Next Gen Now –
The Intelligent Automation
Opportunity for Airlines

Internal Audit, Risk, Business & Technology Consulting

Introduction

Airlines, like many businesses, have been expanding their use of intelligent automation in recent years. They're combining automation technologies like robotic process automation (RPA) with artificial intelligence (AI) to rethink their operations, innovate and create value. However, because many of these initiatives have been viewed more as aspirational experiments than critical business imperatives, they were not often well-funded or implemented with urgency. But now, the COVID-19 pandemic has many airlines considering whether they should accelerate investment in intelligent automation programs in the remaining months of 2020 — and make it a strategic priority for the business in 2021.

The need to support a dramatically leaner workforce is a primary reason for airlines' newly heightened focus on intelligent automation. As of midsummer 2020, about 400,000 airline workers had taken early-out packages, or had been fired, furloughed or notified that they may lose their jobs due to the pandemic.[1] And more workforce reductions are expected for the industry as the COVID-19 crisis persists and continues to negatively impact both business and leisure travel.

Airlines have reduced staffing for a wide range of customer-facing and internal roles, but some of the deepest cuts in headcount have been in back-office functions. That includes groups that oversee and monitor compliance — the organization's second line of defense. In many instances, one remaining worker is now tasked with managing responsibilities once handled by two or even three employees. However, they can't always step in to fill gaps due to competing priorities and/or because they lack the right knowledge and experience.

Overseeing controls for station operations is one example. Before the pandemic, the industry trend was to centralize controls for station operations at the corporate level to drive consistency, improve reporting and ensure compliance. Now, with greatly reduced headcount, airlines face the prospect of pushing some of these controls back to station operations — which creates risk associated with revenue capture, passenger satisfaction, and compliance with laws and regulations. Automating certain controls can help airlines minimize or avoid that risk.

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[1] "Jobs Are Being Wiped Out at Airlines, And There's Worse to Come," by Anurag Kotoky, Manish Modi and Matt Turner, Bloomberg, July 23, 2020: www.bloomberg.com/news/articles/2020-07-23/400-000-jobs-lost-at-airlines-during-coronavirus-pandemic.

A Strategic Priority With the Potential for High ROI

COVID-19 business disruption has helped to highlight many areas, both internal and customer-facing, where airlines can launch or expand intelligent automation initiatives. The scenario of decentralizing station operations described above is just one example. In fact, many intelligent automation opportunities that have emerged because of the pandemic can help airlines improve their operations and reduce risk.

The need to cut costs — and fast — has airlines drastically reducing IT spend. Some are even cutting back budgets for planned automation initiatives as a tactic to manage cash flow during the current crisis. This is an understandable position, given that the International Air Transport Association (IATA) projects that airlines could lose more than $84 billion in 2020 due to pandemic-related revenue losses.[2] However, strategic intelligent automation investments made during this time of uncertainty can be wise provisions that put airlines on stronger footing for a post-pandemic reemergence. These investments are essential for airlines to build efficiency and resilience into the business. Automation leads to quick wins in terms of decreased costs and increased revenue opportunities that can be realized in months or even weeks. Over the longer term, the value these investments can deliver to airlines and their customers is significant and lasting.

The more immediate cost savings and value generation that airlines can realize from intelligent automation stem from rethinking inefficient, manual processes that are time-consuming and, often, prone to error. These processes exist throughout the airlines' businesses, from cargo to catering, in data-intensive areas ranging from finance and accounting and human resources functions to supply chains and IT operations. Some examples of processes that airlines can automate with intelligent automation solutions, and that they'll likely find ripe for transformation, include:

- Account reconciliations
- Cargo airway bills
- Crew scheduling and hotel bookings
- Commission payments
- Compliance activities
- Customer refunds
- Ticket sales auditing

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[2] "Industry Losses to Top $84 Billion in 2020," press release, IATA, June 9, 2020: www.iata.org/en/pressroom/pr/2020-06-09-01/.

