

Airlines in the agentic age

use cases and ideas for getting started with AI



Index

Foreword

Since the introduction of ChatGPT in 2022, the world has been captivated by Artificial Intelligence (AI).

In my view, early generations of AI—machine learning and generative—were very useful technology breakthroughs, but the emergence of agentic capabilities represents an unprecedented opportunity for airlines.

An AI agent we are testing today will handle a passenger call to change a ticket in an instant. Unlike early automation attempts, this is not a fragmented experience. The AI locates the booking, understands the request (irrespective of language), proposes options, processes the rebooking, and initiates payment.

This example is only the beginning. We expect agentic AI to improve almost every airline workflow, from network planning to distribution.

Agentic AI arrives at a moment when airlines are already transforming with new systems for Offer, Order, Settlement and Delivery. At Amadeus, we're building our next generation core airline systems (Amadeus Nevio and Navitaire Stratos) with agentic AI natively embedded. In some modules, AI will sit below the APIs rather than on top of them – meaning it is closer to the data and able to power the business logic of relevant applications.

AI can also augment our current applications, adding new capabilities. It will help airlines to extract more value from their software, faster, and with less effort. So, in parallel with making early standalone use cases like the call center agent to airlines now, we're working on augmenting and reinforcing the full Amadeus portfolio with AI, and we believe this will bring even more value to our customers.

At Amadeus, we are working closely with airlines and trusted partners such as Microsoft to understand how well-governed and cleverly used AI can deliver real value to the industry. Alongside developing our own

agentic AI solutions and integrating them into our existing portfolio, we're engaging with the main AI platforms to explore how we can help airlines capture more revenue, streamline operations and enhance the traveler experience. Like other major technology changes (digital, NDC¹, cloud and OOSD²), Amadeus is investing to identify the best ways to bring benefits for airlines and travelers.

This new wave of AI will help us progress in bounds towards the goal of a smooth and connected journey, since AI allows travelers to search for an entire trip rather than a flight, then a car, and finally a hotel. On the flip side, this heightens traveler expectations and increases the urgency for the travel industry to collaborate and provide that seamless end-to-end experience.

I hope this report provides practical insights and encourages you to engage in the opportunities created by AI. While no single organization has all the answers, collective collaboration will be key to unlocking the full potential of this powerful new capability.



Cyril Tetaz
EVP Airline Solutions,
Amadeus





From executing commercial strategies to supporting decisions in an Operational Control Centre (OCC), AI provides varied cognitive capacity. It monitors the environment, generates recommendations, and, crucially, takes action. It operates continuously; 24 hours a day, in real time. At Microsoft, we are working with airlines, airports, and partners like Amadeus to bring the benefits of agentic AI to travel.

Perhaps the most exciting development is the ability for agentic systems to connect previously siloed domains within and outside an airline. Teams of AI agents are beginning to communicate and collaborate, which will help airlines overcome longstanding challenges around data integration, team coordination, decision optimization, and process alignment.

Yet disruptive technologies can be intimidating. They challenge established ways of working and require strong executive sponsorship, cross-functional collaboration, effective change management, strong governance, and above all, a genuine willingness to experiment.

If you're keen to explore these concepts, I encourage you to engage with Microsoft and Amadeus as we collaborate with the industry to accelerate AI adoption.



Julie Shainock

Global MD for Travel, Transport & Logistics,
Microsoft

¹New Distribution Capability (NDC) is an XML data transmission standard for airline distribution

²Offer, Order, Settle, Deliver (OOSD) refers to standards and technology for airline retailing

Executive summary

Agentic AI is emerging as a transformative force in the airline industry, driven by rapid consumer adoption and increasing pressure on airlines to manage costs and offer travelers the efficient and user-friendly self-service options they expect today.

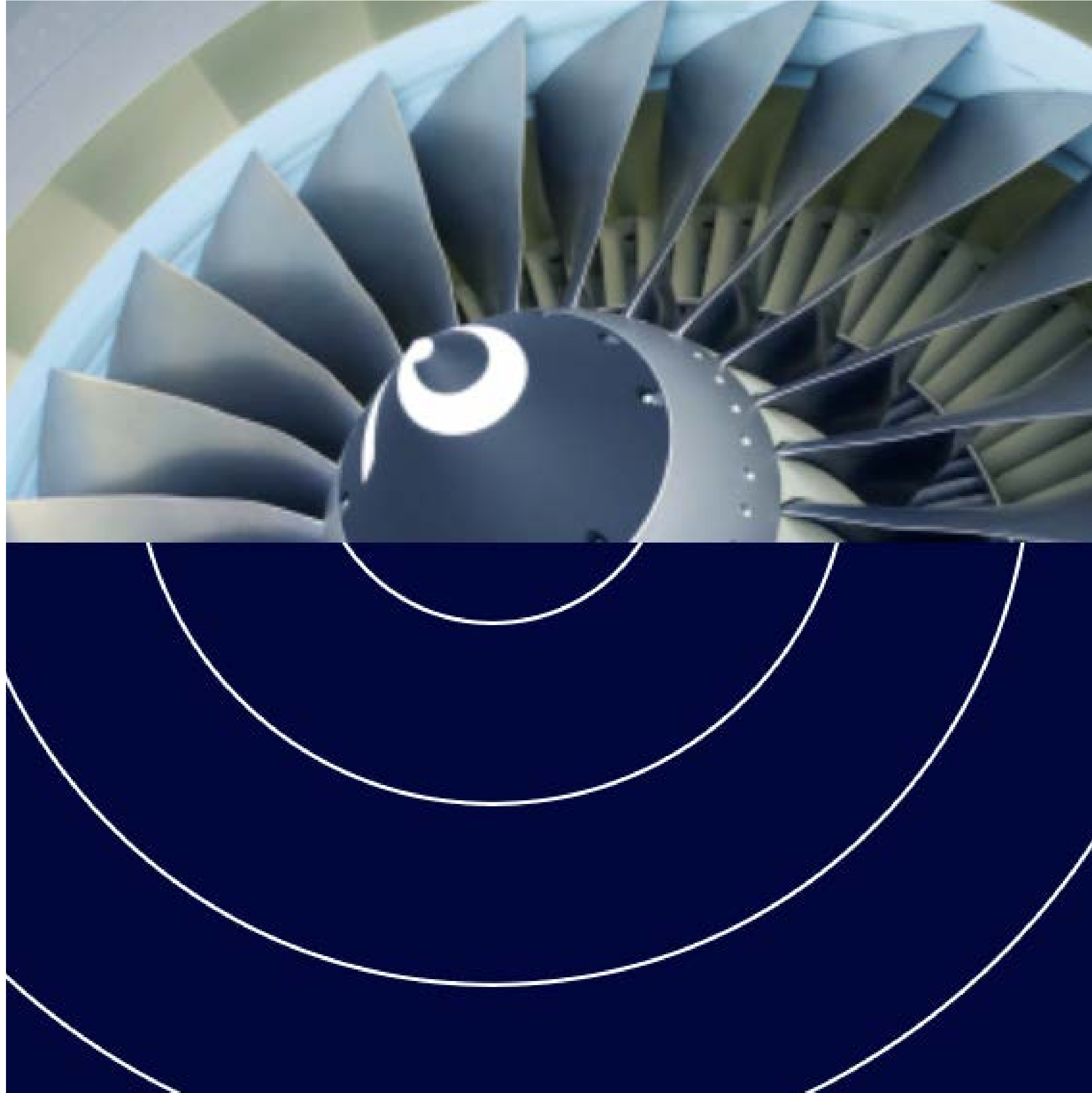
Unlike earlier versions of AI, agentic AI can understand traveler intent through conversational interactions, responding with highly personalized offers and services. By combining multi-source data monitoring and extraction with advanced reasoning and autonomous action, it compresses workflows—from weeks to minutes—while enabling faster decision-making, reducing manual effort, and creating new cross-functional opportunities.

