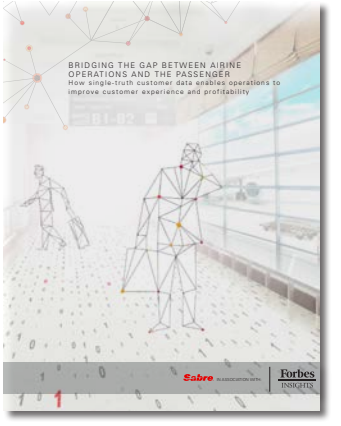
The Connected Airline [article 2 of 4]

Bridging The Gap Between Airline Operations And Passengers

How Unified Customer Data Enables Operations To Improve Customer Experience And Profitability



Ask any airline leader why operational excellence remains elusive, and the usual suspects appear quickly: antiquated air traffic control, airport ramp congestion and just bad luck with weather, all conspiring to throw the most careful flight plans into chaos.

"Each silo in an airline approaches operations with its own interests above others, and it turns into this Whack-a-Mole where leaders just hit the next problem that pops up on their radars.

Michael Baiada, *consultant, ATH Group.*

Airline complexity has long served as the enemy of on-time percentages and disrupted schedules for carriers large and small, regional and global. But what if effective answers to airline operational problems lie hidden within departmental silos, waiting to be discovered and harnessed to create a real-time situational awareness for operations leaders? What if those answers helped smooth operations and enhance the bottom line?

TOP STRATEGIC PRIORITIES OVER THE NEXT FIVE YEARS

Customer experience

53%

"Airlines can control their destinies operationally, but they don't realize it," said Michael Baiada, a consultant for ATH Group in Evergreen, Colorado, who has studied airline efficiency for decades as an airline pilot. "Each silo in an airline approaches operations with its own interests above others, and it turns into this Whack-a-Mole where leaders just hit the next problem that pops up on their radars."

While improving the customer experience and profitability are clear motivators, new regulations penalizing delays in the United States and European airspaces incentivize airlines to take a fresh look at optimizing how they run day-to-day and deal with unplanned disruptions.

To learn more about the relationship among data, technology and airline operations, and the ways these affect customer service and profitability, Forbes Insights and Sabre surveyed 100 operations, marketing, information technology and finance executives from the world's largest airlines.

The Importance Of Actionable And Quality Data

Airline leaders cite technology and limited access to actionable data as the largest obstacles to improving their airlines' customer experience. Yet, access to data is essential, and transforming that data into actionable intelligence is a key differentiator for airlines.

"Data quality is absolutely the greatest challenge for the overall IT strategy," said Wan Qingchao, vice general manager of the operations control center for Air China. "With incomplete or inaccurate data, it is impossible to deliver high-quality products, no matter how excellent the algorithm is and how intelligent the system is. Our company has realized this during the process of working on the decision-support system of flight operations."

Air China faced a similar weather-related challenge with a recent typhoon that affected operations. Its systems projected a demand spike the day after the storm, causing the carrier's capacity-allocation network to plan for far more seats. However, the data significantly over-represented the true demand after the storm, so flights flew only 10 percent full in some cases.

"This kind of situation is a consequence of inaccurate data acquisition, where the data statistics of the system don't match with the actual operations," Wan said.

WHAT ARE THE LARGEST OBSTACLES TO IMPROVING YOUR AIRLINE'S CUSTOMER EXPERIENCE?

1	TECHNOLOGY	52%	5	BUDGET LIMITATIONS	23%
2	LACK OF INFORMATION SHARING	28%	6	ORGANIZATIONAL STRUCTURE	12%
3	LIMITED ACCESS TO ACTIONABLE DATA	25%	7	INABILITY TO ACHIEVE CONSENSUS ON COSTS & BENEFITS	11%
4	HUMAN RESOURCE LIMITATIONS	25%	8	LACK OF VISION	6%

Consider the following scenario. A hurricane changes course suddenly, forcing operations to cease in six hours, as well as evacuation of the airport. Inside the operations center, tough decisions need to be made in real time, such as which flights to divert, which flights to cancel both today and in the next two days, and how to effectively manage scattered crews and stranded customers.

Inside the strategic nerve center of any carrier in this position, it is not the time for guesswork. Leaders require quality information from all areas of the airline and need it presented in a way that gives them the true costs to make operational decisions.

TOP STRATEGIC PRIORITIES OVER THE NEXT FIVE YEARS

Profitability

41%

Addressing the problem requires focusing on making data accurate, as well as turning it into something that is actionable for leaders to guide modern airline operators.

