

Letter from the CEO: Expect the Unexpected in 2019

The year 2017 was officially the safest on record for commercial aviation—but most aviation insurers still produced losses for the year. This telling statistic is all you need to know in order to understand why some underwriters chose to withdraw altogether from the sector in 2018, and why those of us who stayed had to start seeking premium increases.

There is no cause for panic, however. This is not a market in crisis (as was the case in the aftermath of the 2001 terrorist attacks), it is rather a market that needs to get back to a sustainable level after more than a decade of price reductions.

The safety record in 2018 shows that there is no room for complacency, with both fatal airline accidents and fatal helicopter accidents making headlines again. It serves as a reminder that every corporation, however well managed, needs to be prepared for the worst. In this issue of Jetstream we have chosen to look at the topic of crisis communications, with some expert advice on how to develop an effective strategy.

We also offer some observations on a topic that is seldom out of the headlines—that of cybersecurity—and make a retrospective assessment of the lengthy litigation against aviation defendants following the 9/11 attacks, which finally concluded a year ago. Looking into the future we ask whether technology is going to completely change the business of insurance, and review the latest innovations in aircraft and cabin design.

I very much hope that you find something of interest in this edition of Jetstream and wish you all a healthy, happy and prosperous 2019.



Nick Brown *CEO, Group Chief Executive*

From Biplanes to Drones:

Global Celebrates 95 Years as an Aviation Insurance Leader

Global Aerospace traces its history back to 9 August 1924, the day on which the original British Aviation Insurance Group (BAIG) was founded in London.

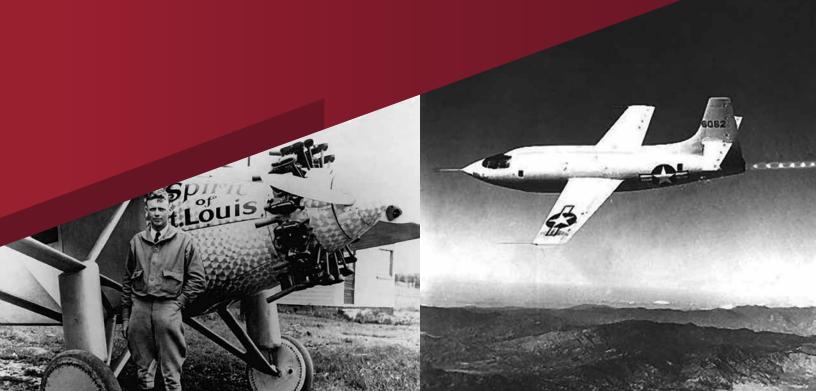
Five years later in the United States, Chubb & Son and The Continental Corporation—two large insurers—joined forces as Associated Aviation Underwriters (AAU) to underwrite airplane insurance.

The two companies grew and evolved through the years, with BAIG becoming BAIC (British Aviation Insurance Company) before later forming part of a new BAIG when a number of companies combined to form a single pool and the largest provider of aviation insurance in Europe. Throughout all the changes, however, their commitment to exclusively serving the insurance needs of the aerospace industry never wavered.

Global Aerospace was formed in 2001 by the merger of BAIG and AAU. From the world's tentative first steps into commercial aviation following World War I, to the rapid expansion of civil aviation after World War II, to the new era of unmanned aerial vehicles, we've been a trusted partner to aviators every step of the way. And when we reach the century mark, we'll look ahead to another hundred years as an aviation insurance leader.







Crisis Preparation:

How Would You Cope in a Crisis?

We live in turbulent times, with global levels of uncertainty continuing to rise. Consequently, it has never been more important for companies to have a robust structure in place to cope with a crisis. Just look at several high-profile companies' recent media experiences and it is clear that even the best-run enterprises struggle when unprepared to deal with negative incidents.

There is a maxim that states: "Before a crisis, time is your friend; during a crisis, time is your foe." In other words, now is the time to seize the opportunity and make sure you have the messaging, the methods, and the right manner to stand in front of the world's media, your staff and peers in the industry, and the families affected by a tragedy and provide both cold, hard data and heartfelt condolences. It is no easy task.

A Crisis Unfolds...

Imagine a very difficult but highly plausible potential crisis that puts your organization's leadership in front of the cameras:

Before a crisis, time is your friend; during a crisis, time is your foe.

