



Q&A

Industry-first airline operations platform: A game-changing opportunity

A conversation with Harsha Majeti, general manager of product management for Sabre Operations

By Stephani Hawkins



“ Our operations team is the largest in the industry, with the experience of implementing solutions and processes from a startup to the largest airlines in the world. ”

Question: As you talk to customers globally, what are some of the most prevalent challenges facing airline operations departments?

Answer: Airlines are experiencing historic growth due to demographic and economic trends. The operational complexity that comes with growth is one of the most prominent challenges faced by airlines today. Maximizing airline profitability, while keeping operating costs low and delivering on the brand promise for an outstanding passenger experience is what will separate the airlines in this highly competitive industry.

So, the question is, how do we help airline operations departments keep up with this growth while delivering on passenger experience during the day of operations? Can processes or technology help? How can digital transformation help solve these challenges?

Q: Digital transformation has become more prominent in the air-transport industry; however, the focus has primarily been on retailing and customer experience. What type of technology is required to power a digital airline operation?

A: Before we talk about digital transformation, let me baseline where we are at Sabre. We started this journey a couple of years ago with

our connected-airline strategy to ensure we are making strategic technology and product investments that simplify the workflow using next-generation GUIs, as well as investing in integration and, most importantly, providing mobile capabilities to all airline employees.

Yes, digital transformation is more commonly spoken on the commercial side of an airline's business. However, at Sabre, we are bringing that same expertise and experience to airline operations with our Sabre Operations Platform. Before we dive deep into the platform, let's take a moment to understand the meaning of digital transformation.

Digital transformation, in short, means moving away from traditional methods of solving business problems and leveraging modern technological innovations to find fast, more-accurate ways to solve those problems or address any number of business issues. As a result, airlines can introduce machine learning and other algorithms into their technology through APIs or microservices to quickly identify and address issues across the entire enterprise.

Based on this definition, our digital airline operations platform was built with three key characteristics in mind — unified, intelligent and agile — to support airline operations' digital-transformation strategies:

- Unified — Unified data helps bring the commercial and operations sides of an airline together in real time. We now have the technology that enables airlines to make quick, smart and precise decisions across their entire business, taking into consideration the financial impact across the life of the flight. For example, when airlines experience an unforeseen event on the day of operations, that information will automatically be shared across commercial and operations to proactively manage disruptions and allow the airline to bounce back more quickly. Furthermore, commercial departments can continuously learn from day-of-operations decisions to create more profitable and operationally feasible schedules in the future.

- Intelligent — Now that you have access to rich, real-time data through APIs and microservices, you need intelligent systems to make effective decisions. For example, airlines deal with disruptions every day that can impact the entire network, such as grounded aircraft and crew or passenger missed connections. Intelligent solutions not only detect the problem, they offer a viable solution. So, if an airline's crew doesn't show up, this intelligent capability, called alert-based recovery, detects the problem and recommends feasible solutions with minimal human intervention. These intelligent capabilities built into our operations platform can help improve airline-employee productivity and reduce operational costs. The goal of these intelligent systems is to free up airline employees (schedulers, controllers, dispatchers) from general tasks so they can focus on critical activities that impact operational costs.

- Agile — Airlines need agile technology to swiftly grow and change. This could involve growing the network, merging with another airline, launching a low-cost model, introducing a premium cabin, undergoing a business transformation or any number of business modifications. In the past, airlines were limited by technology, and making a change, large or small, required a lot of time and money. Agile technology enables airlines to grow or change at will without succumbing to an outlay of significant resources.

Q: In addition to unified, intelligent and agile technology, why should an airline be interested in Sabre's operations platform to help achieve digital transformation?

A: We are uniquely positioned in the travel industry with our commercial and operations platforms, as well as our data and analytics platform. We provide the broadest portfolio of end-to-end solutions across these platforms. Airlines would be interested in our operations platform because of our industry experts, coupled with functionally rich product capabilities and technology:

- Our operations team is the largest in the industry, with the experience of implementing solutions and processes from a startup to the largest airlines in the world.
- The breadth of our portfolio, from schedule and aircraft-tail management to planning and tracking of various resources (crew, gates, airport staff, maintenance control) and optimized fuel management, is the most comprehensive in the marketplace. In addition, our API offering enables airline IT departments

to integrate upline and downline systems without depending on expensive custom solutions.

- Powered by Amazon web services, the platform is stable, scalable and secure. In addition, it is cloud enabled.

Q: What are some unique values airlines can expect when adopting Sabre's airline operations platform?

A: A few examples of how our operations platform delivers significant value to airlines across various departments include:

- Operations control – Our commercial and operations platform integration enables operations controllers to make data-driven schedule adjustments that explicitly consider the impact to passengers' journeys. Using web-services technology within operations enables airlines to receive key passenger information in real time that can be used in delay-cost calculations (number of passengers checked in, domestic/international connections, fare paid, frequent-flyer status, traveling with infants, etc.). We are the only technology company in the marketplace that can truly help airlines make delay, cancellation and aircraft-change decisions based on actual passengers who checked in and their impact on the airline.
- Crew management – Happy crew leads to happy passengers. The most mobile employees in the world – airline crew – need capabilities to help improve work-life balance. Sabre AirCentre Crew Access, for instance, enables airline crewmembers to perform various tasks on the run using tablets or mobile devices. In the past, crewmembers had to go through specific processes to swap duties or take vacations. With our new crew-management

offering, crewmembers can do everything in real time.

