Solving Tomorrow's Aviation Challenges

An Interview with Daniel Baker, Chief Executive Officer, FlightAware

EDITORS' NOTE *Daniel Baker is the founder of FlightAware and has served as Chief Executive Officer since 2005. He is one of the principal developers of the FlightAware technology and, in his current role, directs all of the business units, leads worldwide business development and drives corporate growth. Baker has years of experience as a driving architect of rapid growth businesses from both the technology and business sides as well as enterprise sales and partnerships with Fortune 500 companies and governments. He has been in the Internet services business for over two decades and is a published author on the subject of Internet protocols. He is a regular speaker at aviation and technology conferences and serves as a member of the Board of Directors at the Smithsonian Institution's National Air and Space Museum and the General Aviation Manufacturers Association. Baker is a passionate photographer, cyclist, and pilot holding an FAA Commercial Pilot certificate.*

Daniel Baker

COMPANY BRIEF *FlightAware (flightaware.com) is a digital aviation company that operates the world's largest flight tracking and data platform. With global connectivity to every segment of aviation, FlightAware provides over 10,000 aircraft operators and service providers, as well as over 12,000,000 passengers, with global flight tracking solutions, predictive technology, analytics and decision-making tools. FlightAware receives data from air traffic control systems in over 45 countries, as well as the company's network of ADS-B ground stations in 198 countries, Aireon global space-based global ADS-B, and datalink (satellite/VHF) via every major provider, including ARINC, SITA, Satcom Direct, Garmin, and Honeywell GoDirect. FlightAware's HyperFeed® engine seamlessly fuses thousands of real-time, global data sources with FlightAware's proprietary AI models and algorithms. Leveraging this data with FlightAware's powerful and reliable web-based interfaces and APIs yields the world's most comprehensive and capable flight tracking and digital aviation data platform. Founded in 2005, FlightAware is privately-held with offices in Houston, New York City and Singapore.*

Will you highlight the history and heritage of FlightAware and how the business has evolved?

Given my background in software development, small business, and as a pilot, I started FlightAware in 2005 as a hobby. The goal at the time was to provide a transparent web interface into the nation's air traffic control system with the target market being pilots and other operators of airplanes.

It became evident very quickly after launching the free website that there was tremendous interest from the industry and that there were a lot of technical and data challenges that people were seeing throughout the aviation ecosystem that I was able to help with. We were fielding phone calls not just from FBOs, charter companies and flight departments, but also from small airlines, cargo companies and airport operators. We have grown ever since then to the point of not only having coverage worldwide in the air and on the ground, but also to providing services. We have several sales offices around the world with more than 10,000 customers in business aviation and 100 in the airline space.

We have approximately 100 employees right now, most of whom are in our Houston office. Most of our employees focus on software development and engineering, finding ways to leverage the latest technology in industry to solve tomorrow's aviation challenges. We have evolved into a company that uses everything from artificial intelligence to machine learning to predict the future for airlines and airport operators.

We recently announced that Frankfurt Airport in Germany will begin to use FlightAware's predictive technology to determine the order and time of flight arrivals for the purpose of both gate/stand assignments and also for personnel and other types of scheduling, allowing for better airfield efficiency and resource allocation. The impacts of our business are far and wide.

With the speed of change in technology, how critical is it to put innovation at the core of FlightAware's culture?

About five years after I started the company, I realized that we had gone from being the most innovative company founded on the latest technology at the time to a company that was beginning to have some legacy issues and that was using some older technology.

It became very clear to us that we needed to constantly reinvent, reengineer, iterate and, sometimes, even throw things out and find an entirely new way. In fact, we have a team here called the NextGen team that doesn't really develop products or have a specific mandate. Instead, they will bolt onto another team for six months to two years and try to take the way that something has been done and reinvent it in a way that is multiple orders of magnitude better using the latest technology.

Where do you see the greatest opportunities for growth?

Our growth will come from using machine learning to leverage all of our 1.5 petabytes of data to further enhance our predictive technology. We're talking about predicting flight delays, gate conflicts, taxi times as well as de-icing events and de-icing durations.

What we have done has been amazing and I am very proud of it, but this is 100 times as big. This is being able to prevent delays rather than just report them. This is being able to save people a lot of time by preventing issues rather than just setting expectations so that people can modify their plans and try and be as efficient as possible.

We are already having success with this, and the industry is perhaps even more excited than we are about what we're doing.

FlightAware is headquartered in Houston. What do you see as the strengths of Houston from a business standpoint?

Houston is an extremely large, diverse, cosmopolitan and low-cost city relative to cities of comparable size across the U.S. and the world. It is located in the center of the U.S. with short flights to anywhere in North America and non-stop service to most places in the world.

There's also a great talent pool here. We do an incredible amount of computer science and mass recruiting from Rice University, for example.

With the energy, healthcare and other sectors in Houston all being supported by technology, Houston is now one of the country's top technology hubs.

Meanwhile, we enjoy all of the resources, infrastructure, parks and sense of connectivity that come from being in one of the largest cities in North America. ●