2:05 A.M. Soon after your flight AD123 has gone missing en route from New York to Los Angeles, major media outlets and social media channels are going crazy with speculation of a crash with many injuries and fatalities. The situation has been unfolding for hours now, but there are few hard facts available.

7:15 A.M. The major TV networks are clamoring for an interview. Your CEO will be live on air soon.

9:45 A.M. Victims' families are initiating contact at all levels of your organization looking for more details on their loved ones.

1:15 P.M. Federal investigators on site are requesting information and expertise from your company.

3:30 P.M. Attorneys representing the victims have begun contacting your legal department.

6:00 P.M. You learn that members of your aircraft maintenance team have secured their own legal representation.



AND THIS IS JUST THE BEGINNING. The demands on your company's time—especially that of key managers and executives—will be intense. How are you going to respond? The world is, literally, waiting to hear from you. Plus, you still have a business to run.

Strategies for Emergency Communications

Mark Webster (Financial Times, ITN) and Martin Young (BBC Panorama, Newsnight and Rough Justice) hosted a session titled "Managing a Crisis and Dealing with the Media" at our London seminar. This engaging discussion included insights from courses the two offer on the practice of communication and presentation. But perhaps the biggest takeaway from this session and others like it is this: the time to prepare for the crisis you hope never occurs is now.

While every incident faced by aviation professionals is unique, there are basic actions that can be helpful to organizations affected by an emergency. Some of these can even minimize the negative impact on the organization. Fireside Partners Inc., a worldwide aviation emergency response specialist, recommends some immediate actions for communications personnel.

Contact: info@firesideteam.com, Fireside Partners Inc. and adrienne@chevron2.co.uk, MPW Limited



Fireside Partners Recommends These Actions

- 1. In your next ERP drill/exercise, actually develop the internal and external statements in the context of the scenario. Evaluate them afterward, and integrate the approved wording into your pre-approved statements.
- Organizations who have invested in an Emergency Response Program (versus just a plan) say things like, "Right now teams of trained professionals are assisting each family with information, resources, and support."
- Monitor the pulse of the social spaces for images and video that can be helpful for situational awareness. Communicate tactically, and only counter harmful and egregiously false information.
- 4. An airline serves the public, and therefore communicates compassion and seeks to regain public consumer trust. Business operators do not serve the general public, so communications should target stakeholder audiences like owners, corporate accounts, and those directly affected.
- 5. Modern technology provides numerous vehicles to carry messages forward. Evaluate your program, attend a training course that matches your business model, and incorporate multiple communication options into your program.
- 6. Everyone in the organization has communication responsibilities, not just the PR person or team. All employees should know what to say and to whom inquiries should be directed.
- 7. There should never be any presumption of privacy when on the internet or outside your own home. Always assume someone is recording you and communicate professionally in every engagement.

Insuretech:

Is Fundamental Change in the Insurance Industry on the Horizon?

Many believe the answer is a resounding "yes." An industry that is often characterized as slow to adapt and somewhat opaque to the outside world is being challenged to adjust on many fronts. Driven by external competition from tech startups and internal cost pressures, insurers and brokers are under pressure to shift their strategies and modernize.

A QUIET REVOLUTION is taking place in three main areas. The first is external; how the customer's interaction with the insurer can be improved or changed to create a better user experience. The second is internal; how changes to processes can improve efficiencies, regulatory compliance and cost margins. The last relates to risk; specifically, ways in which technology and data can help customers manage risk, and insurers analyze and price it.

Adapting to the Next Generation of Customers

Buyers, especially younger ones, have different preferences from most insurance company executives, a trend that will continue to accelerate. Insurers need to act to limit further divergence between the demands of the buyer and their products and services as each generation becomes more reliant on, trusting of and familiar with smart technology.

FOR THE CUSTOMER, insurance buying can be a frustrating experience—multiple applications to be completed, call centers on the other side of the globe,

opaque pricing and wordy policies littered with fine print can all serve to make insurance seem like a necessary evil. Improvements in any of these areas would help change the image of insurance to a valuable, customer-focused service.

MOT ALL BUYERS ARE ALIKE however. Individuals may be more attracted to a pay-as-you-go model or one where all interaction is via an in-app chat bot. Corporations and buyers that are more traditional probably still prefer to establish annual policies that do not require constant interaction. Consequently, changes must be made wisely and after careful consideration of the needs of all stakeholders.

