2024 SITA NORTH AMERICAN AIRLINE IT INSIGHTS

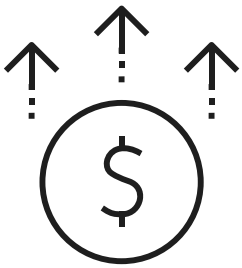
Overall priorities

In this year's IT Insights study, we started by exploring which of the common 'hot topic' areas in aviation IT were expected to receive the most investment in the coming 12 months. While all are key areas in the industry, which were the ones that were really top of mind?

Amongst North American airlines, two priorities stand significantly above the others. These are; 'cyber security', which three quarters put in their 'top 3' areas, and 'AI', which nearly half put as their #1 priority.

While Cybersecurity is a consistent priority across all airlines – with it being by far the highest area of investment globally - North American airlines are significantly more focussed on AI development than other areas of potential investment.

IT resource focus for 2025



Of the following areas, please rank the top three (3) that your IT resources will be most focused on during 2025

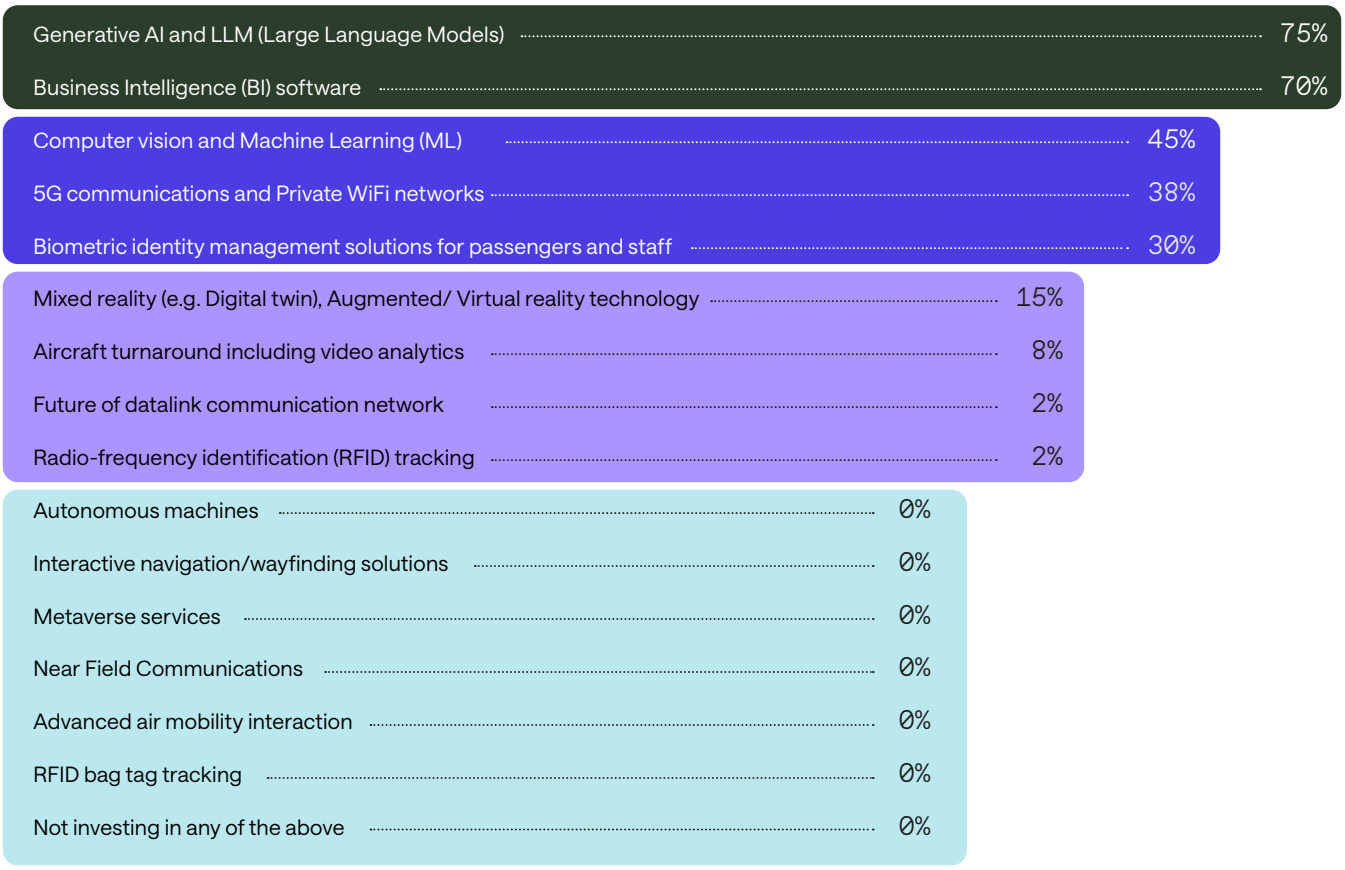
Technology priorities

When we look at individual technologies that airlines are investing in, we see that the use of data in producing advanced analysis is clearly where the most money is being spent – with AI and BI being the top two investment areas by a significant margin. A second tier of focus areas – computer vision and 5G – might represent the next wave of technological investment which could continue to grow in focus over time.

Similarly to what we saw with regards to North America's overall priorities, while AI and BI are also major technology investment priorities in the global landscape, the level of investment relative to the other areas we explored here is significantly higher in North America.

From these two questions, we are building a clear picture that we might expect to see some of the next wave of AI innovations in the sector coming from North America – given the heightened level of resource that is being put into the technology.

Highest levels of technology resource



Please select which three of the following technologies you expect to spend the most resources in the next 12 months?