Airlines can deploy agentic AI in two primary ways: enhancing traveler experiences and optimizing internal operations. For travelers, it enables personalized trip planning—with natural language search and booking—complemented by real-time post-booking assistance, for example in disruption scenarios. Internally, it empowers teams by automating workflows, sharpening commercial strategies, and supporting more informed, data-driven operational decisions.

Agentic AI does not replace core airline systems (such as Order Management, Payment, or Passenger Service Systems). But it does augment them considerably, by leveraging their data and business logic and orchestrating actions. However, given the probabilistic nature of AI models, deep integration with reliable systems of record, such as Amadeus, alongside a robust security and compliance framework governing not just data access, but the integrity of autonomous decisions themselves is essential to ensure trust, and integrity.

While generative AI had a big impact on travel's inspiration stage, agentic commerce is set to reshape the next stages of trip planning by enabling conversational, intent-driven interactions that outperform traditional interfaces. Although this is all still evolving, emerging protocols aim to standardize how AI agents communicate, transact, and complete bookings. Now is the time for airlines to explore and engage with AI distribution channels to maintain reach, capture high-converting traffic, and secure first-mover advantage.





- **From a customer experience perspective**, agentic AI overcomes longstanding airline challenges such as fragmented customer data. By synthesizing data across systems, AI creates a unified customer view and individualizes offers, servicing and journey orchestration. Once deployed by airlines, reinforcement learning will further enhance outcomes by continuously learning from real-time performance; optimizing offers and interactions over time.
- **Commercially**, AI automates revenue management insights, and therefore strategy development, and marketing execution. It enables rapid experimentation, real-time optimization, and end-to-end campaign automation, significantly increasing agility and return on marketing investment.
- **Operationally**, agentic AI introduces proactive, multi-agent systems that monitor performance, simulate scenarios, recommend and even execute decisions across domains such as disruptions, turnaround, and capacity planning. These systems improve efficiency, reduce costs, and enable better coordination across traditionally siloed functions.

However, the adoption of agentic AI introduces risks, including hallucinations, bias, and data security concerns. Effective implementation requires robust governance frameworks, combining deterministic controls with human oversight to ensure compliance, accuracy, and accountability.

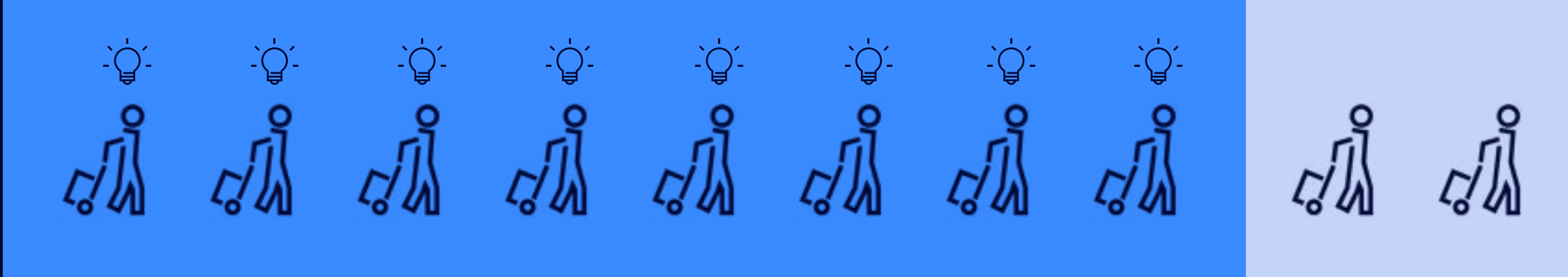
To successfully adopt agentic AI, airlines should start now, with targeted use cases that make sense for their business. But even more importantly and practically, they should make sure their data is ready and fit for use by AI agents, ensure system compatibility, establish governance frameworks, and start with internal education and change management.

Essentially, agentic AI represents a once-in-a-generation shift, comparable to the arrival of the internet. Airlines that successfully embed AI into their systems, data, and processes—underpinned by strong governance—will gain a decisive competitive edge, delivering superior customer experiences, increased operational efficiency, and accelerated revenue growth.

Why agentic AI matters

New Amadeus research conducted in March 2026 with 1,000 travelers shows that AI is already mainstream in travel.

