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Aviation & Aerospace

Flight challenges are far from insurmountable

In IBJ's Thought Leadership Roundtable, executives from Republic Airways, Indiana Wesleyan University, and Jet Access, tackle some of the biggest challenges facing the airline industry.

Q: Airlines are coming in for a lot of criticism lately; how much of the criticism about delays and cancellations and service failures should be legitimately laid at the feet of the airlines?

BRYAN BEDFORD: Delays and cancellations are always unwelcomed for travelers but also for airlines and their crews. By far, the most efficient, most profitable way to operate

an airline is to create a realistic, achievable schedule and then keep it. Some delays and cancellations are weather-related, and some are related to air traffic control constraints; by and large, those are beyond airlines' control. Some are safety-related; no one really objects to those. For everything else, it's reasonable to ask the airline to account for the snafu and what it will do in response to get travelers on their way as quickly and conveniently as possible.

many other industries, are dealing with supply chain congestion, the Great Resignation, and economic upheaval compounded by the COVID pandemic and recession. These issues are having an adverse effect on the aviation industry. Often criticized for their cumbersome operations, these organizations are doing the best they can to recruit, train, and retain pilots and other service personnel in light of these extreme conditions. While some airlines have responded better than others, no level of foresight would have prepared the industry and its leaders for this moment. The slew of challenges represent an adaptive crisis that extends far beyond simple technical fixes. The solutions will require incredible wisdom from industry leaders to both respond in the immediate and hedge against future disruptions.

ANDY MILLER: Airlines, as with

QUINN RICKER: The dynamics in aviation are challenging even in good times. Covid put a significant strain on the industry, from which it is still in recovery. From the pilot shortage and supply chain issues to the lack of training resources, the industry is suffering. Leaders from each sector of the industry need to come together to find solutions to meet the industry's current demands and prevent future inadequacies.

Q: How can the aviation industry balance the tension between public safety, passenger convenience, and the price for air travel?

QUINN RICKER: As an industry with human lives at stake, safety should always be the number one priority. While passenger convenience and reasonable pricing is important, aviation is an overly complex industry; and there are many factors that contribute to the daily operations for millions of travelers. There has been a long term and significant gap in government support and funding for the FAA that has impacted the ability for the aviation industry to operate efficiently. The government needs to partner with the industry to assist the FAA in recruiting and retaining top talent to meet the industry's growing demands

ANDY MILLER: Safety is a No. 1 priority and comes at a cost in terms of passenger comfort and even consumer economics. Delays due to

weather or mechanical issues help to ensure the safety and comfort of the passengers. With increasing fuel prices, labor shortages, and thin profit margins, airlines will inevitably reflect the increased costs in ticket prices. Balancing these challenges over the long-term is more about resetting expectations with the consumer. Adjustments in work travel, for example, reflect a natural shift in the decision-making process for the consumer and businesses. Will pricing stabilize? Certainly, but with increased labor and safety costs, consumers must reset their expectations and realize the industry is not immune to the inflationary effects in our economy.

Q: What would you say to someone who is fed up with commercial flight? What are their best alternatives?

ANDY MILLER: Despite its shortcomings, commercial flight remains the best option for traveling a long distance. The last 20 years represents the safest period in the industry. Further, in most cases, flying offers the most economical option in terms of money and time spent. General aviation does offer an alternative path for traveling. It provides more flexible and on-demand methods of transportation. Opportunities for general aviation can be seen in the increase in demand for private jets and turbo prop airplanes. Some companies and individuals might benefit from this path, though the expense often far outweighs the benefits. Otherwise, organizations can resort to more virtual forms of engagement and, in effect, reducing or eliminating perfunctory business travel by plane. The alternatives, though, do not generally provide the same level of economic or time advantage as commercial aviation.

QUINN RICKER: Utilizing private aviation is the safest and most convenient option for travelers who are looking for alternatives to commercial flight. When Covid impacted commercial travel in 2020, people who never thought of private jet travel as an alternative discovered that it was a viable solution for necessary travel. Private aviation traffic has increased 15 percent from its 2019 levels; and we see no sign of the growth slowing down. As the 10th largest private charter operator in the U.S., Jet Access provides options for private air travel from chartering anairplane to



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owning an airplane and everything in between. Fractional ownership offers a way to reduce the cost of owning a private airplane by splitting the expense between a number of people. In addition to the safety and convenience of private air travel, flying private increases efficiency and maximizes time savings, allowing travelers to fly directly to their destination and avoid the frustration of layovers, delays, and cancellations. There are more than 5,000 general aviation airports in the U.S., compared to approximately 500 commercial airports.