Pandemic-Driven Innovation With Intelligent Automation

To understand the positive impact that intelligent automation can have on airline operations, consider reservation centers, which have been overwhelmed during the pandemic as customers have scrambled to cancel or rearrange their travel plans. An added challenge is the fact that many reservation center staff are still working remotely due to social distancing guidelines. And because of cost-cutting, many airlines have avoided increasing headcount in reservation centers despite increased workloads.

Out of necessity, many leading airlines have turned to intelligent automation solutions to support their reservation center teams during the crisis. For example, one RPA solution — a software bot — that is used by several airlines can automatically extract ticket information from customer emails on file, open booking and refund applications, and validate the passenger name record, customer itinerary, airline reward, coupon status and commission to process requests and issue e-vouchers.[3] One major airline was able to reduce its e-voucher processing time from 20 minutes to under three minutes by using an RPA bot to streamline and accelerate its cancellations workflow.[4]

RPA solutions can be implemented very quickly, which has made them even more valuable to airlines trying to manage the pandemic-related pressures straining their reservation centers. One airline created six automations and deployed three bots within 24 hours to help its overburdened reservation center team handle high volumes of voucher refund requests, cancellations and booking extensions.[5]

Supporting reservation center operations with intelligent automation also allows airlines to create a better experience for their customers by reducing call handling times, speeding issue resolution and more. Positive outcomes include enhanced customer satisfaction, which can help to deepen customer loyalty — and boost revenue for the airline. And, because reservation center staff are more effective in their roles and can focus on resolving customers' most critical issues, their job satisfaction rises, which increases morale, productivity and retention.

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[3] "Automation Anywhere Bot Slashes Flight Cancellation Processing Times from 20 Minutes to 3 Minutes," media release, Automation Anywhere, April 23, 2020: https://martechseries.com/sales-marketing/customer-experience-management/automation-anywhere-bot-slashes-flight-cancellation-processing-times-20-minutes-3-minutes. (Note: Protiviti has an alliance partnership with Automation Anywhere.)
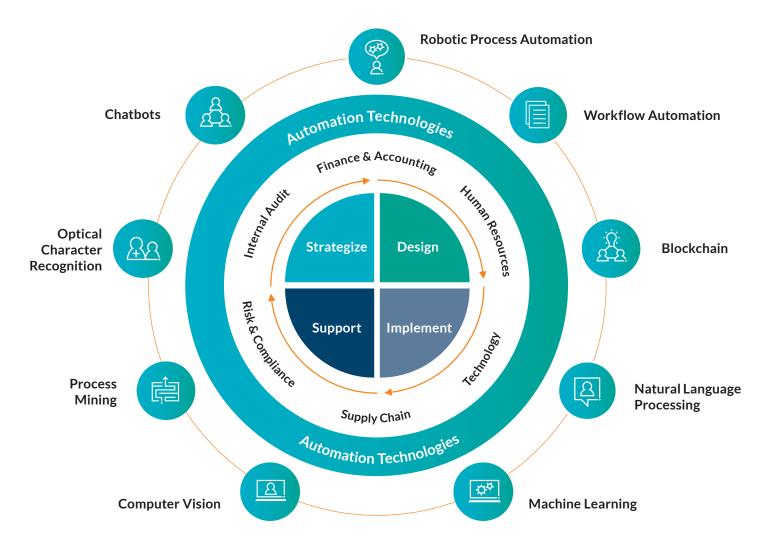
[4] Ibid.

[5] "Covid-19 Challenge: Tremendous Increase in Voucher Services," UiPath case study, 2020: www.uipath.com/resources/covid-automations/process-voucher-requests-sas. (Note: Protiviti has an alliance partnership with UiPath.)

Building a Foundation for the Future With RPA

In many industries, robotics and intelligent automation are fast becoming the preferred method of cost reduction. RPA is typically the first, foundational step toward broader intelligent automation within the organization. The illustration below highlights the various forms of automation that, when applied properly, can provide measurable value across all business functions.