With nearly **8** in **10** travelers using AI for trip planning



The study shows that use today is mainly assistive, with only 6% relying on AI to handle ‘most’ of their travel planning.

The research highlights top concerns as:

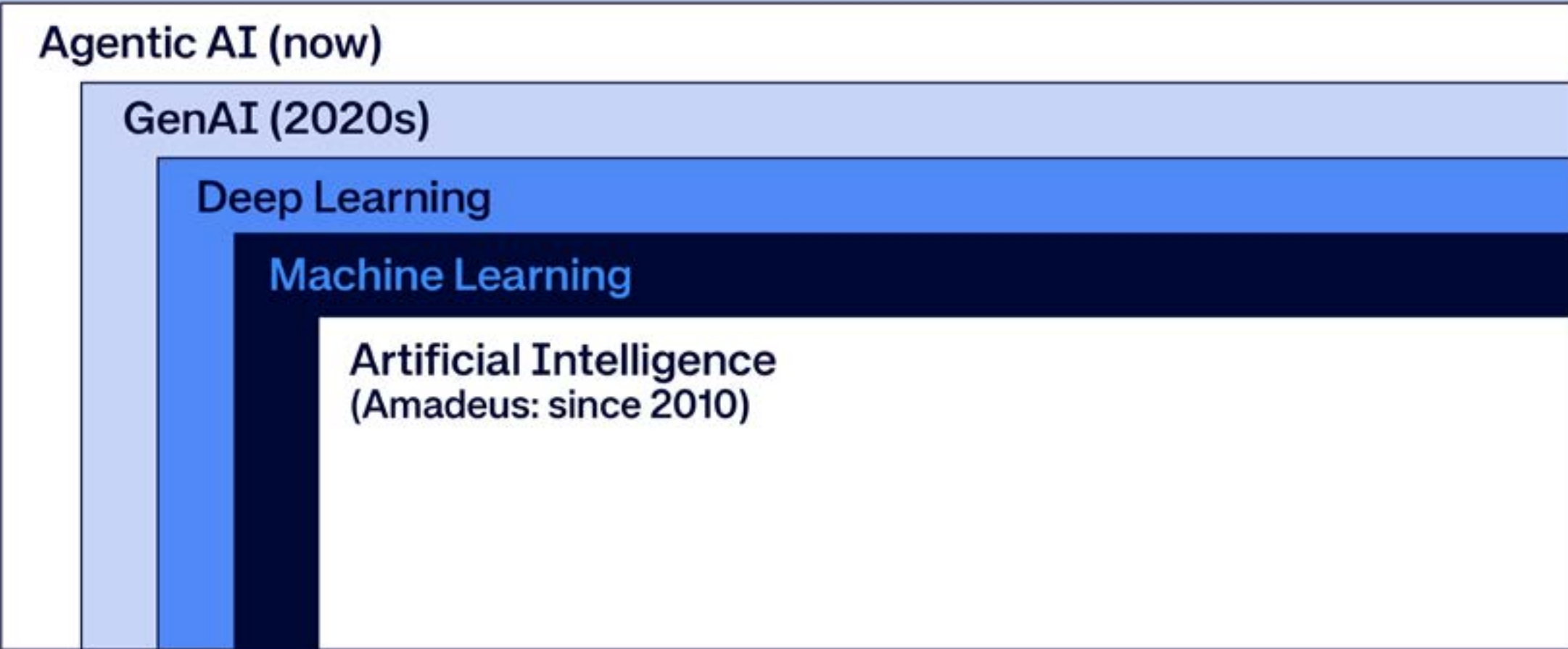
- Privacy and data (35%)
- Accuracy and reliability (34%)
- Preference for control and human involvement (27%)

With most airline management teams focused on increasing revenue, improving efficiency, and offering a better experience for passengers, agentic AI can unlock significant gains in all three areas.

“
2026 will be a defining year for agentic AI in aviation. Over the next 18 months, most airlines will move from exploration to real-world deployment—embedding agents across the traveler journey and core operations.
”

Julie Shainock
Global MD for Travel, Transport & Logistics,
Microsoft

AI in travel isn't new



AI understands a traveler's intent more deeply than previous generations of technology. Airlines can harness this to:

- Create more attractive offers to increase conversion
- Provide more personalized service to increase loyalty
- Enhance the customer experience at every stage of the journey

By monitoring, reasoning, recommending and acting, AI collapses traditional workflows allowing tasks that took weeks to be completed in minutes. This helps airlines to:

- Take better and faster decisions
- Reduce manual work through automation
- Identify new opportunities across departments

Justin Bundick, VP AI & Intelligence Platforms, Southwest Airlines, views agentic AI as transformative: *“Today, AI agents can execute predictable processes and, in the future, I think they’ll evolve to become true digital co-workers that help us expand business value streams with both human and digital capital.”*

Jóhann Valur Sævarsson, Director, Enterprise Architecture, Icelandair, explains that the airline is gradually adopting agentic AI: *“Today, we have a handful of agents handling discreet workflows and many of them are successful. We haven’t yet built multi-agent systems or solved the orchestration issue, but we can already see that agent-to-agent co-operation is the future.”*

AI augments an airline's existing systems

It's important to pause and appreciate how AI will interoperate with existing systems.

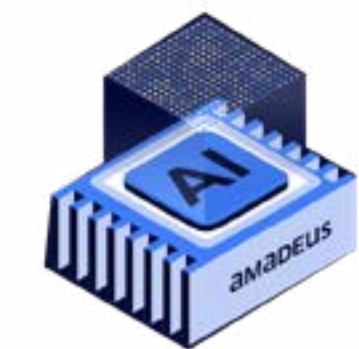
AI will not replace existing airline technology. An AI model will not store the traveler's order. It will not process the underlying payment. It can trigger these transactions, but it needs to work with the systems that undertake these actions to do so and to provide a view of the state of each transaction.

Airlines can access these benefits by applying AI in two ways:

- For travelers, AI delivers a consistent and personalized experience across every touchpoint, from inspiration to booking and beyond, into complex servicing and disruption scenarios.
- For airlines, Agentic AI executes workflows autonomously and helps teams make smarter and faster decisions that improve commercial performance, streamline operations and simplify traditional workflows.