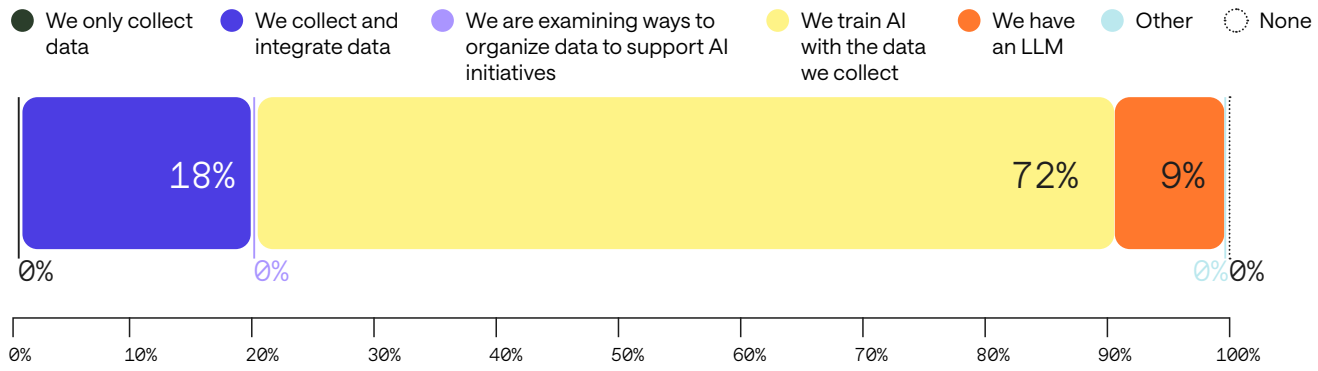
Data and AI maturity

Given it is clearly such a priority, we've delved into data and AI as a topic to explore investment and levels of maturity in more depth. Again, we see a high level of maturity in North America compared to the global picture. All of the North American airlines included in this study reported already having a data platform in place – even higher than the global figure of 90%.

More starkly, we also see that 72% of airlines in the region are already training AI with the data they collect. This is considerably more than the 28% who are doing this globally. There are also 9% who already have an LLM, compared to 2% globally. Whereas most other airlines are either just integrating data or examining use cases for AI – North American airlines are already putting it to use.

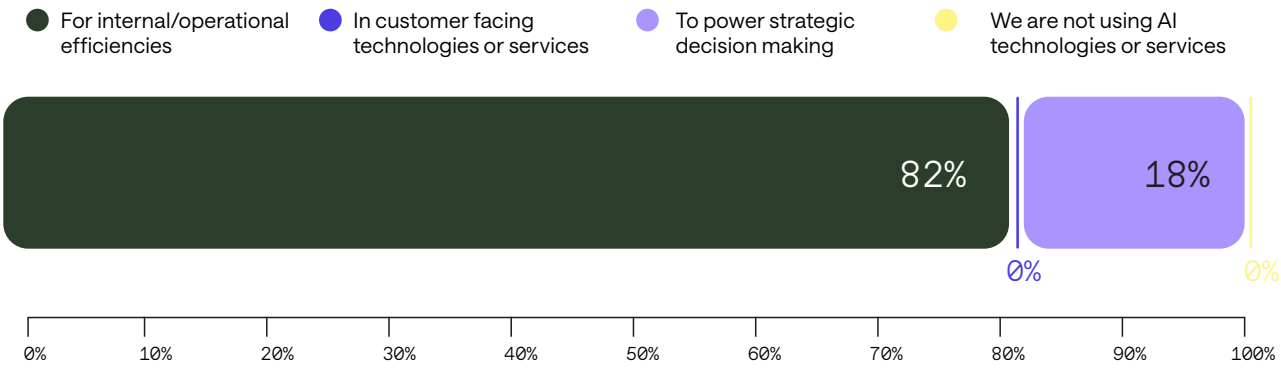
While the level of maturity is higher, the current goal of AI remains the same in North America as the global market - with 82% saying their primary focus is on internal/operational efficiencies (74% in the wider market). That being said, nearly one fifth are focussed on strategic decision making with their AI initiatives – more than double the 8% of the global market. It will be interesting to see whether the high levels of investment in the region lead to a greater focus on using AI to driver strategic decisions, or if the focus on cost-cutting and efficiency will remain.

Data & AI maturity



What stage is your airline at with regards to how it collects and integrates data?

Data & AI maturity



Which of the following best describes how you are primarily using AI within your airline currently?

Uses of AI

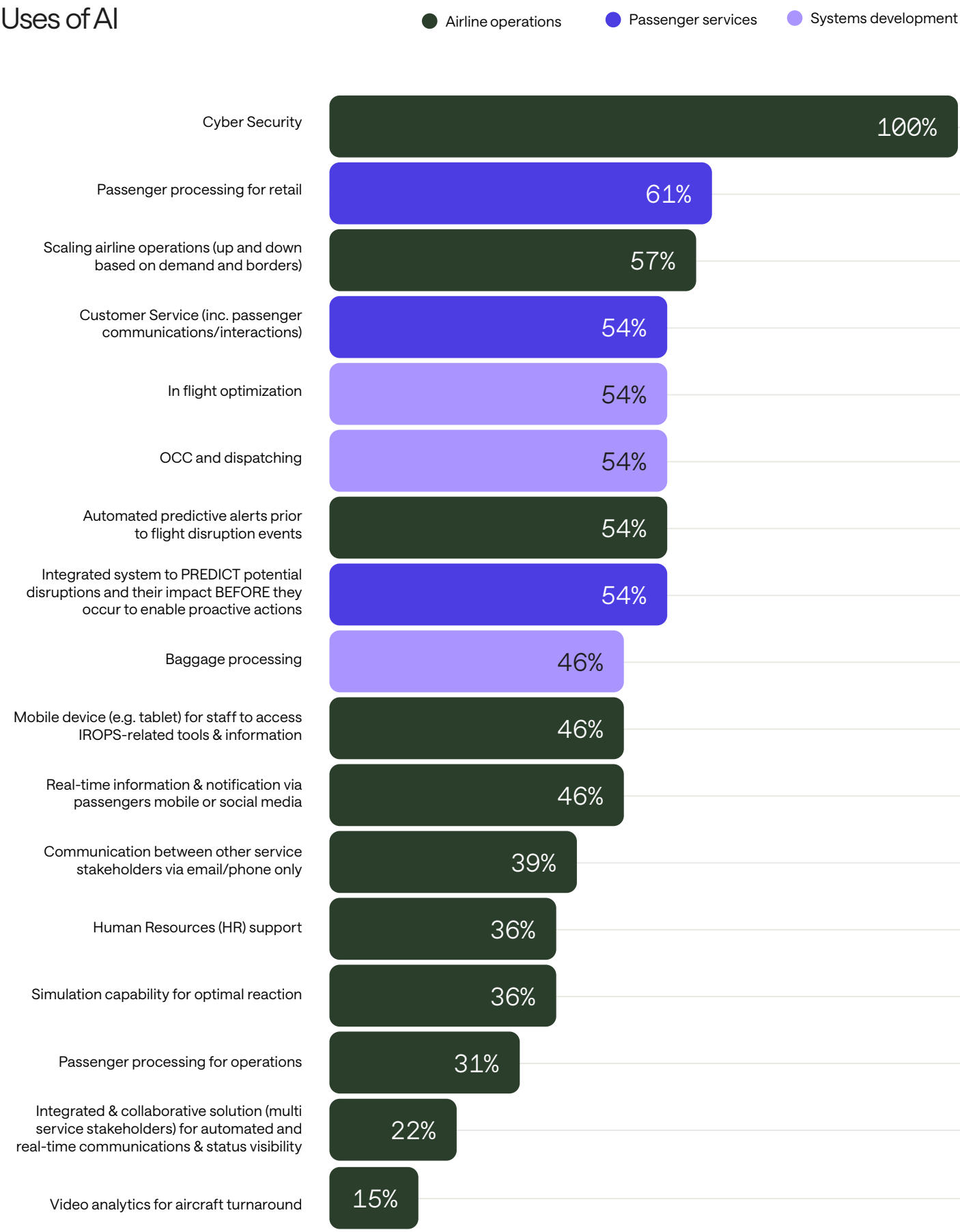
In terms of the specific areas in which airlines are focussing their AI investment, there is unanimous agreement around AI usage for cybersecurity purposes, with 100% of airlines having implemented this.