- Flight dispatch – The core business objective and market promise for every airline is, of course, to get passengers to and from their destinations safely, efficiently and in a timely manner. Our flight-management solutions give airlines the ability to do all those things seamlessly with technology to plan, operate, track and manage every flight. This includes real-time weather with predictive analytics and alerting for dispatchers, synced flight plans between dispatchers and pilots via mobile applications and real-time communication between the ground and flight deck. Using the best optimization algorithms in the market, our flight-management solutions save airlines millions of dollars every year.
- Airport management – Like crewmembers, ground staff has a direct impact on customer experience. As the first point of contact at the airport, it is important that they are in the right place at the right time. That is why we have invested in bringing mobility and streamlined communication to ground staff. From enabling staff to swap shifts and request vacation time from home to delivering them all the information needed to better serve passengers and the operation, mobility is at the forefront.

Because of the services-based integration and the technology investment we have made, we can now centralize data management so airlines can eliminate data inconsistencies across both their commercial and operations sides of the business. Now, combine the data integration with machine learning, business-intelligence analytics and optimization techniques, and you have unified, intelligent and agile technology.

Q: What immediate opportunities do you see for commercial and operations departments to work together to achieve airline-wide digital transformation?

A: First, both sides of the business must communicate in real time ... all the time. Let's say a customer placed a food and beverage order, but the flight attendant was unable to serve the items due to unexpected turbulence. This is both a planning issue (when the items were purchased) and an operations issue (when they were expected to be delivered). But how can that data be captured so appropriate action can be taken to improve the customer experience?

Airlines that use our commercial and operations platforms have immediate access to the data on both sides of the business. This enables the airline to proactively reach out to the customer via numerous methods to acknowledge the issue and offer a refund or some form of compensation before the customer contacts the airline.

Another example is scheduling. If an aircraft cannot be turned around within the allocated time at a specific airport, resulting in a delay every time on that route, the real-time integration between the commercial and operations departments now highlights the issue for immediate action. You can apply this logic to many scenarios that involve both commercial and operations issues.

Until now, there has been no real-time automation and data sharing between the two business areas. Therefore, I would say these two platforms present a game-changing opportunity for airlines that will reduce enterprise-wide costs, as well as improve productivity, increase employee satisfaction and deliver an exemplary experience throughout the customer journey.

Q: Looking at airline operations in general, how does digital transformation apply to airlines directly, ultimately resulting in a better customer experience?

A: One example of how digital transformation applies to airlines can be showcased in the handling of an Aircraft on Ground (AOG) situation. Unlike in the past, airlines can now introduce machine learning across their systems and use existing situational data to determine possible flight delays and take corrective actions. Based on this information, an airline can identify how a delay will impact the rest of the network and quickly determine the best way to mitigate the domino effect across its operation.

Another example of digital transformation is the ability to intelligently address medium to large disruptions and automate aircraft, crew, airport resources and passenger rebooking. Our operations platform enables an airline to run multiple what-if scenarios evaluate the holistic business impact in real time and deploy the solution that is least impactful to the airline and its passengers. Revised schedules for the flight, crew and airport resources can now be communicated via mobile devices and receive acknowledgement to ensure the airline has sufficient manpower available to execute the plan.

This applies to passenger-facing tools as well. Passengers can be automatically informed of any changes to their flight status and the actions the airline is taking to solve the problem for the passenger. This enables the airline to get ahead of the problem and quickly address it, removing the stress and anxiety for passengers and, thereby, enhancing the customer experience. At the same time, it lessens the impact to the rest of the network, reducing disruption costs.

Q: What excites you most about the future of the aviation industry as we embark on an airline-wide, industry-wide digital transformation?

A: The thing that excites me the most is what landed me at Sabre. There's the fascination of watching a plane take off and land, and the fun of travel, whether it will be for business or for personal. Everything we experience in the airline industry motivates us to continue to innovate.

For me, watching how we went from very manual or sequential processes to these technology-powered, automated decision-making tools is amazing! We are now embarking on a new journey that encompasses all the emerging and changing technology, and how the digital transformation is going to change the operations arena is very exciting and challenging. There is an incredible amount of data that is available that will empower operations to proactively manage it. I wouldn't be surprised at some point if more than 80 percent of the

tasks within airline operations become automated ... with a few people observing, overseeing and shadowing.

Today, there are more than 175 airlines in our operations community, and one of the things that excites me the most is partnering with them to bring the Sabre Operations Platform to fruition. **/A**

Harsha Majeti

Harsha is an airline-technology veteran with more than 17 years of industry experience. He has all product-management accountabilities, including investment and strategy for the Sabre AirCentre solutions. This includes crew, movement, flight and airport solutions for Sabre's global customer base. Harsha holds a master's degree from the University of Chicago, Booth School of Business.

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