GEN AI



Agentic AI



Transform the traveler experience



Optimize commercial performance and operations

True value is achieved when AI interrogates an airline's existing systems to orchestrate key processes, something that can be very time-consuming and almost impossible for humans to do in organizations with siloed operations.

Consider an airline AI chat interface helping a traveler add an ancillary service. We need it to have access to the airline's Customer Relationship Management, loyalty and product catalog data, so it recommends the right ancillary. It also needs to trigger the payment, perhaps by initiating a card-on-file payment or adding a payment link to the chat. Once payment is made, the traveler's record needs to be updated in the Order Management System (OMS) or Passenger Service System (PSS).

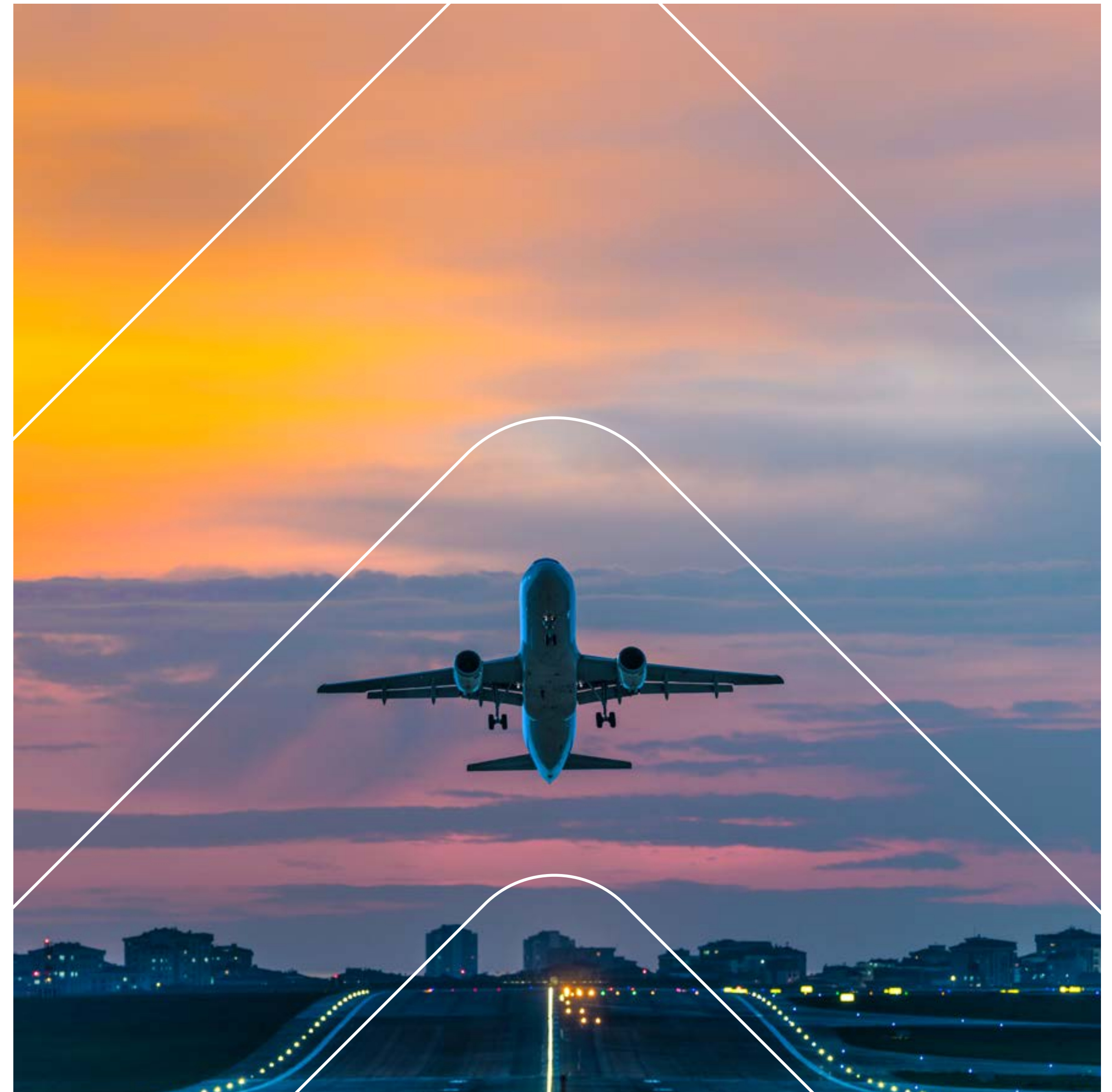
The AI agent needs access to data so it can personalize the offer and connectivity to the airline's system of record (OMS or PSS) and payment system, so it can initiate these transactions. That's why much of the work for airlines relates to readying existing systems to interface with AI agents.

"AI will sit on top of an airline's existing technology core, and success will ultimately hinge on how well these two worlds are integrated and operate together", **explains Alexandre Sbragia.**

“**AI is not a complete solution. Because of its inherently probabilistic nature, AI cannot on its own provide the level of predictability, trust, and precision that airlines require to operate their core processes. Its effectiveness—and true power—depend on tight integration with trusted systems of record and high-quality data.**”



Alexandre Sbragia
SVP Engineering, Airline Solutions,
Amadeus



Agentic commerce: why AI will transform trip planning

Agentic AI promises to significantly improve the trip planning experience across airline owned and third-party touchpoints.

Truly personalized trip planning

For decades, the travel industry has aimed to deliver truly personalized journeys to travelers. While loyalty information, traveler profiles, browsing insights and past purchase history provide valuable insights into a traveler's preferences, these inputs alone do not provide a definitive, real-time understanding of a traveler's intent.



The only way to truly understand a traveler's intent is through direct, real-time conversation. Airline-owned AI agents and AI assistants like Microsoft Copilot do this, so they can deeply understand the traveler's intent during trip planning. This means AI can help to assemble a trip that best matches the traveler's needs. However, enabling this requires robust foundations; systems that can both supply AI with accurate, relevant data and execute its decisions with precision.