There is then a significant gap to 'passenger processing for retail' which has AI use-cases in 61% of airlines. There are then a string of areas with just over 50% AI implementation.

In terms of where North American airlines are ahead of the curve in terms of AI implementation, the greatest difference is in 'scaling airlines operations' (57% vs 29%), 'cyber security' (100% vs 78%), Mobile device for staff access to IROPS' (46% vs 27%) and 'Integrated system to predict disruptions' (54% vs 39%).

This focus on areas such as 'scaling' and 'predictions' lines up with what we saw previously with North America airlines being more likely to focus on strategic outcomes from their AI investment.

Uses of AI



In which of the following areas are you currently using Artificial Intelligence tools or initiatives?

IT challenges

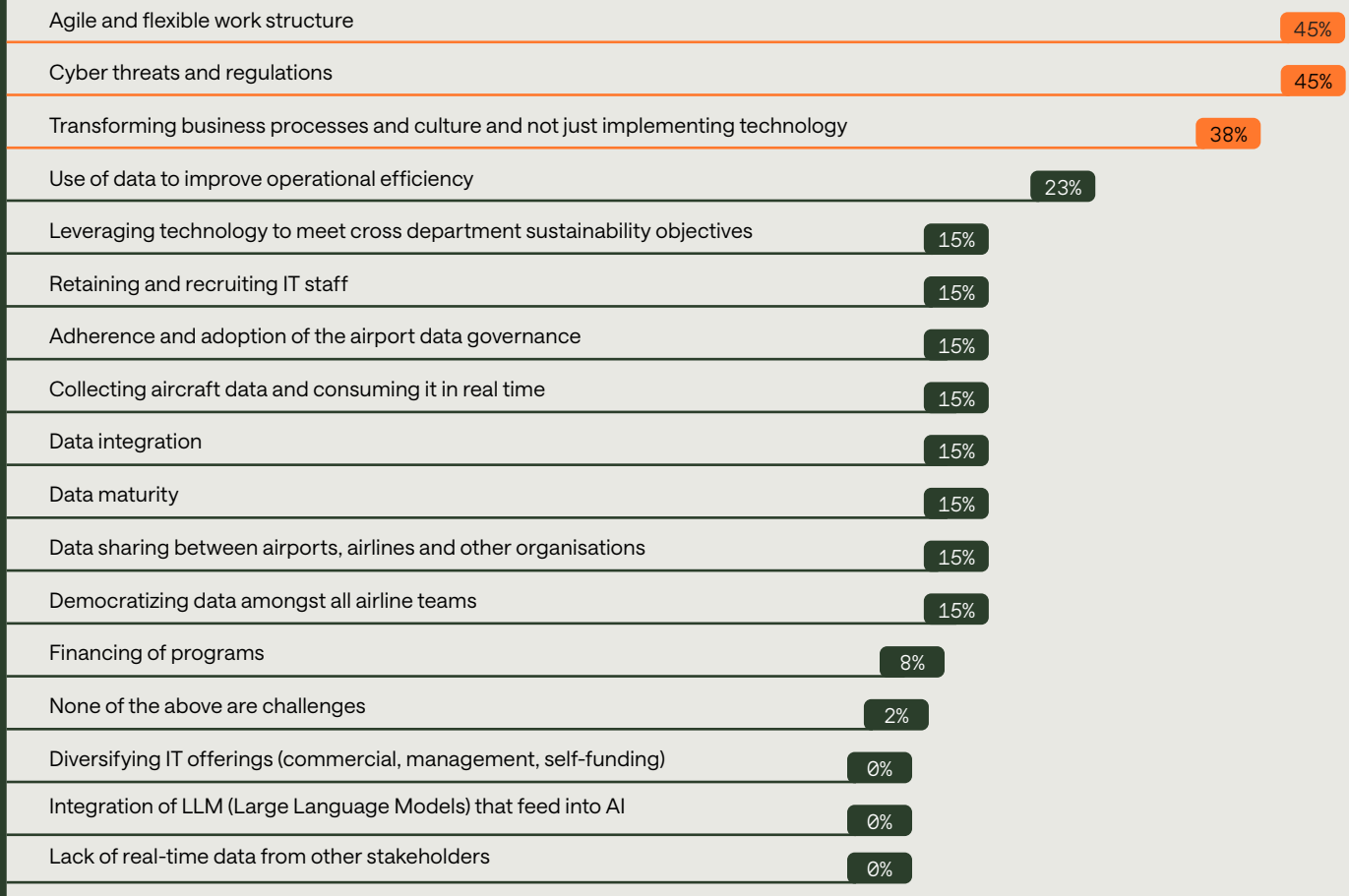
Within any areas of IT implementation, there are going to be challenges.

We explored which challenges were most prominent across airlines and there were three that came out particularly strongly; 'agile and flexible work structures' (45% in the top 3 challenges), 'cyber threats and regulations' (45%) and 'transforming business processes and culture' (38%).

These three areas are mostly aligned what we see in the wider market, although interestingly the latter is slightly less of a focus in the region (globally, it was significantly ahead of all other challenges).

It seems North American airlines aren't facing as many difficulties with the internal processes that go alongside technology implementation and rather are more focussed on how to be more agile and flexible within their IT teams.

