aircraft meet all safety requirements and flight departments continue to operate efficiently and effectively. That's why there's growing concern about the state of the aviation talent pool.

THE 2019 BOEING PILOT & TECHNICIAN OUTLOOK, which covers personnel demand in the business aviation, commercial aviation and civil helicopter industries, states that "804,000 new civil aviation pilots, 769,000 new maintenance technicians, and 914,000 new cabin crew will be needed to fly and maintain the world fleet over the next 20 years."[1] Unfortunately, companies that have historically had an ample supply of candidates for open positions are now seeing the pipeline start to dwindle. And this challenge doesn't just involve pilots, although their numbers are dropping as well. The talent shortage affects flight crews, ground crews, scheduling and operations teams, and the vendors that support aviation.

A "Perfect Storm" Is Brewing

What's behind the decline in the talent pool? It's a multifaceted problem, of course, and one that's continually evolving. However, it's clear that certain factors are coming together in a way that none of us in the industry have seen in our lifetime.

First, as the world population grows, so does the demand for aviation and the expertise it requires. Consequently, talent resources are being stretched thin. Second, numerous aviation professionals are approaching retirement age. For example, according to the U.S. Bureau of Labor Statistics, the median age of aviation mechanics is 51, which is nine years older than that of the U.S. workforce in general.[2] As the individuals on the leading edge of this wave start to leave, the industry is feeling the pinch.

Third, regarding business aviation in particular, more pilots than ever are changing course and going to work for the airlines, lured by better compensation, more predictable schedules, robust retirement benefits and job stability. And finally, the number of people pursuing careers in aviation has leveled off in recent years or is even declining by some estimations.

As a result, many experts feel that the numbers have moved beyond concerning and are headed in the direction of critical. Fortunately, one factor the industry has in its favor is a growing awareness of the issue. At one point a small problem left to HR departments to wrestle with, the increasing talent shortage now has the attention of everyone from frontline workers to C-suite decision makers. This is good, as it'll require a concerted effort to right the (air)ship!

Taking Steps to Address the Aviation Talent Shortage

What can be done to reverse the industry's troubling downward talent trend? Surely the solution will have to be as multifaceted as the problem. Stakeholders must:

INCREASE OUTREACH EFFORTS. No doubt, the number of young people considering employment in aviation is directly related to the number of them who are exposed to aviation as a career path. So, we must all create more opportunities for young people to learn about our industry, and their exposure to the world of aviation should start as early as elementary school.

PROVIDE BETTER TRAINING. To create optimal educational environments that stimulate and challenge team members, aviation has to adopt new teaching modes and methods including immersive technologies and adaptive learning.

IMPROVE WORK/LIFE BALANCE FOR EMPLOYEES. Being on-call and ready to assist with flights taking place at any time of the day or night may have some allure for people new to the industry. But very quickly, that appeal diminishes and most employees want a more standard schedule and the stability it provides.

MATCH THE COMPENSATION OF OTHER INDUSTRIES. To maintain a healthy talent pool, business aviation specifically must provide the kind of salaries and benefits offered by the airlines and other industries that are enticing good employees to leave.

MAKE IT EASIER TO HAVE A CAREER IN AVIATION. While the requirements around training and certifications in our industry were developed for safety reasons, any aspects of them that don't support that mission and instead discourage people from pursuing an aviation career should be considered for modification or elimination.

SUPPORT EMPLOYEES THROUGH MENTORSHIP PROGRAMMES AND OTHER INITIATIVES. One of the many appealing aspects of a career in aviation is the sense of being part of a "family." That feeling can be enhanced through mentorship programmes that teach employees new skills but also reassure them that they have strong connections with knowledgeable peers they can turn to when they need advice or support.

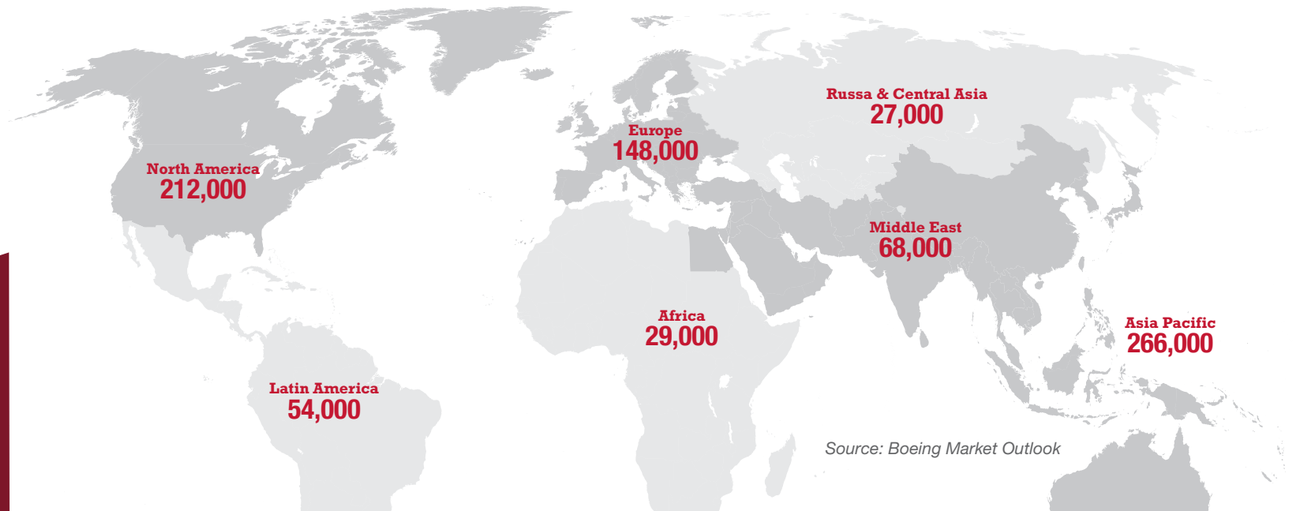
What's on the Horizon?