Natural language search

Today, trip planning largely relies on structured forms centered around origin and destination inputs. We provide this information sometimes with an indication of our budget and receive options. From there, we filter the list, perhaps based on our ideal departure airport, hotel facilities, or timings.

By entering a natural two-way conversation, AI agents flip today's search experience by providing a detailed list of requirements from the outset. Unlike a classic search that returns a long list of flights with little context, AI assistants can surface richer information from the start: seat configurations, ancillary services, and bundle options, giving travelers a far more complete picture before they ever click through.

This means many travelers will perceive the natural language search experience as superior to the form-based interface the travel industry has traditionally relied upon. This is another reason Amadeus expects a growing number of travelers to plan trips using AI.

Gaëlle Bristiel, SVP Engineering, Distribution & AI Delivery Lead, Amadeus, shares:

"A lot of work needs to happen on search at the industry level, so we can maximize the potential of agentic inspiration. Amadeus is working to seize this opportunity for our customers and the wider industry: to connect the travel ecosystem to AI assistants at scale."

Agentic commerce protocols

For agentic commerce to flourish, technical standards are needed to define how agents interact throughout the end-to-end flow, covering communication, booking and payment. Several protocols have already been proposed and are gaining traction.

- **Model Context Protocol (MCP):** An open-source protocol originally made available by Anthropic, which can be conceived as a wrapper that enables APIs to be consumed and understood by AI agents.
- **Universal Commerce Protocol (UCP):** A protocol for agents to interact with one another created by Google and Shopify. UCP enables checkout and payment.
- **Agentic Commerce Protocol (ACP):** An open standard created by Open AI and Stripe that enables buyers, their AI agents, and businesses to interact conversationally to complete a purchase.
- **Agent2Agent Protocol (A2A):** An open protocol from Google with contributions from 50 other companies, allowing AI agents to communicate with each other, securely exchange information, and coordinate actions on top of enterprise platforms or applications.
- **Natural Language Web (NLWeb):** An open project developed by Microsoft that aims to make it simple to create a rich, natural language interface for websites, allowing users to query the contents of the site using natural language, just like with an AI assistant or Copilot.

Ultimately, the market will determine the protocols that underpin agentic commerce. In the travel sector, however, there is a clear opportunity to influence the evolution of general protocols alongside the need for travel-specific standards that reflect the complexity of travel operations.

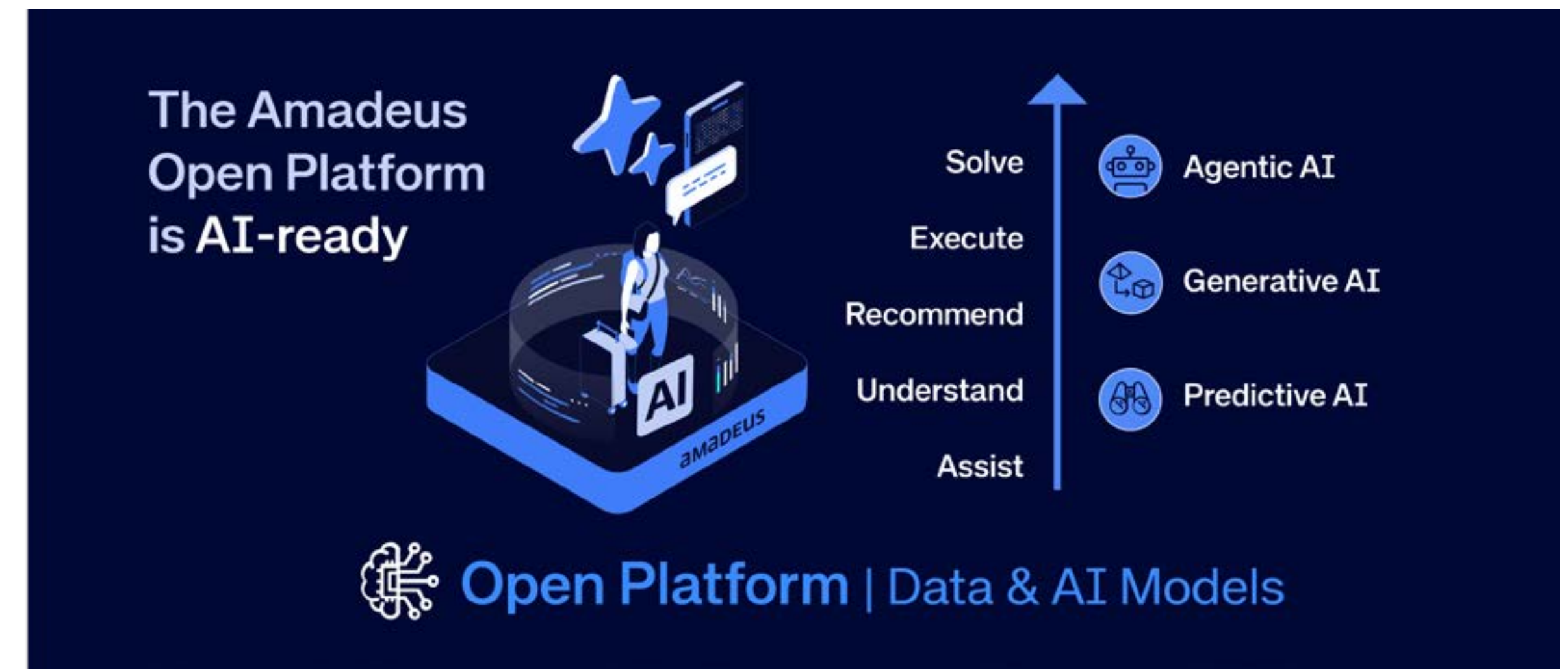
Irrespective of technical standards, Amadeus will support airlines to work with AI assistants in a way that secures reach and conversion while protecting their brands.

How Amadeus is supporting Agentic commerce

Today, Amadeus provides early agentic solutions so airlines can offer assisted trip planning across their own touchpoints. Alongside developing our own first use cases,

we are closely collaborating with major AI companies, including Microsoft and Google, to figure out together how to bring the benefits of agentic commerce to travelers, airlines and the broader industry.