Achieving Internal Changes

Internal change is easier to achieve. It is less disruptive to the fundamental business and can be achieved largely out of sight of the customer. Furthermore, it is likely to create the biggest short-term benefit to a company's bottom line. For most insurance entities, internal change and increased use of technology began long ago, is constantly evolving and likely to accelerate.



Data-Driven Risk Management

The final area is data-driven risk management and analysis. The Internet of Things (IOT), wearable technology and other devices will transform the way we are able to monitor and control our own risks. This level of personal risk management will ultimately result in more accurately priced insurance products, based on the customer's individual metrics rather than a broad swath of the population.

For insurers, data-driven underwriting will become ever more powerful. While some insurers have introduced in-car sensors to profile driving habits, others are using hidden data from online applications to price risk. At least one insurer tracks the speed with which you click though the underwriting questions and the time of day you make the application. These factors, in addition to many more you do not realize exist, influence their quoted premiums.

A POSITIVE CUSTOMER EXPERIENCE is likely to produce internal benefits and better risk outcome for the insurer. Take claims management for example. The customer reports a car theft online or via an app, the process taking only a matter of minutes. This information automatically populates the insurance company's database and alerts an adjuster. Meanwhile the tracking device in the car has either automatically alerted the police, leading to successful vehicle recovery, or been disabled, thus creating the confirmation necessary to settle the claim quickly. In this scenario, the claim might be paid within hours of the theft with little insurance company interaction. Everyone wins in this type of scenario.

The Right Way to Make Changes

How does the insurance industry go about adapting its practices? There are a few fundamentals to consider here. Companies need to start seeing their IT departments more as a strategic investment and less like a cost center putting an unnecessary burden on the bottom line. This requires strategic thinking and a commitment to a long-term investment in technology.

Companies need to attract the best talent. While opening an office in Silicon Valley, complete with the soft furnishings and beer kegs synonymous with tech startups might be one play, ensuring that their output is valued at C-suite level and ultimately incorporated

into workflows, services and products may require a more inclusive approach.

Individuals will ultimately feel more valued if they are part of the core business. In addition, the corporate identity will need to resonate with the talent the business is looking to attract. Starched white collars and a century-old corporate identity is unlikely to attract tech geniuses, especially if they are expected to work in a less tech-centric environment than Silicon Valley. Companies need to create excitement and a positive culture based on altruistic values consistent with those of their new hires.

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Looking Ahead

For now, the incumbents have a few clear advantages—brand recognition and loyalty, the ability to invest in technology and, most importantly, the customers. At its core, insurance is complex and highly regulated. This helps established companies hold on to their business. However, the startup mantra of "move quickly and break stuff" comes with much greater risk in the insurance industry than in others.

Perhaps the best strategy is to collaborate in a way that startups are empowered to challenge the norms, disrupt the status-quo and "break stuff" while being funded and supported by existing industry players. These partnerships could create a powerful environment in which the traditional players become the disruptors.

Adoption of technology for the insurance industry is inevitable. The need to adapt is being recognized across the sector so all buyers should anticipate changes to come.

Global Gives Back:

Corporate Responsibility in Action

At Global Aerospace, we continually strive to go above and beyond meeting the needs of our clients. We also strongly believe that we should positively impact the community that we serve through our actions.

FROM OUR EARLIEST DAYS, we have understood that being a responsible member of any community includes giving back. Because of our aviation focus, we place particular emphasis on assisting with aviation-related programs, children's charities, and local community initiatives.



Dreamflight: Holiday of a Lifetime for Deserving Children

Dreamflight is a UK charity that changes young lives by taking children with a serious illness or disability on the holiday of a lifetime to Orlando, Florida using a specially chartered Boeing 747 airliner. Once a year, 192 deserving children from all over the UK, accompanied by a team of medical caregivers, get to enjoy 10 magical days. Many children could not undertake such a trip without the support of the army of doctors, nurses, physiotherapists, and non-medical volunteers who care for the children 24 hours a day.

Founded in 1986 by two former British Airways employees, the first Dreamflight trip took place in November 1987. Since then, over 5,000 children have taken part in their "holiday of a lifetime." We have been proud supporters of this hugely positive aviation venture since 2012.