Which of the following are the biggest IT and data challenges that you face at your airline? Please select a maximum of 3 areas



Cyber security emerging tech

As we've seen, alongside AI – cyber security is a primary investment focus for North American airlines.

Within this, there are 4 areas where airlines have almost ubiquitously either implemented technologies or plan to do so (82% each). For three of these, this is roughly aligned with the wider market, but there is a clear greater focus on 'Extended Detection and response' (82% v 56%) in the region.

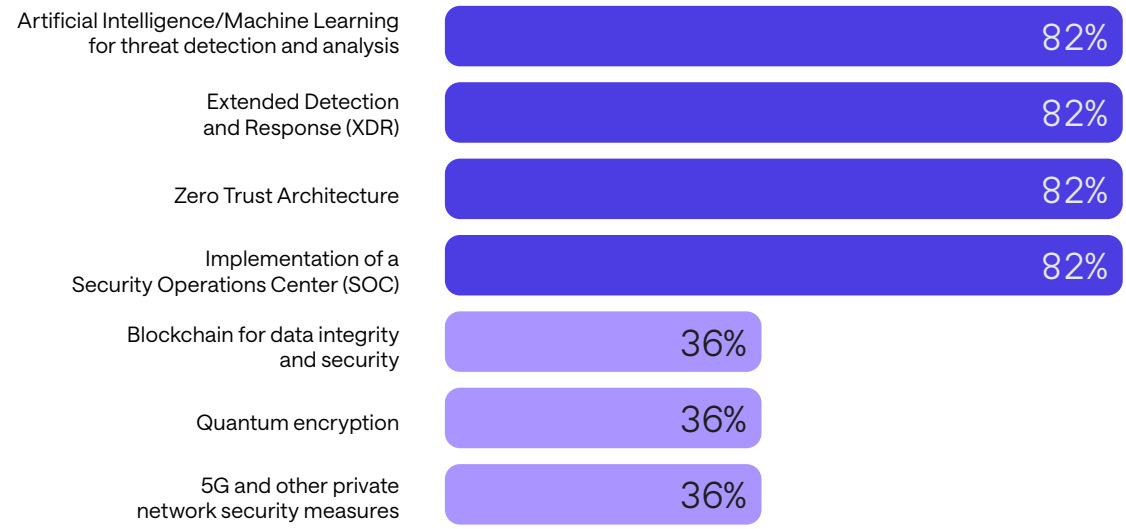
In terms of IT security initiatives specifically, North American airlines are relatively advanced.

There are three areas that have been implemented by 100% of airlines (privileged account management solution, SSO authentication and DDOS protection appliances or cloud protection). Further to this, 85% have implemented 'multi-factor authentication'. There are also another five areas that have been implemented by the majority of airlines.

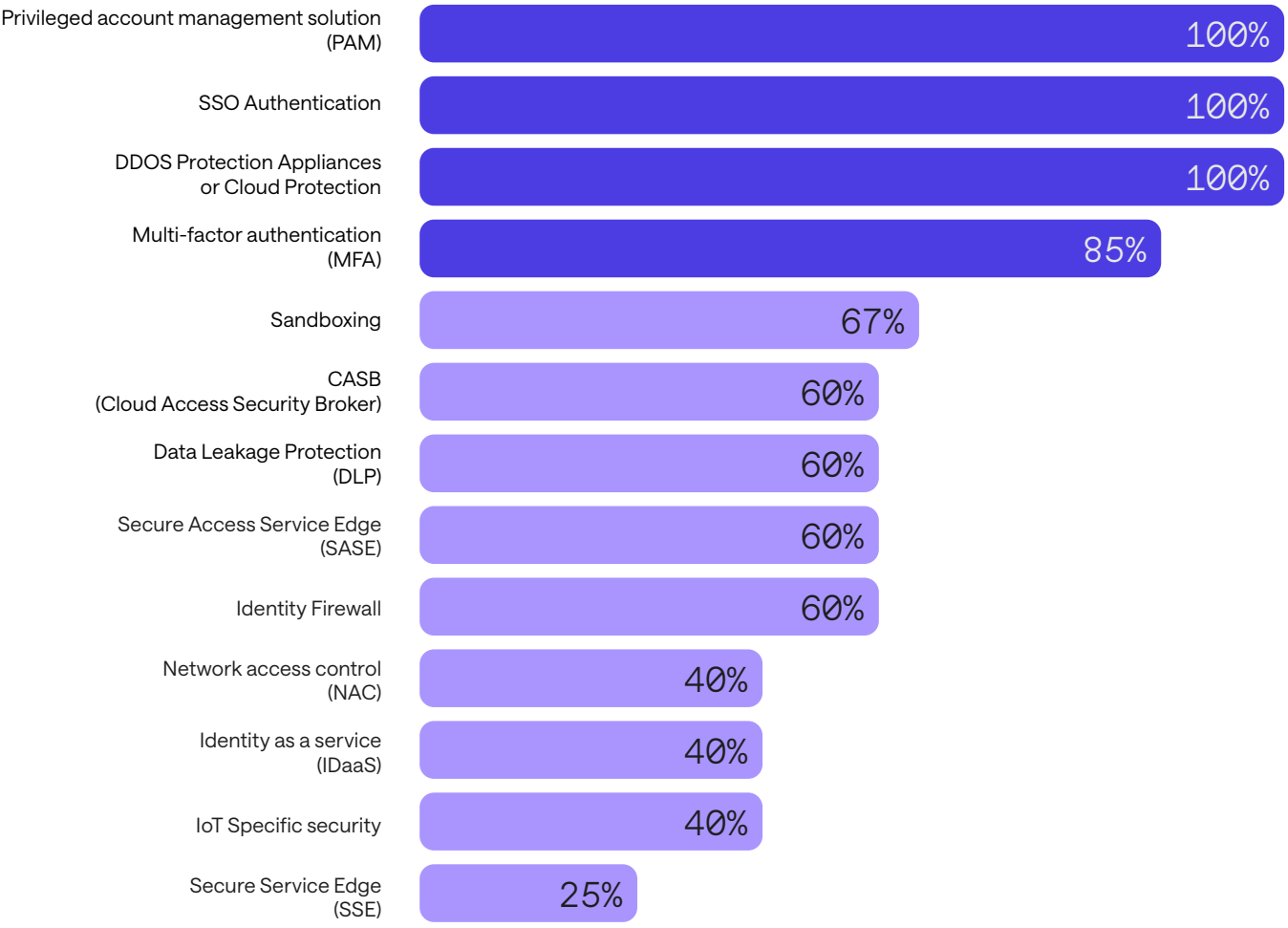
In comparison to the wider market, 'Privileged account management solution' is the one are where North American airlines are most ahead of the curve – with 100% having implemented compared to just 59% of global airlines.