- We will harness our unique position to connect AI assistants and other agents owned by airlines, travel sellers and other travel companies with trusted, dynamic travel data (from individual or multiple suppliers), in a secure and responsible way.
- With a one-to-many value proposition, we can help AI assistants to efficiently connect to a diverse range of travel content while providing similar value to airlines seeking to broaden their ecosystem of content for air, hotel, mobility and more.
- AI augments the Amadeus Open Platform and we recognize that we have a critical role to play to reliably execute the transactions that underpin AI recommendations.
- The advent of NDC has significantly increased look-to-book ratios, and we expect agentic AI trip planning to place further strain on look-to-book metrics. With Amadeus Advanced Airline Profile, [Air France-KLM has reduced](#) unproductive NDC traffic by 70% and we intend to support airlines to achieve similar outcomes for agentic commerce.



Agentic commerce: airline touchpoints

Agentic AI combines advanced reasoning capabilities with the ability to act, marking a fundamental shift from basic chatbots that simply provide flight information and answer questions about fare terms and conditions.

It supports the full journey – not only for inspiration and search but also booking, servicing through the trip, and post-trip engagement.

An airline call center agent

Today, it's possible for AI to immediately answer a call from a traveler who needs to rebook a flight (in fact, several, simultaneously). The AI agent can confirm the traveler's identity, retrieve his/her booking, understand the verbal change request, propose new options, articulate the fare differential and initiate the payment. The AI agent can switch between languages as needed and, if required, route the call to a human agent giving them a concise summary of the conversation context.

AI agents that can actually resolve your query

Conversational text exchanges mean airlines can better understand the need of the traveler and offer more appropriate offers and service.

“LLMs gave chatbots the ability to handle much more context. That's what unlocked real conversation and the ability to collaborate between AI agents and human agents”, shares Ghaleb Rostom, SVP Product Management, Airline Solutions, Amadeus.

Amadeus has developed an agentic commerce solution using Microsoft's Azure OpenAI infrastructure, Amadeus Max for Travelers, that airlines can use across their B2C touchpoints, to guide and assist travelers, within airline-defined boundaries.

It can work with customer service traveler-facing agents already in use, to take their capabilities to another level.

“**Every major disruption is also a customer service crisis. Airlines need to be able to respond to thousands of passengers simultaneously, instantly, and personally. That's not something you can staff your way out of. It's exactly the problem agentic AI is built to solve.**”



Nicolas Chevillotte
Industry Advisor,
Microsoft

“On top of having AI in any channel the travelers choose, airlines want AI that books the right product or bundle, follows their rules, and stays on brand. That's what we're building with them: an AI layer connected to the airline's content and systems, working inside the boundaries the airline sets”, states Rostom.

The voice-based AI agent for airline call centers has been successfully tested and is now ready to move into production.

Agentic commerce: distribution via AI assistants

Travelers are rapidly shifting to AI-assisted trip planning that provides more personalized and improved user experiences. Airlines that don't understand this and sit on the sidelines risk being left behind.

The agentic distribution opportunity

For airlines that have invested in delivering superior experience on their own websites, the rapid emergence of AI assistants may appear disruptive. However, with a strategic approach, AI distribution represents a significant opportunity.

- **Improved reach:** a [recent report from McKinsey](#) found that 84% of European consumers already use AI in their daily lives with a large majority seeking inspiration for purchases, researching products and comparing options. Therefore, we expect the AI channel will become ever more important for achieving distribution reach.
- **High converting traffic:** when an airline's offer is presented by an AI assistant, it has already been matched to the traveler's specific intent – meaning the traffic AI assistants generate is likely to be highly qualified, with stronger conversion potential. At the same time, as consumer adoption of AI assistants accelerates, airlines can expect significant and growing volumes of AI-driven demand reaching their systems, combining scale with quality.
- **First-mover advantage:** when the web gained popularity, some airlines were better placed than others to capture the opportunity. Today, we're in a similar moment with AI and there's a significant first-mover advantage for airlines that engage now.

*“How AI assistants present airline offers is being decided right now. Airlines that engage early (with each other and with partners already in conversation with major AI companies) have a real chance to shape it. Those that wait will adopt what is getting built now”, explains **Ghaleb Rostom, SVP Product Management, Airline Solutions, Amadeus.***

Different models for participating in AI distribution

Airlines are beginning to engage with AI assistants according to a variety of models. Experiments are taking place, and the key players are working to identify the optimal user experience.

*“At Icelandair, we're preparing to distribute via the AI assistants. We appreciate that travelers want to use these tools, and we need to be present. The question is how? We're observing airlines that have made their own inventory available via MCP, but at this point we prefer a fast-follower approach. We're very interested in industry-wide initiatives for engaging with the assistants”, states **Jóhann Valur Sævarsson, Director, Enterprise Architecture, Icelandair.***

Link referrals: once the traveler has planned their trip with the AI assistant, they are provided with a deep-link to the airline's own website to complete the booking and payment. While this option doesn't fulfill the ultimate vision of agentic commerce, it does provide airlines with a near-term option for being present via AI assistants.