Global Aerospace and Young Eagles: Getting Young Aviators Airborne

The Young Eagles program of the Experimental Aircraft Association introduces young people to the possibilities of aviation through free introductory flights with EAA-member pilots. In 26 years, more than 2.1 million participants have taken flight with some 50,000 pilots.

RECOGNIZING THE POSITIVE IMPACT the

Young Eagles program has on kids and the aviation community as a whole, Global Aerospace is proud to be a cornerstone donor to the charity, sponsor of The Gathering dinner and auction event held annually at EAA Air Venture, and a sponsor of the EAA Air Academy Lodge. In addition, Global Aerospace pilots have volunteered personal time and company resources to fly well over 100 introductory flights.

Business Mentoring

Bordering the City of London (the financial district where our UK office is located), the Borough of Tower Hamlets is one of the most economically deprived in the country. Seeking to give back to our local community in London, we are partnering with a high school in the Borough to provide a Business Mentoring Program for students aged 14–15. Volunteers from Global Aerospace work with a student on a one-to-one basis both at their school and in our office. Now in its third year, the program has proved highly rewarding, as much for our volunteers as for the young students who are being mentored to help them achieve their goals in life.

The Bob Hoover Academy: Changing Young Lives with the Power of Flight

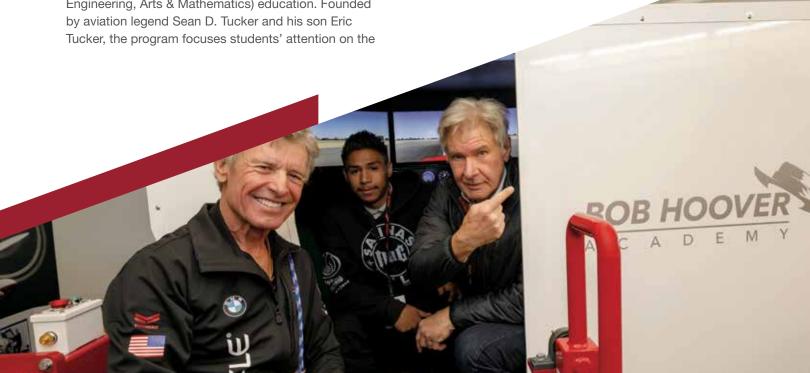
The Bob Hoover Academy in Salinas, California is a 501(c)(3) non-profit corporation that uses aviation to get underserved, at-risk youth interested in and ultimately excited about STEAM (Science, Technology, Engineering, Arts & Mathematics) education. Founded by aviation legend Sean D. Tucker and his son Eric

The program focuses students' attention on the goal of learning to fly, helping them make the connection between success in the classroom and success in life.

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Today, teens who had little hope of academic success prior to enrolling in the program now have an 83 percent attendance rate and all members of the school's most recent senior class earned their high school diploma.

Securing aviation insurance is challenging for an aviation education program. Global Aerospace supports the Bob Hoover Academy through our charitable assumption of the financial risk of operation on its behalf along with our tireless promotion of the school's humanitarian cause.



Cybersecurity:

Will Organizations Ever be Safe from the Denizens of the Dark Web?

Managing cybersecurity often feels like a never-ending job. Just when an organization feels its infrastructure is secure, a new threat vector emerges and it's back to the drawing board. The faceless inhabitants of the dark web are constantly innovating, using society's increasing reliance on digital distribution channels against it. Can this cycle be broken or are businesses doomed to play catch-up for all time?

THE SOLUTION starts with understanding how a cybercriminal thinks. A hacker looks at an organization's use of technology and finds weakness they can exploit. Thus, any use of technology is fair game. The initial response is one that has been popular for millennia: build a defensive perimeter and sit safely behind it.

As the threat level increases, replace wooden stockades with stone castles, and so on. In the modern day, organizations strengthen technology perimeters with firewalls, secure websites with strong passwords and dual-factor authentication, and protect employees with anti-phishing software and by preventing access to sites of a dubious nature.

A Proactive Approach to Cybersecurity

IN THE MODERN DAY, castles are obsolete, either ruined or converted to stately homes. What of the approach to cybersecurity? While no one proposes that organizations abandon their perimeter defenses, they need to look both inside and outside them for weaknesses that criminals can target and exploit.