• • • **Intelligent Automation Overview**

Increased consistency, reduced reliance on reservation center personnel and an overall reduction in operating costs are other benefits that airlines are experiencing by using RPA and other intelligent automation solutions. Labor costs are lower because fewer staff can do more in less time, while also delivering higher-quality work, avoiding costly mistakes, and helping the airline to meet compliance and regulatory requirements. And, because RPA bots can work with existing systems, airlines can keep their IT costs in check.

The pandemic's impact on the reservation center has also prompted some airlines to use RPA to provide self-management options to customers seeking a convenient process to cancel or rebook flights and get refunds. While implemented out of necessity to handle the pandemic-driven spike in calls in the spring of 2020, this automation is something airlines can now build on proactively for the future. For example, they could create chatbots that use natural language processing (NLP) and machine learning technologies to "converse" with customers, creating a more personalized experience that helps increase customer satisfaction and reduce churn.

That's just one practical way that advanced technologies can help airlines expand the power of intelligent automation. Over time, as they increase their digital maturity, airlines may want to pursue more complex endeavors such as:

Advanced analytics and workflows

Airlines can enhance their reporting and use advanced analytics to gain visibility into supply chains and fulfillment cycles, financial health, enterprise risk, and customer experience and feedback. They can also drive real-time monitoring and employ automated alerts, workflows and decisioning. Commercial tools can also be used to put powerful advanced and predictive analytics capabilities — such as machine learning — in the hands of analytics teams through a simple, easy-to-use interface.

Process mining

With process mining software, airlines can visualize processes and rapidly identify inefficiencies, manual processing, unnecessary rework and bottlenecks. Internal audit teams, for example, can use process mining to proactively monitor threats to Sarbanes-Oxley compliance and other regulatory requirements. Process mining can also help airlines conduct customer experience analytics, so they can understand design issues that require attention. And airlines can refine user journeys and meet customer service expectations by adopting a human-centric approach to re-engineering processes.

A subsidiary of a major airline based in Europe used process mining to boost flight punctuality and reduce the negative impact that delays were having on customer satisfaction. It thoroughly analyzed its ground operations to determine how key processes for aircraft turnaround — from loading to fueling to catering — were having an impact on overall punctuality ratings. By identifying and addressing where minor delays were adding up during the day, the airline improved its flight punctuality.[6]

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[6] "Celonis customer Lufthansa CityLine crowned the winner for 'Data Powered Business' in IDC European Data Strategy & Innovation Awards 2020," media release, Celonis, June 9, 2020: www.celonis.com/press/celonis-customer-lufthansa-cityline-crowned-the-winner-for-data-powered-business-in-idc-european-data-strategy-innovation-awards-2020. (Note: Protiviti has an alliance partnership with Celonis.)

Chatbots

AI systems, as well as machine learning models, can make it possible for airlines to positively influence their passengers' journeys and turn unpleasant experiences into more satisfying ones. The pandemic has made this opportunity clear. Consider how, in the early weeks of the crisis, thousands of travelers turned to chatbots for information and support — and got it. For example, stranded travelers were frantically messaging airport chatbot AirChat to request information about any flight that could get them home and get answers to questions such as, "Do I need a medical certificate to travel?"[7] Amid mass flight disruptions, a Canadian airline's chatbot saw a 1,671% increase in support tickets coming through Facebook Messenger and WhatsApp — and it was able to resolve 87% of cases.[8]

For many airlines, all of the above activities, which are more complex initiatives than most RPA deployments, represent longer-term goals for intelligent automation. But again, airlines can find intelligent automation opportunities right now in many areas of the business and make improvements that can deliver rapid returns and deliver value in the short term — and for the future.

Blockchain

Airlines can improve the account reconciliations process with blockchain technology. Today, when a ticket is sold, airlines must often deal with multiple players — such as global distribution systems (GDSs), travel agents and other airlines. And they must share sensitive booking data in the process. The current approach also creates a complex web of revenues and payments for reconciliation. But with blockchain technology, airlines can automate and streamline settlement processes, keep booking data secure, eliminate disputes, and do away with heavy reconciliation work.