Cyber security emerging tech

Which of the following emerging technologies have you already implemented into your Cyber Security strategy, or do you plan to integrate within the next 3 years?



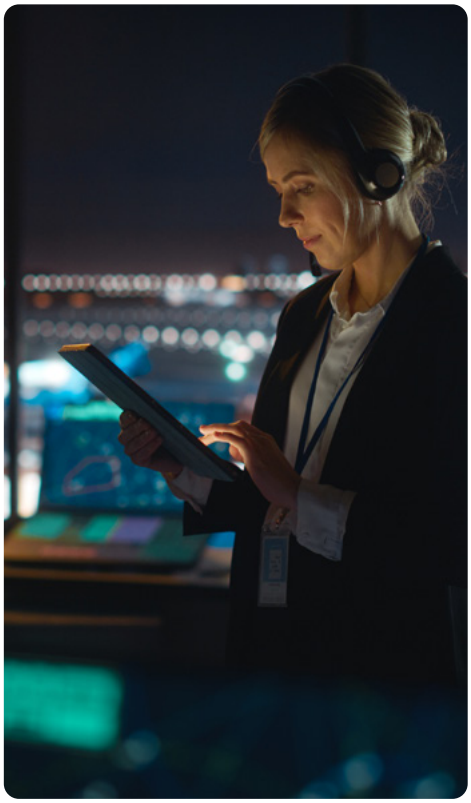
Which of the following IT Security technologies have you already implemented, or do you plan to implement by the end of 2027?



Cyber security challenges

While North American airlines appear to be advanced in the space, the reason that investment in cyber security remains high is that there are still a significant number of challenges associated with it.

Within the region, 'Ensuring the security of third-party vendors' is by far the most widespread challenge, with 100% of them putting it in their top 3. This is unsurprising, given the complex and sometimes lengthy supply chains that businesses in North America have, which require robust checks and levels of confidence. This may be particularly heightened at the moment given the level of geo-political instability that exists, which is throwing more focus on to supply chains across all industries.



100% Ensuring the security of third-party vendors	54% Rapidly evolving threat landscape	46% Integration with legacy systems
39% Limited skilled workforce	15% Limited budget (e.g. due to costs associated with servers, workstations etc.)	15% Compliance with international and national regulations
15% Change management	0% Lack of real-time threat intelligence	0% None of the above are challenges

Which of the following are the primary challenges you face in implementing comprehensive Cyber Security measures at your airline?

Digital identity technologies

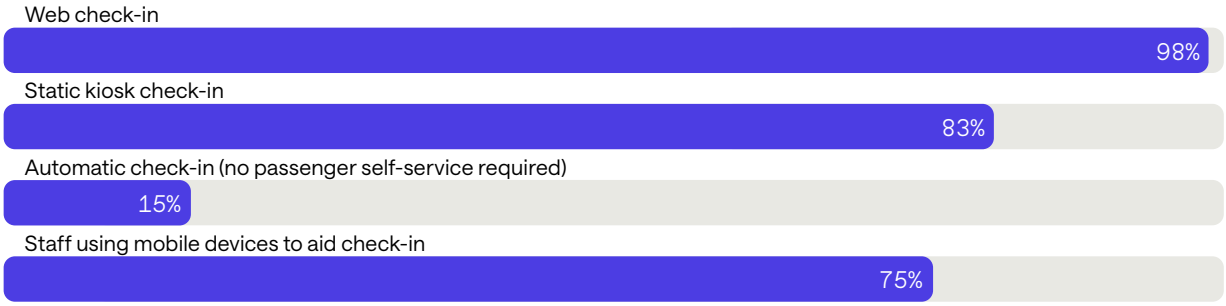
North American airlines have widely implemented digital technologies for passenger flow, with 60% having 'touchless' in place and 53% having 'biometric enabled'. This is significantly more than the global airline industry.

In terms of technologies being implemented across process areas, there are a number which are almost ubiquitous.

'Web check-in', 'Assisted bag drop' and 'At airport bag-tag printing' are all implemented by 98% of airlines.

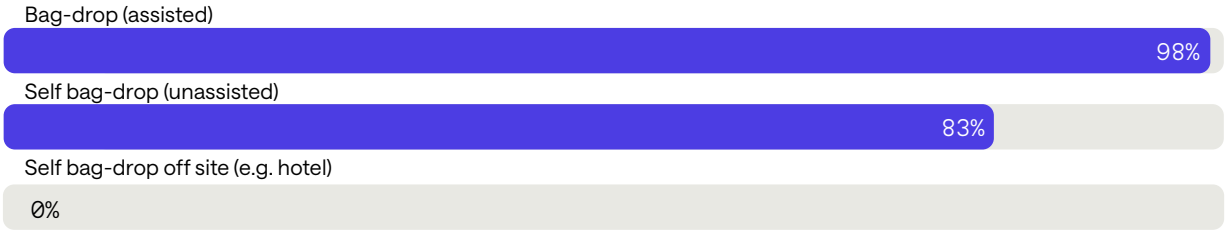
The latter two represent significantly higher levels of implementation than the wider industry, suggesting a more thorough approach to baggage management.