No castle ever proved to be impregnable and this may be equally true of cyber defenses. Companies should assume that someone will break in at some time. Once this point is conceded, it follows to invest in detecting breaches and implementing measures to slow down and thwart infiltrators. Without detection technology in place, a breach can go unnoticed for many years as recently evidenced by one hotel's discovery their guest reservation database has been exploited for the last four years.

In the middle ages, travel between castles was always hazardous and so it is in the digital world. Data in transit needs to be made secure, whether it's traveling by email, mobile device or memory stick.

Data Security Requires Diligent Partners

It's impossible to do business without sharing data with third parties, but can organizations afford to simply trust that they will take good care of it? Companies assess suppliers on how well they perform their services. Should businesses not also consider how well their data is being protected?

Businesses have evolved beyond the use of simple websites, into the use of digital platforms and cloud solutions. These technologies often rely on software from a variety of suppliers. How can companies be sure that

none of the suppliers have had their code compromised? One airline's recent cyber-attack provides an example of how much damage the insertion of 20 lines of malicious code can do.

Controlling what happens in the outside world can be a daunting task. The temptation is to say no data leaves this organization without an armed escort! Fortunately, the answer is to do what business have always done when faced with a threat to the way they operate: make an assessment of the risks faced and implement protective measures proportional to the level of exposure.

THIS IS A WELL-ESTABLISHED APPROACH for

dealing with financial risk: check credit ratings, put cash under lock and key, put mechanisms in place to detect fraud, encourage staff to report suspicious behavior, and so on. Businesses need to evaluate cyber risks in a similar way and ensure they operate in a way that minimizes exposure to cybercrime. This requires a whole-company approach. The cybersecurity specialists in the IT department can't do this by themselves, but need to work closely with the rest of the business. An organization working together is always stronger than the sum of its parts, and this is as true in the fight against cybercrime as it is in any other business endeavor.

Meeting High Standards for Cybersecurity

In preparing to fight against cybercrime, it helps to have clear guidance on where activities should be focused. Fortunately, the New York Department of Financial Services recently introduced a first-in-the-nation

cybersecurity regulation. This requires companies to take a risk-based approach to IT security and governance to minimize the threat of cybercrime. It is a good standard, and one that all companies would be wise to meet.

COMPANIES MUST CONTINUE TO EVALUATE

their cyber exposure and to invest in technology, training and awareness to keep customers' data safe. As the technology continues to evolve, so must an organization's approach to combating cybercrime. It can be a costly business but no CEO wants to be in the position of one airline executive who had to explain to customers and the media how details of 9.4 million customers were leaked. Reputation is everything in business and its loss can be rapid following a cyber breach. How much an organization values its reputation should be reflected in how much it invests in managing its cybersecurity.

In working toward full compliance, it is always essential for an organization to have an independent view of how effective it is.



On the Horizon:

Commercial Air Travel Innovations

Commercial air travel is an industry that is continually evolving. Whether the goal is to control costs or increase customer comfort and satisfaction, the pressure to innovate is constant.

SOME OF THE SUGGESTED CHANGES to things like cabin configuration, in-flight services, and resource management are truly inspired and immediately become industry standards. Others leave customers and aviation experts scratching their heads a bit.

Either way, there are always new ideas on the horizon, and speculating about whether they will be adopted or abandoned is interesting for those who follow aviation. The Smithsonian recently shared a collection of innovative ideas from different companies that may, one day, find their way onto commercial flights.

Coming Soon?

Will any of the innovations below ever see large-scale implementation? Maybe a better question is, "Should they?" You be the judge.

stacked seating. Airlines continue to look for ways to maximize every last square inch of cabin space in order to maximize carrying capacity and profitability. Airbus is doing more than just pondering it. The company has filed for a patent on a cabin configuration in which passengers are literally stacked on top of one another, with the top seats replacing the overhead bins. The company avoids calling this "stacked seating" and instead refers to it as "mezzanine seating." A diagram seems to indicate that a benefit would be that people could completely recline without impacting (physically or metaphorically) fellow travelers.



STANDING SEATING. This oxymoron refers to an invention from an Italian company called Aviointeriors that creates a middle ground between standing and sitting. The Skyrider 2.0 has an angled seat that allows passengers to take some, but not all, of the weight off their feet. An advantage to airlines is that the seats can be closer together. Previous standing-type seats have not been approved by authorities, so it is unknown if this type will get the green light.