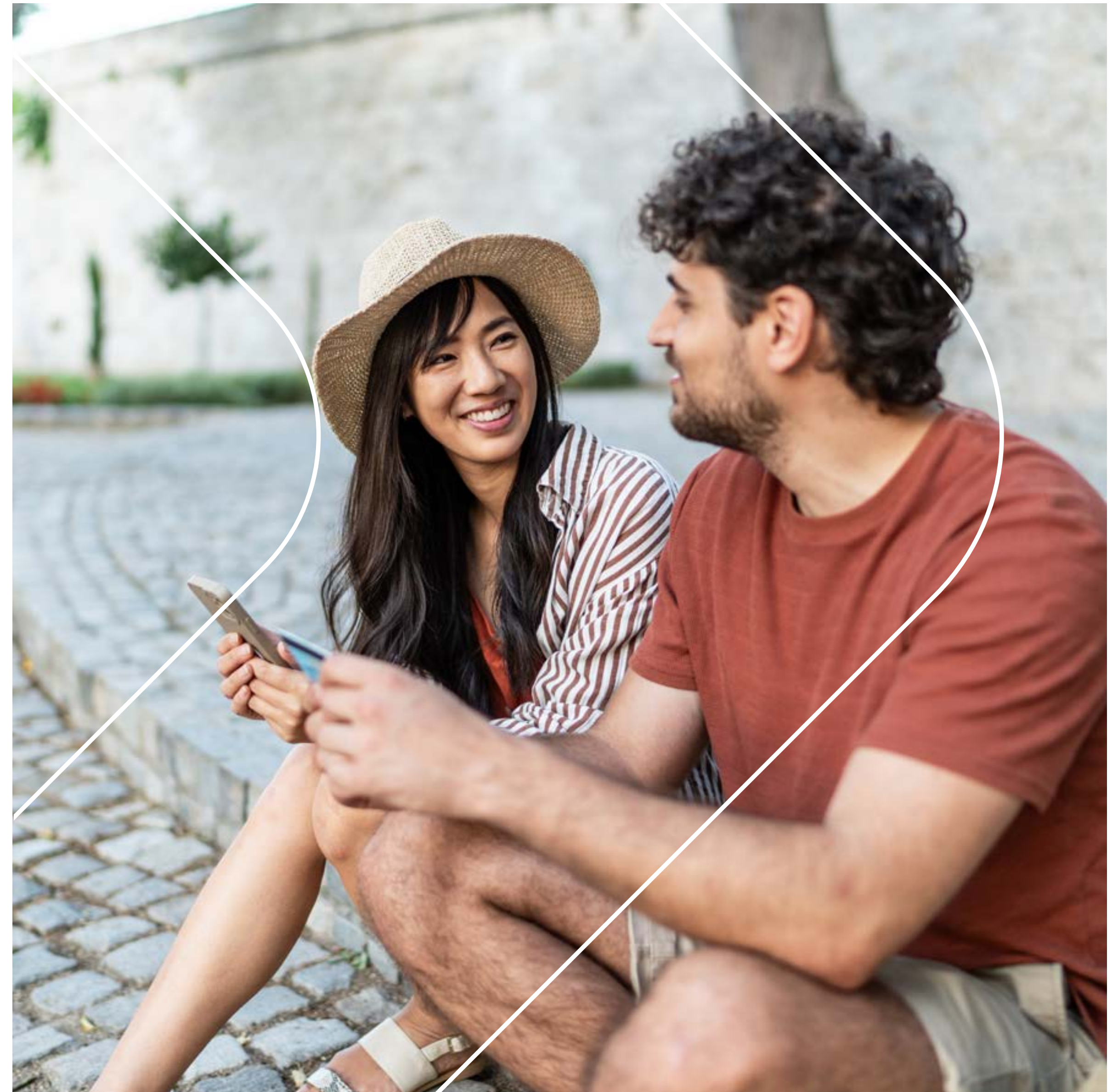
Native apps within AI assistants: some airlines are building native apps within the AI assistant environment. This offers greater control over the way content is displayed, while travelers benefit from AI trip planning, real-time availability, and pricing. While such native apps are promising, they require the user to specifically select the app from a sidebar or to tag the airline in the chat interface. And apps only provide fares from one airline, rather than allowing comparison, which research has shown travelers want from AI. Airlines also face the prospect of maintaining several apps across the different AI assistants. And the user is ultimately still directed to the airline’s website to complete booking and payment.

Embedded booking and payment: this is an option we still have not seen at scale in travel. Here, the traveler would complete booking and payment within the AI interface – a much more user-friendly experience. However, making embedded commerce work is non-trivial, as the AI assistant requires efficient access to real-time inventory and pricing at scale.

Indicating the complexity involved, [Open AI recently decided to drop its embedded checkout and payment experiments](#) in favor of app-based commerce.

Even with embedded booking, it is unlikely the AI companies will wish to become responsible for transactions. Airline systems will continue to be the system-of-record and airlines will continue to be the merchant-of-record. In other words, the data and business logic in an airline’s commercial systems will be accessed and orchestrated by AI agents.

“At first glance, fully embedded agentic commerce may seem obvious, but travel is incredibly complex. We are working with AI assistants and travel providers to ensure content can be accessed efficiently, displayed neutrally, and booked securely. We need to get that right for agentic commerce to truly flourish”, mentions **Delphine Domingues, VP Product Marketing, Travel Distribution, Amadeus.**





Customer experience: beyond rules and segmentation

Airlines have faced two main challenges when attempting to improve the customer experience.

The first is the lack of a unified traveler view, with information scattered across CRM, PSS, Digital, Loyalty, and other systems, often held in different data formats. Consolidating this information with traditional methods is expensive, time-consuming, and imperfect. Agentic AI can bring together traveler-related information from multiple systems. This provides the illusive single customer view or 'golden record' that enables effective personalization.

The second barrier was the lack of machine learning capability powerful enough to personalize on an individual level. Such challenges led the industry to practice segmentation, where product bundles were matched against segments of travelers and administered with rules. AI provides individual-level personalization.

Creating the best possible offer with AI

As airlines adopt new retailing technology capable of defining their entire product catalog at a granular level, a rules-based approach becomes increasingly impractical. One of our airline customers found that they would need to manage 17,000 unique rules to effectively match product bundles to customer segments.

Today, we can run machine learning models to propose the best possible offer or action. The context comes from exchanges between traveler and AI assistant, combined with consolidated insights from traditional systems, relating to both the trip and the traveler.

These models work with reinforcement learning, a branch of machine learning that understands which offers generate high conversion and then reinforces those principles when making future offers. This new approach allows an airline's commercial strategy to respond in real time with offers that resonate with travelers, rather than attempting to manually track, measure and adjust thousands of rules.



AI-orchestrated user journeys

Airlines have also relied on segment rules to define user journeys, e.g. automatically checking for an upgrade when a “premium business traveler” books an economy fare.

Again, AI enables airlines to fully orchestrate each traveler’s journey, aligning individual needs with the airline’s strategic priorities.