Check-in

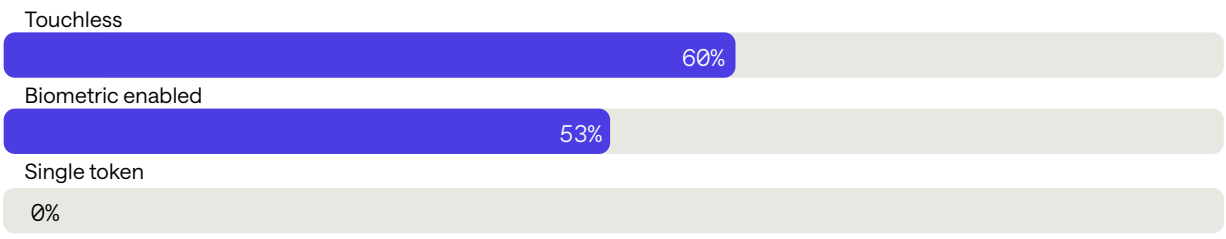


Self bag-tag print

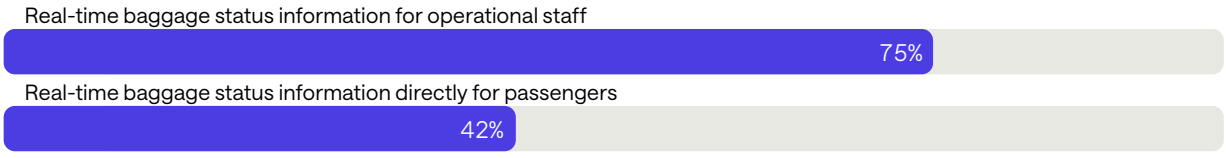
Self bag-drop



Self-boarding



Bag Tracking



Which passenger digital identity technology(ies) have you implemented (or do you plan to implement) to facilitate passenger journey flow?

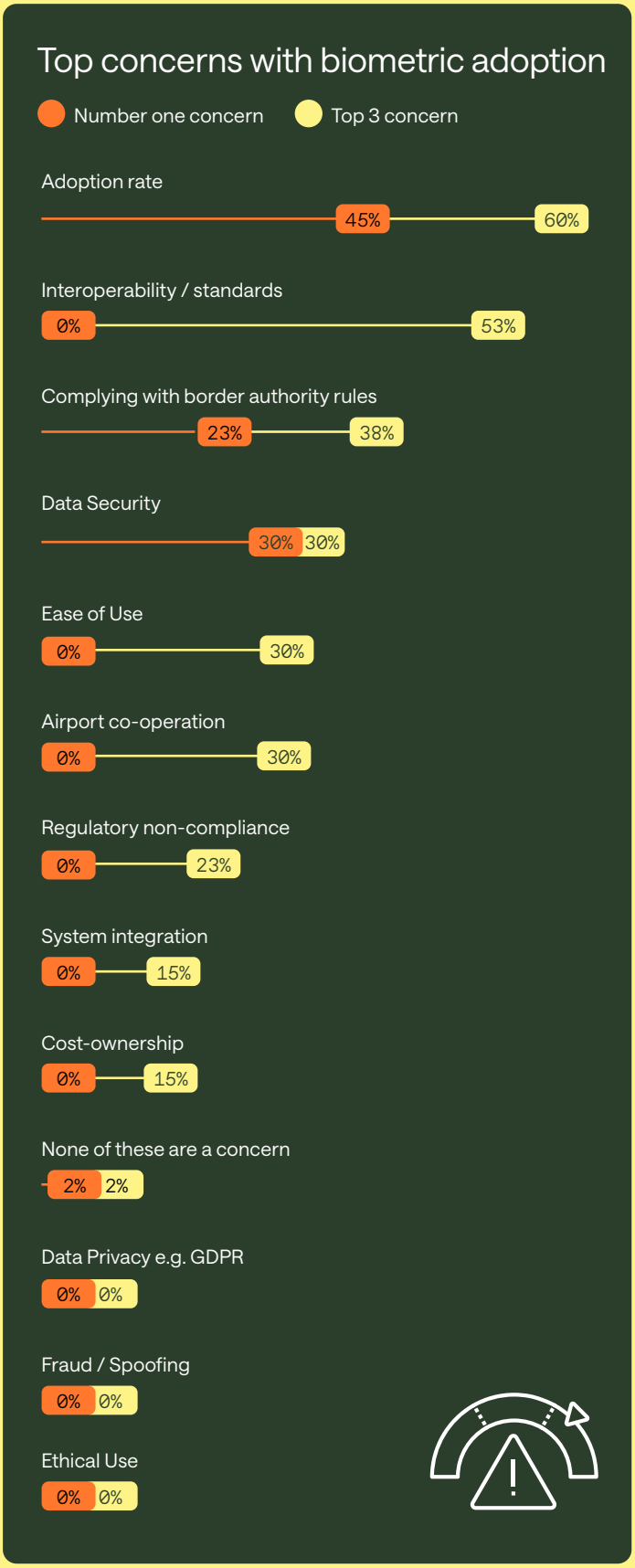
Which technology(ies) are you using (or do you plan to use) in the following process areas? If you are not investing or planning to invest at all, please select 'no plans'?

Biometrics concerns

In terms of the concerns airlines have with biometric implementation, the most widely experienced one in the region is 'adoption rate'.

This suggests that while there will be of course be challenges on the technological side, the main concern currently is how to increase both awareness and trust levels amongst the public, in order to ensure uptake of what could be an incredibly valuable technology. The fact that this is such a high concern in North America suggests they may be more acutely aware of the potential difficulties in doing this.

Interoperability/standards and complying with border authority rules are also major areas of challenge, but interestingly, data privacy comes much lower down the list in North America than in the wider market – perhaps part of a wider attitudinal difference in the region compared to the global picture.



Which of the following are your biggest concerns when it comes to adopting biometrics and digital identities at your airline?

Innovation partners

When it comes to innovation strategy and management, 85% of airlines have an innovation team/department and the vast majority of these are overseen by the central IT department (82%).

North American airlines are also working with external innovation partners in a number of areas. Given what we have already seen about the focus on AI in the region, it is no surprise that the area where most of these partnerships exist is in 'AI' at 83%. This is then followed by 'autonomous machines' and 'wayfinding technology' at 60%.