ATH Group's Baiada contends that a real-time understanding of how flights impact hub operations – along with follow-on impacts to customer service and eventually profits – requires a more invested gathering and weighing of real-time flight factors such as connections, gate availability, crew resources, revenue impact, maintenance, and how adding or subtracting merely minutes from aircraft arrivals can mean the difference between gate gridlock and a hub that hums.

WHAT DO YOU BELIEVE WOULD IMPROVE YOUR AIRLINE'S PERFORMANCE?

	OPERATIONAL PERFORMANCE	CUSTOMER EXPERIENCE	PROFITABILITY
ADOPTING ADVANCED TECHNOLOGIES	46%	53%	41%
INFORMATION SHARING	27%	27%	12%
STRONG LEADERSHIP	26%	16%	50%
INCREASED BUDGETS	19%	20%	13%
MORE SKILLED EMPLOYEES	16%	33%	21%
IMPROVED ACCESS TO ACTIONABLE DATA	16%	23%	10%

WHAT WOULD BE AN IDEAL WAY TO DISPLAY REAL-TIME, ACTIONABLE DATA?

	DEPARTMENT-RELATED DATA ON A DEPARTMENTAL LEVEL	DATA FROM SEVERAL DEPARTMENTS ON A DEPARTMENTAL LEVEL	SOME DATA ON AN ENTERPRISE LEVEL	ALL RELEVANT DATA ON AN ENTERPRISE LEVEL
1 LEAST PREFERABLE	2%	14%	11%	2%
2	6%	20%	31%	9%
3	17%	28%	35%	9%
4	43%	34%	17%	34%
5 MOST PREFERABLE	32%	5%	6%	46%

"If I need to throw 15 ping-pong balls to you in a short amount of time, let me prioritize them and have me manage the flow, versus trying to throw them all over at one time or having a third party tell you how," Baiada said, cautioning that airlines seem too content to cede control of their aircraft to air-traffic-control systems in the air and on the ground, hurting performance in both regular and irregular operations."

TOP STRATEGIC PRIORITIES OVER THE NEXT FIVE YEARS

Profitability

41%

An Equal Stake Across The Airline

The journey toward creating actionable data for airline operations includes several challenges:

- Extracting usable real-time data from all areas of airline operations,
- Finding the right tools to analyze the relationships between those data subsets,
- Determining the best way to present the analysis to leaders in a way that is truly actionable to drive improvement in operations.

The right tools also have to be in place to present operational leaders with the best possible version of operational impact to guide real-time decision-making.

At Saudi Arabian Airlines, a holistic approach to information technology helps link different areas of the enterprise while generating the kind of data needed to help explain how to optimize operations.

"We have managed to create the underlying foundation by integrating all our operational, commercial and back-office platforms in a real-time approach, thereby giving us the opportunity to capture real-time data for further analysis," said Muhammad Ali Albakri, former executive vice president of strategic projects and airline transformation for Saudi Arabian Airlines. "Without having such cross-referenced analysis, capturing data alone may be limited in its value."

When choosing between two flights to cancel because of operational constraints, load factor (a measure of how full planes are with paying passengers) may seem like the easiest metric. But a half-full plane may hold a high percentage of high-value customers and present a much more significant revenue impact than the "fuller" flight. The duty-day limits of flight crews could make one flight much more obvious, and the maintenance needs of the aircraft over another may yet be the most pressing driver of how to choose which flight to cancel.

Finding tools that present operational decision-makers with real-time, synchronized data drives improvement in metrics that go far beyond the simple on-time and completion factor.

The survey results reflect more confirmation that leaders believe technology can solve these issues and improve customer service. Technology and the ability to collaborate among different departments rank highly as both obstacles and enablers to aligning customer experience and operational performance.

"If the utilization of operational resources can be increased by even a very small percentage with advanced technologies, the absolute value can be considerably large, not to mention the inestimable social value from the improved safety-management level and service quality," said Air China's Wan.

More than half surveyed (51 percent) believe improving operations is a top priority, ranking it higher than other factors such as aligning operations, marketing and IT (39 percent), and building customer loyalty (35 percent). The biggest obstacle to improving airline performance, according to the survey, is finding the right combination of technologies that yield the data required to build actionable intelligence for operational leaders and creating those solutions in a cost-effective way.