The use of blockchain in the travel industry has already led to a reduction in transaction costs of up to 20% for consumer ticket bookings.[9] Several leading airline companies employing the technology have been able to prevent instances of over-boarding, simplify processes, and facilitate faster and more secure payments. Airlines can also use blockchain technology for tracking baggage and cargo, verifying passengers' identities, and more.

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[7] "Airlines Use Chatbots to Automate Customer Service as Requests Soar," by Justin Mulfati, Apex, May 21, 2020: https://apex.aero/2020/05/21/airlines-chatbots-automate-customer-service-requests-soar.

[8] Ibid.

[9] "Destination Blockchain: Shaking Up Travel Industry and Cutting Costs," by Julia Magas, Cointelegraph, July 1, 2020: https://cointelegraph.com/news/destination-blockchain-shaking-up-travel-industry-and-cutting-costs.

Conclusion

This is a challenging time for airlines — and the pandemic will have lasting effects on the industry. As some experts suggest, recovering from COVID-19 disruption may be a much more arduous journey for airlines than it was after the 9/11 terrorist attacks because it "has not only made people more afraid to fly, it's taken away most of our reasons for flying in the first place."[10] Also, it "may take a long time for the industry to develop the equipment, policies and procedures to deal with" this crisis.[11]

While it may not seem like the right time to invite more disruption, savvy leaders in the industry will recognize that it is an ideal moment. They can see that making fundamental changes and improvements in everyday operations now can help their airline survive COVID-19 disruption, for however long it persists, and position the airline to prosper in the post-pandemic economy.

By investing in and expanding the use of intelligent automation, airlines can increase their ability to emerge from the pandemic more efficient and resilient, and ready to maintain business continuity if their operations are severely disrupted again. Leadership will be better able to focus on achieving strategic objectives, instead of simply trying to keep the business operating. And they will be supported by a more agile team that can help the airline elevate the customer experience and find new ways to innovate and generate revenue because they are free to focus on more value-adding work.

How We Help Airlines Succeed

Protiviti combines deep process and industry knowledge with intelligent automation expertise to help airlines launch or refocus their intelligent automation initiatives. Our approach includes virtual workshops, powered by design thinking principles, that enable remote working teams to envision how intelligent automation can improve their operational performance. These sessions draw from leading practices, and they help teams to focus on thinking creatively about using automation in their business.

Our cross-functional team of experts possess the process knowledge required to deliver optimized automation solutions. We can help airlines to envision, realize and protect the value of their intelligent automation initiatives by collaborating closely with them on:

- **Automation strategy**, including business case and road map development, technology selection, and proof of value

- **Process evaluation and solution design**, encompassing process mining, analytics and prioritization, as well as process optimization

- **Program implementation**, including solution development and building governance

- **Program support and development**, comprising change management, training and monitoring and maintenance

To learn more about what intelligent automation can do for your business, visit www.protiviti.com/US-en/intelligent-automation.

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[10] "Airlines got travelers comfortable about flying again once before — but 9/11 and a virus are a lot different," by Janet Bednarek, CNN.com, July 30, 2020: www.cnn.com/travel/article/airlines-passenger-confidence-coronavirus/index.html.

[11] Ibid.

ABOUT PROTIVITI

Protiviti (www.protiviti.com) is a global consulting firm that delivers deep expertise, objective insights, a tailored approach and unparalleled collaboration to help leaders confidently face the future. Protiviti and our independent and locally owned Member Firms provide clients with consulting and managed solutions in finance, technology, operations, data, analytics, governance, risk and internal audit through our network of more than 85 offices in over 25 countries.

Named to the 2020 Fortune 100 Best Companies to Work For® list, Protiviti has served more than 60% of *Fortune* 1000 and 35% of *Fortune* Global 500 companies. The firm also works with smaller, growing companies, including those looking to go public, as well as with government agencies. Protiviti is a wholly owned subsidiary of Robert Half (NYSE: RHI). Founded in 1948, Robert Half is a member of the S&P 500 index.

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