GERM-FIGHTING SEATS. It is safe to say that a significant portion of the flying public has concerns about catching a bug from their fellow passengers. Recaro Aircraft Seating GmbH is seeking to address those concerns with the development of a new "self-cleaning" seat. The seat material contains a disinfectant designed to kill disease-causing germs.

VIRTUAL REALITY HELMETS. Some travelers enjoy the flying experience. Others can't wait to be back on the ground and off the plane. For the latter, Airbus has designed and patented a virtual reality helmet they can don and be "transported" to another place while aloft.

ECO-FRIENDLY FAUCETS. Researchers at Cranfield University in the UK believe they have created a winwin with a lavatory faucet that produces a fine mist by atomizing water. The faucet has enough pressure to clean hands but uses 90 percent less water, which means planes can travel lighter and airlines can enjoy fuel savings.

DINING ROOMS AND DOUBLE BEDS. What Qatar Airways has dubbed the QSuite uses rotating seats and movable panels to allow a seating area to be turned into a private dining room. The seats can also be configured into beds.

CARGO HOLD WORK/PLAY/SLEEP SPACES. Another way that Airbus is looking to improve the commercial flying experience is by allowing passengers to access areas in the cargo hold designed for working, napping, or exercising. A significant benefit to parents of young children could be a play area where kids can burn off some energy.

Regardless of what happens with these ideas, it is good to know that companies around the world are working hard to make commercial flights more enjoyable for passengers and more profitable for airlines.



Airlines continue to look for ways to maximize every last square inch of cabin space in order to maximize carrying capacity and profitability.



The litigation against airlines, security companies and other aviation-related defendants following the September 11, 2001 terrorist attacks against the United States finally was concluded in December 2017.

Following the terrorist attacks, wrongful death, personal injury, property damage, and business interruption claims exceeding \$30 billion were filed in federal court in New York. The liability theories against the defendants were alleged negligent pre-board passenger screening.

The majority of the wrongful death and personal injury claims were filed with the 9/11 Victim Compensation Fund created by the U.S. Congress 10 days after 9/11. Only 95 death and injury claims were litigated and all were resolved by settlement without a trial.

The subrogated and uninsured property damage claims, valued in excess of \$4 billion, were settled at mediation in 2010 based on a liability discount of approximately 75 percent. A similarly discounted 2014 settlement was reached with the brokerage firm Cantor Fitzgerald, which lost 658 employees that day.

THE FINAL SETTLEMENT in 2017 involved claims by World Trade Center Properties (WTCP), the owner of a 99-year lease on the five WTC buildings that were destroyed or severely damaged on 9/11. The federal judge overseeing the litigation ruled that WTCP's uninsured damage claims for destruction of its leasehold were completely offset by the insurance payments received by WTCP. The final settlement represented less than one percent of WTCP's overall claims.

More than \$30 billion in third-party liability claims originally asserted against the aviation defendants were either settled or dismissed without a liability trial. The total indemnity payments by the aviation insurance market for all third-party liability claims arising from the 9/11 attacks were less than \$2 billion.

Global Aerospace was the lead underwriter for American Airlines on September 11, 2001 and supervised the defense of its insured in this 16-year litigation. In the process, we were reminded that there are a number of keys to the successful resolution of complex, multiparty litigation: a close working relationship among insurers, insureds and counsel; if possible, an allocation agreement among contributing insurers; continuous risk analysis during the process; and use of mediation rather than jury trial.

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The 777X:

Boeing's Latest Innovation

Boeing is no stranger to pushing the envelope when it comes to innovation. Since its launch in 1995, the 777 has consistently been named by long-range travelers as one of the most preferred airplanes.

THE COMPANY'S LATEST MODEL, THE 777X,

is now in production. It will have many new features like larger windows, a wider cabin, and enhancements that decrease fuel consumption by 12 percent. This includes a longer version of Boeing's fourth generation composite wing.

With each wing at 108 feet long, the 777X's total wingspan will be 235 feet—36 feet wider than its predecessor. To ensure the jet can use the same facilities as existing models, the outermost 12 feet of the wings will fold upward after landing. While this type of capability is not new, having been used for decades with carrier-based military aircraft for example, the 777X's folding wingtips will incorporate the most advanced technology.



The first 777X test plane rolled out of the factory in August 2018 and the first flight is scheduled for 2019.





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