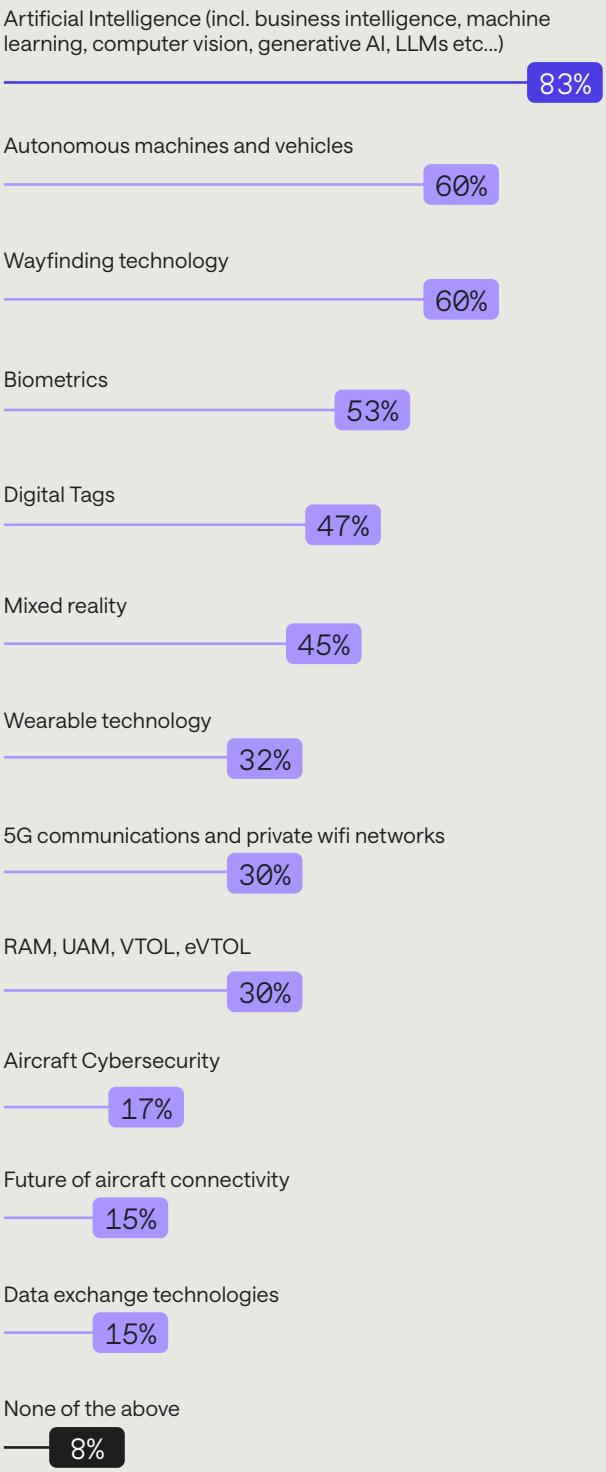
All of these are significantly higher than the wider market – suggesting North American airlines are working with a wider variety of these partners on a wider range of technologies than the global average.

Does your airline have a dedicated innovation team/ department?

Does this team/department report into, or is it directed by the IT department?

In which of the following areas, if any, do you collaborate with start-up/innovation partners currently?

External innovation technology



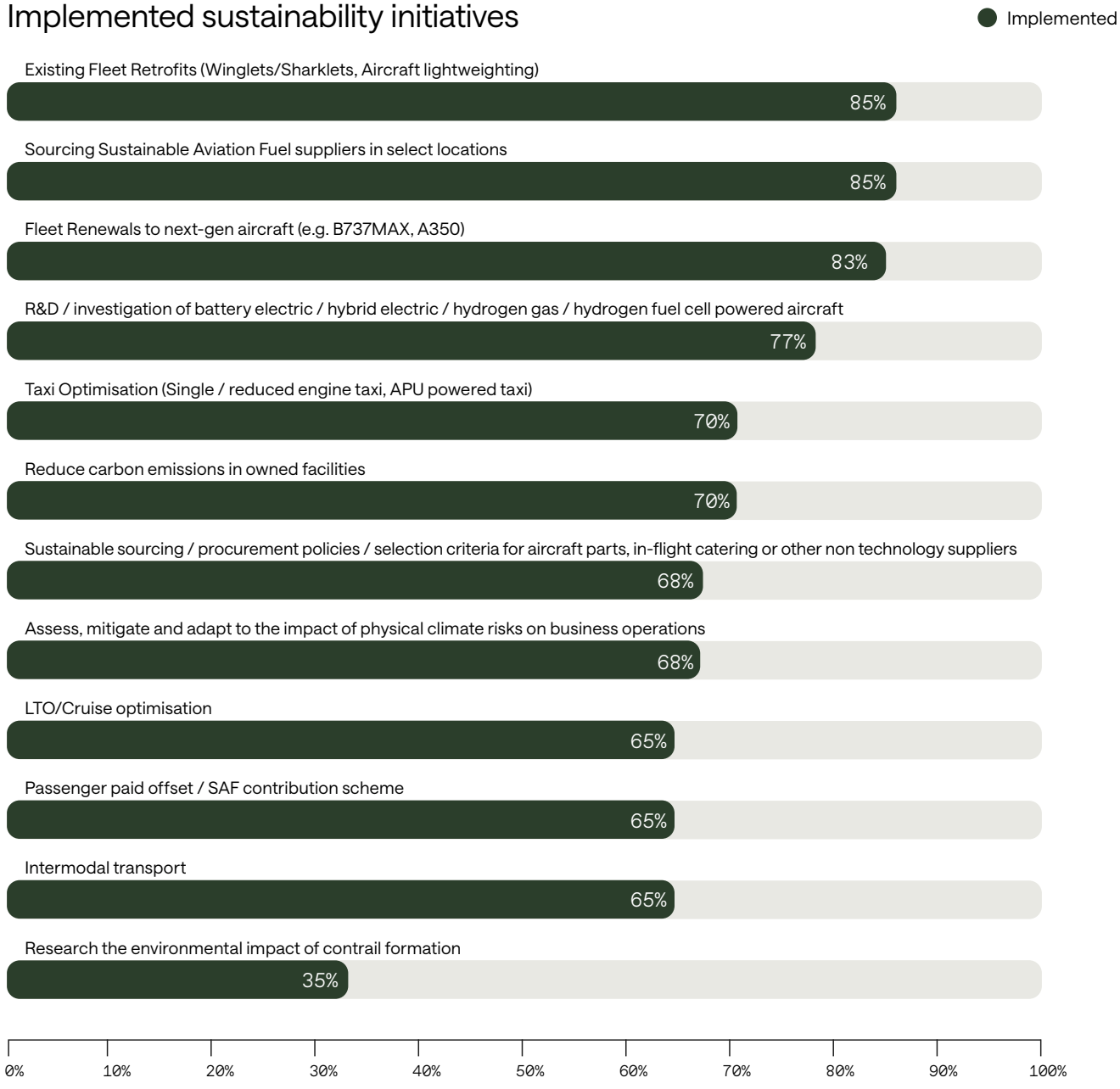
Sustainability initiatives

The most widely implemented sustainability initiatives amongst North American airlines are; ‘existing fleet retrofits’, ‘sourcing sustainable aviation fuel suppliers’ and ‘fleet renewals’ – at over 80% each.