Aviation is a "can do" industry. Dealing with the workforce issues that we face today will be no different. We must get started now, and we will. But there's every reason to believe that the energy and resources aviation is bringing to bear on the challenge will, before long, reverse the talent shortage and attract the enthusiastic newcomers that will be needed.

[1] https://www.boeing.com/commercial/market/pilot-technician-outlook
[2] https://www.atec-amt.org/news/category/workforce

> *The talent shortage affects flight crews, ground crews, scheduling and operations teams, and the vendors that support aviation.*

New Pilot Demand: 2019-2038
Pilot Outlook by Region



Source: Boeing Market Outlook

Advanced Air Mobility: The Next Evolution in Aviation?

The aviation sector may be on the cusp of major transformation. While it has continuously developed over the past century, new technologies are currently being developed that have potential for a transformative impact.

Drawing on the success of small, unmanned systems, combined with the pervasive success of ride-hailing apps, many see the growth of urban-passenger-carrying, autonomous or semi-autonomous aircraft as being a natural evolution in air travel.

Advanced Air Mobility (AAM) vehicles promise to be able to move people and cargo more quickly, safely and quietly than helicopters, and at a reduced cost. Furthermore, proponents predict AAMs could provide sufficient capacity to alleviate ground congestion and with a relatively low carbon footprint.

Two questions immediately come to mind. Can these vehicles provide efficiency at an affordable price? And, what is required to make the vision a reality? This article focuses on the second question, with an unapologetic bias toward questions of safety.

Challenges to Successful AAM Implementation

There are many hurdles to the AAM concept being successfully realized.

AIRSPACE MANAGEMENT. The existing airspace ecosystem involves a reliance on technology, combined with human interaction and skill. How AAM vehicles can coexist with low-flying helicopters and other piloted air traffic creates many issues.

Will onboard artificial intelligence coexist with traditional piloted aircraft using see-and-avoid traffic separation? Are distinct air corridors a potential short-term solution? NASA and others envision a digitized and connected traffic management system that not only caters to AAM craft, but to existing airspace users as well.

GLOBAL HARMONIZATION. Regulators around the world have failed to implement one common set of rules for small Unmanned Aircraft Systems (UAS). While the local nature of most UAS missions might provide justification, a lack of cross-border parity of regulations has created a confusing environment.

It would be a mistake to allow numerous rules for AAM since the scope and reach of the technology is yet unknown. Furthermore, it is easy to predict how these vehicles must interact with aircraft in venues like major airports.

GROUND INFRASTRUCTURE. Many envision using existing structures for managing flight traffic (tops of buildings, multi-level parking lots, under-utilised piers, etc.). Others plan to use purpose-built vertiports, where operators can share space and cost. Whatever the answer, the relatively few downtown heliports in cities today should be a sobering data point. Adding to the challenge is the likely need to provide fast-charging stations, security checks and a set of contingency landing sites in case of in-flight emergency.

REGULATION AND CERTIFICATION. Still recovering from the unfulfilled vision of Very Light Jets (VLJs), most regulators are taking a measured approach to AAM. Reluctance to chase the next big thing is not their only reason for hesitation, however.

With air travel becoming significantly safer each decade, regulators are disinclined to allow unproven aircraft to operate in our skies. Contributing to their reluctance is the less-than-stellar record of UAS. While human failure is a factor in many unmanned accidents, the fallibility of the aircraft systems should not be underestimated.

Regulators have a herculean task in establishing aircraft safety/certification criteria and pilot requirements for such a wide variety of designs. To ensure safety, the industry must take a crawl, walk, run approach, especially where passengers are involved.

The aviation industry has flourished to a great degree because it was prepared to take risks and to continually push boundaries. Maintaining progress against an unparalleled period of overall industry safety places an additional burden on AAM visionaries.

ALTERNATIVE POWER PLANTS (APPS) AND AERODYNAMIC INNOVATIONS. Some AAM companies are using existing airframes and aircraft models as testbeds for APPs. Others are going with a ground-up approach, designing aircraft that use both vertical and horizontal thrust and any number of rotors, as well as electric and hybrid power plants. Either way, the complication of introducing aircraft equipped with new power sources makes the regulatory and practical task of adoption harder still.

SOCIAL ACCEPTANCE. Also important is the need to convince residents of impacted communities of the benefits of additional air traffic. Noise concerns and questions around privacy, safety on the ground and infrastructure cost will arise. Persuading potential passengers of the safety of AAM vehicles will require effort as well.

Social acceptance does not end there, however. Persuading potential passengers of the safety of AAM vehicles will require time and commitment.

INVESTMENT. Although many of today's start-ups are backed by deep pockets, the companies currently competing to win the race to commercial realization face strong headwinds. Those involved need to strap in for a long ride to reap the benefit of the USD17.7 billion market predicted for 2040 by Deloitte Insight's 2019 report.

Patience and Collaboration Will Be Key

The diverse technologies required for the development of Advanced Air Mobility already largely exist. The challenge is in bringing them together in a way that satisfies regulators and the wider population. There is still a long way to go before we see aviation as an extension of our favorite ride-hailing app or as a simple, affordable way to get to the airport during rush hour.

Stakeholders need a steady hand and a collaborative approach to shepherd in the next phase of aviation in a safe and sustainable manner.

GLOBAL AEROSPACE

INSURE WITH CONFIDENCE

global-aero.com

GA.43.4 (1/2020)