WHICH OF THE FOLLOWING REPRESENT THE TOP OBSTACLES AND ENABLERS OF ALIGNING CUSTOMER EXPERIENCE AND OPERATIONAL PERFORMANCE?

	OBSTACLES	ENABLERS
ABILITY TO COLLABORATE	45%	53%
TECHNOLOGY ADOPTION (LEGACY VS. ADVANCED TECHNOLOGIES)	45%	49%
RESOURCES (BUDGET, SKILLS, BACKLOGS, PRIORITIES)	54%	54%
ABILITY TO ACHIEVE CONSENSUS ON SERVICE QUALITY IMPROVEMENT COSTS AND BENEFITS	40%	32%
ORGANIZATIONAL STRUCTURE (VERTICAL VS. HORIZONTAL)	17%	22%

HOW CAN A HORIZONTAL ORGANIZATION AND ADVANCED TECHNOLOGY SYSTEMS HELP AIRLINES OVERACHIEVE ON OPERATIONAL GOALS?

IMPROVED BUSINESS PROCESSES, REDUCED CYCLE TIME, FASTER SPEED TO MARKET	74%
REAL-TIME, SEAMLESS VIEW OF OPERATIONAL PERFORMANCE DATA	72%
ENHANCED DISRUPTION HANDLING DUE TO MORE EFFICIENT COLLABORATIVE DECISION MAKING	71%
BETTER COLLECTION AND DECISION-MAKING ABILITY USING CUSTOMER DATA	69%
ACCELERATE THE IMPROVEMENT OF PROFITABILITY	60%
NO BENEFITS TO A FLAT CONNECTED ORGANIZATION	60%

"Gulf Air's operational strategy depends on actionable data to ensure optimum operations with reduction in operating costs," said Dr. Jassim Haji, director of information technology for Gulf Air, which recently changed its approach to IT infrastructure. "What led to the change in approach is the realization that acting fast and quick on data helps avoid potential disruptions, turns negative passenger experiences into positive ones and keeps us ahead of the competition."

Better Enterprise Systems Drive ROI Throughout The Company

All operational management now aims to defuse operational situations to prevent high-profile meltdowns that generate negative media coverage, hurt brand perception and often create lasting damage. More so than before, carriers are "de-risking" operations to prevent weather-related problems, and they're doing it through better data management and forecasting through these tools.

Airlines can plan for the worst, but being tested by unforeseen operational crises remains the ultimate stress test of a carrier's entire IT infrastructure. Results are measured by the event's impact on revenue and the speed at which an operation returns to normal, an effort that typically requires all parts of an airline to move toward common goals in a coordinated manner.

Optimizing the day-to-day flight schedule provides obvious benefits that can push through the enterprise, as well as truly pay off during irregular operations where even the most careful plans are disrupted. With U.S. regulators fining airlines for aircraft that sit on the tarmac for more than four hours and European regulators forcing carriers to pay passengers back for delays, carriers are more motivated than before to be ready for (and minimize) schedule disruptions.

"One of the critical pieces is having a system that performs what-if scenario analysis to find the optimum way to handle a particular disruption event," said Gulf Air's Dr. Haji. "This analysis should take into consideration the available aircraft and crew and compare this to accommodating passengers on other airlines, delaying a connecting flight to avoid missed connections or finding other alternatives."

"What led to the change in approach is the realization that acting fast and quick on data helps avoid potential disruptions, turns negative passenger experiences into positive ones and keeps us ahead of the competition."

Dr. Jassim Haji, *director of information technology for Gulf Air.*

Brand Promise Delivery And Operational Excellence Need To Be Data-Driven

The survey notes that 65 percent of airline leaders said their organizations are transforming across multiple platforms and functions; change and new technology are joining hand in hand. This allows airlines to harness data for operations leaders, with the enterprise benefiting from the follow-on effects.

To that point, the most frequent response to which initiative can improve overall operations is building unified technological systems across the enterprise (77 percent).

"Proper change management is another essential element that is required to ensure clear two-way communication, staffs' knowledge transfer, staffs' buy-in and create the necessary economic environment where the technology implementation brings true business values," Albakri said.

Finding the right data tools leads airlines to realize the virtuous relationship among improved operations, better brand perception and the bottom line.

"I firmly believe that operation improvements will help airlines make good on their brand promises to customers and raise profitability," said Air China's Mr. Wan. "The future aviation market will evolve toward personalized service and market segmentation." ASCEND

For additional information, please contact Kamal Qatato at kamal.qatato@sabre.com.