Q: The shortage of pilots seems to be one of the largest challenges the industry is facing now; how is your organization addressing it?

BRYAN BEDFORD: We've seen this issue coming for a while. That's why we were one of the first airlines in the United States to create its own flight school-LIFT Academy-in 2018. Since then, we've graduated more than 180 pilots, many of whom have gone on to become Republic pilots. We're also at the forefront of the effort to create new paths to becoming a pilot that are more affordable and that expand the talent pool while also improving safety and performance. Finally, we've been aggressive in our outreach to flight schools around the country to support their programs, to meet their students, to introduce them to Republic and our culture.

ANDY MILLER: Indiana Weslevan University is helping to solve the pilot shortage through its innovative aviation program. The university partners with local flight training providers to offer safe, efficient, and localized pilot degree programs. Students complete their general education and aviation studies online, while completing their flight training at a local school. This partnership model enables the university to scale its pilot training programs as degreeseeking students have more options to finance their flight training through the federal financial aid program. Additionally, our partners benefit from a new pipeline of students who experience the value of a degree.

QUINN RICKER: Jet Access has made significant investments in our accelerated flight training program that focuses on recruiting and training the next generation of pilots. Our program provides training and employment as flight instructors, in addition to career guidance and mentorships with charter pilots. The Jet Access Flight Training program provides discounts and financing options to make earning a pilot's license more feasible. Increasing awareness of career opportunities in aviation through community outreach programs is also an important initiative for Jet Access.

Q: It takes more than pilots to run an airline; what is the state of talent development for all aviation careers?

ANDY MILLER: There is a growing need in the aviation industry for labor to fill a variety of aviation occupations beyond the critical need for pilots. In its annual labor report, Boeing found that the industry will experience a shortage of 610,000 technicians, 899,000 cabin crew members, and 602,000 pilots. These reports often do not account for the growing labor demands in frontline staff, many of whom impact the passenger experience. Not unlike every other industry, aviation will need a robust talent development pipeline and retention system to address current and future staffing levels. It is inevitable that these systems will lead to increased ticket prices as airlines pass down the costs to the consumer.

BRYAN BEDFORD: We need skilled, dedicated people in every position: on our flight decks, in our cabins, in our maintenance hangars, in our operations center and in the myriad corporate roles it takes to get a single flight aloft; never mind what it takes to operate 900 flights a day! We're hiring in almost every position, working with colleges and training schools across the country while taking matters into our own hands by conducting state-of-the-art training at LIFT and within Republic's operation with our dispatch and maintenance apprenticeship programs. There are endless career opportunities in aviation, and I'm proud that so many takeoff in Indianapolis.

QUINN RICKER: One of the biggest challenges we're facing is the shortage of highly skilled and licensed aircraft maintenance technicians. Aircraft maintenance technician employment is expected to grow by 11 percent by 2030, with 14,400 openings annually, on average, across the U.S. In order to ensure passenger safety, airplanes must undergo routine FAA regulated maintenance and inspections; and without the skilled workforce in place, it will become difficult to keep airplanes flying. The supply of qualified aircraft technicians is not improving fast enough to meet the increased demand for air travel. In order to address this growing issue, Jet Access has partnered with local aviation maintenance schools to develop recruiting initiatives aimed at increasing awareness of high paying jobs in aviation maintenance that are in increasing demand. While some industries are starting to slow down or lay off staff in the current economic climate, the aviation industry is still hiring for high wage jobs with great growth opportunities.

Q: What training and education innovations might advance the next generation of aviation?