However, this is followed closely by a number of other areas – and all except one of the sustainability initiatives we tested are implemented by more than half of airlines.

In fact, there are overall higher levels of implementation in North America than there is in the wider market. In particular, ‘sourcing sustainable fuels’ has particularly high levels of implementation compared to the global average (85% vs 62%).

Implemented sustainability initiatives



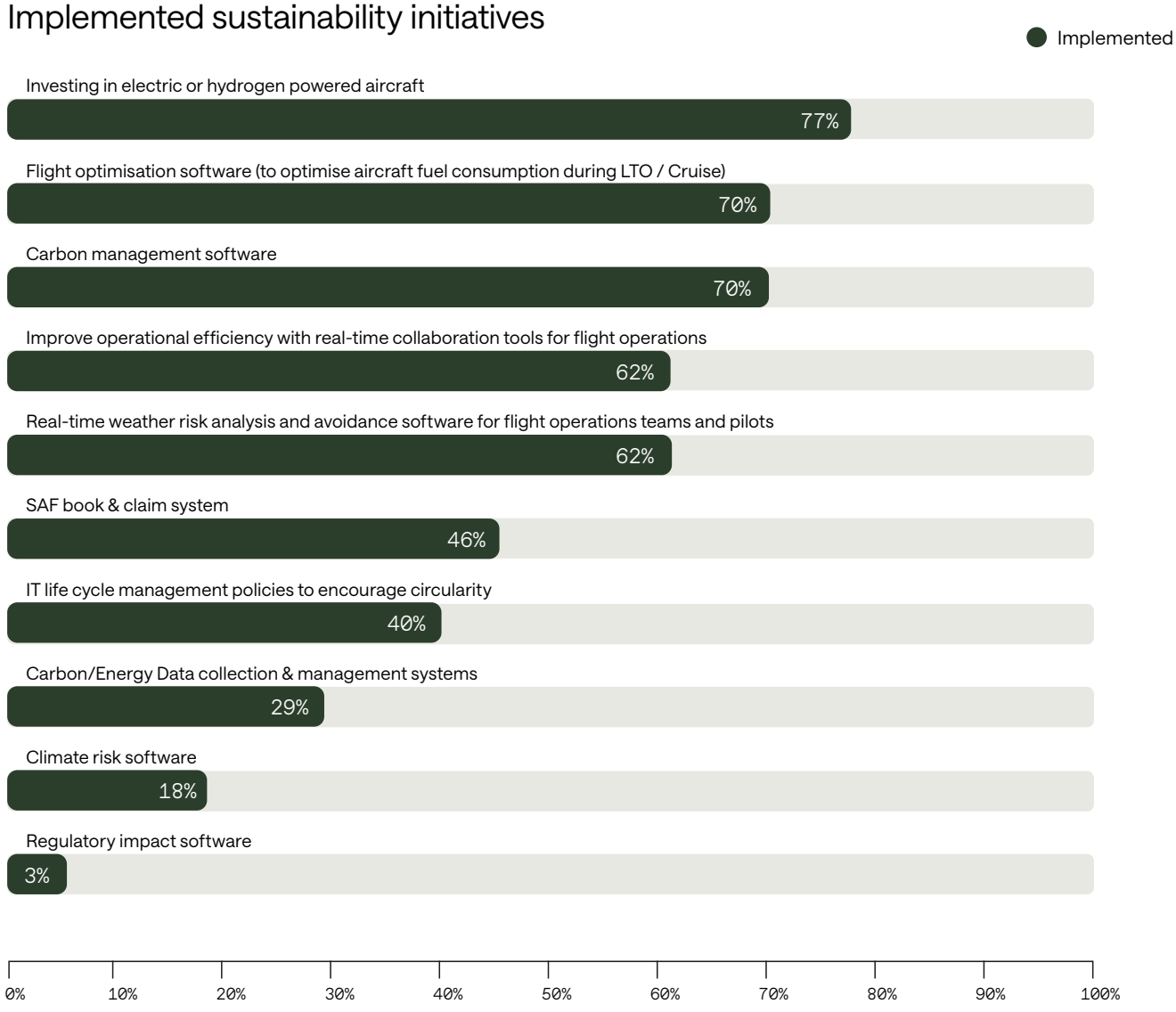
Which of the following environmental sustainability initiatives have you implemented currently?

Greening-by initiatives

In terms of 'greening-by' initiatives, 'investing in electric or hydrogen powered aircraft' is the most widely implemented – with 'flight optimization software' and 'carbon management software' also adopted by large numbers.

The former is significantly more advanced in the region – with just 29% of the wider market having adopted currently – suggesting that North America is really leading the way when it comes to the next generation of aircraft power.

Implemented sustainability initiatives



Which of the following 'Greening-By' technology-related investments or policy changes have you made so far, in order to support your sustainability goals?

Methodology

Airline Survey

SITA's Airline IT Trends Survey is well established as the global benchmarking survey for the airline industry.

The survey was first produced in 1999 and was designed to offer all air transport industry stakeholders the latest facts, figures, and trends related to technology adoption and spending.

This year's survey also explores the transformational impacts of the pandemic and post-pandemic recovery period on the air transport industry.

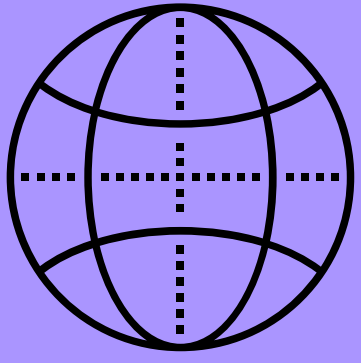
During September-November 2024, questionnaires were sent to senior IT executives in each of the top 379 passenger carriers, including low-cost operators, together with carriers representing important players in the regional and leisure sectors.

This North American airline report represents the views and insights of carriers representing over 60% of North American passenger traffic (based on the 2023 IATA WATS passenger traffic) – including 6 of the largest 7 carriers. The report provides clear insight into IT strategic thinking and developments for the industry.

Research

Independent market research agency Savanta was commissioned to undertake the research on behalf of SITA. The research was conducted in strict confidentiality and the results are presented in an aggregated form. All source data remains confidential, and the results of individual returns are not disclosed to the research stakeholders.

SITA would like to thank the following airlines for taking part in the research: Air Transat, Air Canada, Alaska Airlines, American Airlines, Delta Air Lines, Spirit Airlines, United Airlines and United Parcel Service.



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