ANDY MILLER: Pilot training requires a significant financial investment. Increased fuel, labor, aircraft acquisition, and insurance costs have created a significant entry barrier for interested individuals. But evaluating the long-term return

on investment is an important aspect of the decision calculus. Innovations in the flight training space can help curb these expense increases. Flight simulators and competency-based education (i.e., earning a credential by demonstrating competency as opposed to seat time) can increase the velocity of earning a pilot credential. Plus, these are much less expensive methods to operate an aircraft; an aircraft is an expensive classroom. Simulators and virtual/augmented reality present helpful options for lowering the cost of flight instruction. Balancing these innovations with necessary experience in the cockpit will require robust conversations in the years ahead.

QUINN RICKER: Along with the Jet Access Accelerated Flight Training Program, we have developed partnerships with local educational institutions to introduce young people to career opportunities in aviation. There has been a decline in enrollment in vocational and trade school institutions, and it has had a significant impact on the aviation industry. We need to work together to communicate the benefits of an 18-24month degree resulting in a six-figure salary versus a traditional 4-year degree. With so many top-tier aviation organizations located in Indianapolis, such as Jet Access, Republic Airways, FedEx, and Rolls Royce, we have the opportunity to make Indianapolis a national hub for aviation.

BRYAN BEDFORD: In 2018, we launched a state-of-the-art flight training school, LIFT Academy, featuring a dedicated, proprietary training curriculum specific to commercial airline pilots. Our goal was simple: to develop a highly structured, mission-specific training curriculum that would produce the best commercial pilots in the industry. Rather than logging unstructured, non-missionspecific, "time building," LIFT offers highly structured, mission-specific, intensive and higher-quality training that enhances performance and safety.

The synergy between LIFT and Republic has enabled us to capture performance data from the time a student applies to the LIFT program through their first year of flying for Republic. We use this data to constantly strengthen the program and produce the safest pilots possible. The data show students completing the LIFT program perform at a higher level than pilots from more traditional training programs. Our pilots' training continues throughout the entire duration of their flight career and is the largest area of investment for our airline year after year. So much so, we're constructing a new aviation training campus in Carmel that will further engrain training at the center of both our culture and our corporate operations for all of our more than 6.000 associates.

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Q: How is the aviation industry addressing the need for diversity?

QUINN RICKER: The aviation industry has made significant strides in promoting diversity through organizations such as Women in Aviation International, International Aviation Women's Association, and The Ninety-Nines, along with focusing on minority scholarship programs and community development initiatives. Jet Access recently launched an initiative to provide financial support for our flight training program in rural communities where potential students are less likely to be exposed to career opportunities in private aviation.

BRYAN BEDFORD: We've been persistent as a company to eliminate our industry's unique barriers to ensure all individuals in pursuit of an aviation career are successful. Our team has established a network of partnerships across the country to provide exposure to aviation careers and direct support to the next generation of aviators across all levels of education. This summer we sponsored 16 students from central Indiana high schools to train towards their private pilot license. This of course was a win for the students who realized their potential while gaining exposure to state-of-theart flight training and a win for us in that we get introduced to some amazing students who are going to be incredible pilots. We've proven that you can achieve a successful, diverse workforce by putting the right resources in place. As

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an industry we must be willing to accept innovative solutions that uphold integrity and the safety of our operations.

ANDY MILLER: Approximately 92% of pilots in the U.S. are white, and 93%are men. Additionally, only 13% of top executives in the the global airline industry are women. Creating diversity in these executive, pilot, and support ranks is essential. Demographic and workforce participation trends will present issues for the industry if it does not prioritize developing pipelines into these underemployed groups. A variety of affinity groups, such as the Organization for Black Aerospace Professionals, Latino Pilot Association, and Women in Aviation International, provide support and mentoring for student and commercial pilots. Additionally, the Air Force has funded a project to increase diversity in the pilot community by establishing a summer training program for Air Force Junior ROTC Cadets. This past summer, Indiana Wesleyan University hosted and trained 18 cadets pursuing their private pilot license. Eight of them were women or students of color.

Q: What regulatory changes, if any, are needed to improve the aviation industry in our country?

ANDY MILLER: The industry should consider raising the minimum retirement age for airline pilots from 65 to 67. Doing so would help alleviate, at least temporarily, the pilot shortage. Additionally, revamping the pilot training methodology and the flight-hour requirement to become an airline pilot are long overdue. FAA training standards and rules have not changed much since World War II, despite the advent of technology and learning aids. The industry does a great job of training pilots to command single-engine Cessna 172s. The U.S. approach would benefit from the European model, where training from day one is to become a multi-crew member of an Airbus 320. Issues of scale and the transferability of skills increases the time to earning a pilot job, all of which create impediments for the market. Regulators, in partnership with the industry, can develop experiments to test alternative models that can be codified into the training system.

BRYAN BEDFORD: The nation is experiencing a significant airline pilot shortage that is driving the cancellation or delay of tens of thousands of flights and diminishing air service for small and mid-sized communities across our country. This situation is due in large part to overly restrictive regulations that prevent a diverse pool of potential pilots from entering this career path. The issue is a long-term problem that Republic has been working to solve for years through LIFT Academy, but we need action from Congress and the FAA to come to the table to discuss common sense solutions. This is a growing crisis that threatens to eliminate air service to 90 million Americans in the very near future.

ANDY MILLER: Advances in automation are beginning to show that airlines can safely shift from multipilot to single-pilot operations. Trials with cargo flights have conducted fully automatic operations, with only a human monitor on the ground. Of particular evidence, a growing fleet of Unmanned Aerial Systems provide surveillance for the military and police. In general, the FAA is working to address the growing number of drones and unmanned systems being operated in the National Airspace System. The expansion of these practices will inevitably lead to new models of aviation that will drive future investments in technology, regulations, and labor. The question is not whether an autonomous aviation future exist? Rather, the better question is, when will automation become the norm?

QUINN RICKER: The advancements of built-in automation systems in airplanes have improved flight control, provided greater operational efficiency, and resulted in fewer weather-related incidents. However, flying highly automated planes requires more pilot training and experience, which has created a strain in the simulator training environment and contributed to the pilot shortage. In addition to automation, we will see a major shift toward electric (eVTOL) aircraft. Jet Access has invested in electric charging stations in preparation for this and will continue to support further innovation.

Q: What is the future of automation in the aviation industry?





Bryan Bedford has more than 30 years of experience in the airline industry. He joined Republic in July 1999 as president and CEO. Previously, he served as president and CEO of Mesaba Holdings Inc. in Minneapolis, as well as Business Express Airlines Inc. in Boston. Under his leadership, Republic has grown from \$85 million in revenues and 36 turboprop aircraft to more than \$1.3 billion in revenues and an operating fleet of more than 200 E-Jet aircraft. Bedford holds commercial, multi-engine and instrument pilot ratings.

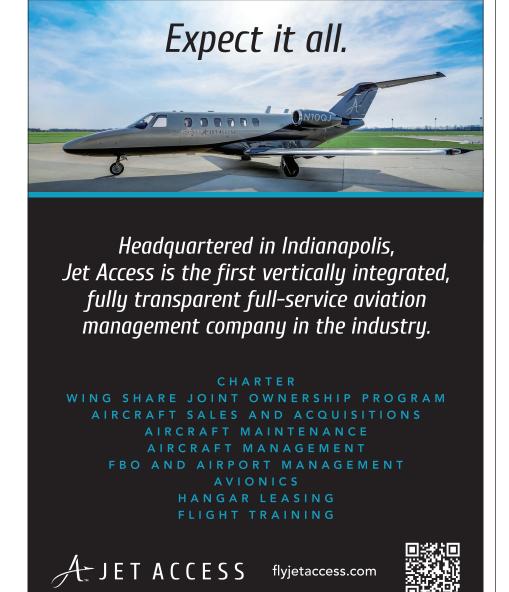




Andy Miller, PhD, serves as the vice president for innovation & partnerships at Indiana Wesleyan University. Andy establishes educational and strategic partnerships with various organizations in the Midwest, including workforce and economic development organizations, state agencies, local nonprofits, flight schools, and other educational institutions. These partnerships provide training and educational pathways to support adult learners and workforce needs.



Quinn Ricker As the CEO of Jet Access, has applied his proven leadership style and ability to leverage technology into the fast-paced and growing aviation industry. He is a recognized expert in business processes and optimization. Ricker served as President and CEO of Ricker Oil for 14 years and led the company to become one of the Top 100 Places to Work in Indiana. He continues to focus on strategic growth and leadership development through his role at Jet Access.





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