In an agentic world, the airline can set an objective, like ‘increase Net Promoter Score’ or ‘maximize revenue’ and the AI model will define the optimum user journey for each traveler. For example, if the airline’s objective is to increase loyalty during disruption, the AI agent will consider whether offering a food voucher, miles, or free lounge access is most likely to achieve a favorable outcome.

Azul’s CIO Henrique Rabenhorst explains: “Customer experience is a key advantage and an ongoing effort at Azul. That’s why we handle a significant volume of customer experience data, and processing it using traditional Business Intelligence tools presents relevant limitations. This is one of our primary areas of focus for agentic AI. We are progressing, for instance, in better understanding the profile of passengers flying on a given day, including the identification of premium customers, with the goal of continuously enhancing their experience. One application under consideration is the use of AI to suggest, for example, seating passengers with short connections closer to the exit rows, which could help reduce missed connections. This type of application supports us in identifying and managing the details that make a meaningful difference in the customer journey.”

Working with AI assistants to super-charge trip planning

While AI assistants are bringing new levels of personalization to trip planning, the tools aren’t perfect because they lack access to structured data airlines hold about passengers. Airlines have an opportunity to collaborate with AI companies to improve effectiveness.

Imagine a gold tier loyalty member using AI to plan a trip. Loyalty insights would ensure offers don’t include bags, because they already benefit from a baggage allowance. Similarly, if a traveler is seeking destination inspiration, the AI assistant would benefit from understanding where the traveler had flown recently.

Combining AI’s ability to reason and personalize with consolidated data assets from previously siloed airline systems is a game changer for airline customer experience. The airline industry has been working toward an increasingly personalized experience for decades, and now we have powerful new tools to accelerate this.

Agentic payments

As agentic flows mature, payments become a critical enabler of the experience. When the passenger has stored their card on file with the airline, a Merchant Initiated Transaction (MIT) can be triggered as part of a chat or voice interaction with AI. This payment is ‘invisible’ and initiated by the airline, without the traveler needing to complete checkout.

When no card-on-file is available, technology from Amadeus' payments business (Outpayce) will enable the AI assistant to present secure digital wallets such as Apple Pay or Google Pay directly within the conversation, allowing one-step payment. Where necessary, a full checkout flow can also be surfaced within the AI interface. Machine learning can make smart recommendations on which method of payment should be offered to each traveler to improve conversion.

Loic Pierlot, Acting Head of Payment Engineering, Outpayce from Amadeus, and Head of Engineering Travel Unit Professional Services, Amadeus, mentions: *"We can already provide payment solutions when a human interacts with an AI assistant, and we continue to evolve them to improve payment experience and thus conversion. However, enabling payments between autonomous agents requires a new evolution of payment capabilities."*

Amadeus' March 2026 research with travelers shows that building trust is essential to AI-led payments. The analysis found that only 24% of respondents were comfortable with AI undertaking payment on their behalf for their next trip, the lowest of all twelve tasks included in the study.

The rapidly emerging field of agent-to-agent payments requires new approaches that build trust. When an agent transacts on behalf of a traveler, airlines need to establish the identity of the AI agent and the human it works for – ensuring the agent is entitled to act on their behalf.

The AI agent's 'intent' must also be certified. For example, if the AI agent attempts to spend the traveler's funds on a flight to Singapore, the airline must be sure that what's being paid for matches the traveler's original request. Traveler trust is a major factor.

[American Express recently announced steps](#) to build trust by protecting the value of agentic transactions, but only when intent has been certified.



Various agent-to-agent payment protocols are being developed including A2P from Google, which draws on cryptographically signed digital contracts that serve as proof of a traveler's original instructions.

The protocol seeks to:

- Prove that an agent has the traveler's authority to transact
- That merchants can be sure an agent's request matches the traveler's intent

That accountability can be determined for fraudulent or incorrect transactions

Commercial, revenue and marketing: faster time-to-market through automation

Agentic AI can help airlines automate their commercial and marketing strategies by analyzing trends, making suggestions, generating assets, taking actions and reporting on performance.

Amadeus' agentic AI initiative for airline professionals (Amadeus Max for Airlines) adds an intelligent orchestration layer across Amadeus' airline solutions. It introduces AI-native ways of working, with cross-domain intelligence and dynamic, context-aware workflows that help airline teams work faster, make better decisions, and focus on higher-value tasks.

Agile commercial strategies

Launching a new commercial strategy, like offering lounge access from a new airport, takes several weeks. The airline must build and agree on a strategy to launch this new product. Once approved, the implementation phase in their retailing systems is tedious.

With this intelligent layer enabled across Amadeus Altéa and Amadeus Nevio, analysts can upload the strategy paper and use AI to automatically build the rules. A process that took weeks can be done in minutes, helping airlines respond to market conditions quicker.

At Navitaire, an Amadeus company catering particularly to low-cost carriers, is investing in AI agents and taking an incremental approach to releasing them in live production environments.

"Nevio is being built with AI designed in from the start. In some modules, agentic AI will sit below the APIs (not just on top of them). Altéa is a mature system, so it won't be AI-native in the same way as Nevio. But airlines on Altéa can't wait for the transformation, the need is now. We're bringing AI agents to them too", **explains Ghaleb Rostom, SVP Product Management, Airline Solutions, Amadeus.**

One AI agent leverages Navitaire's technical documentation and standard operating procedures, so agents can ask questions like 'how do I split this booking?'. The agent can then execute simple tasks, saving additional time.

The AI agent means Navitaire can resolve technical issues much faster and has reduced manual work for its support team by 10%, freeing engineering resources to work on more complex issues.

Henrique Rabenhorst, CIO, Azul describes how his team has been applying AI to support the company's goals: *"One of our most consistent applications of AI tools to date supports the handling of legal matters. The Brazilian regulatory and judicial environment has particularities that generate a relevant volume of cases. We employ Artificial Intelligence to capture and review each case, to organize and categorize it, and to guide the search for evidence that supports our position. The results we have observed include a positive evolution in success rates and greater efficiency in the associated legal costs."*

“

We have a team of AI agents monitoring the Navitaire system around the clock. They identify technical issues and present similar past cases to our support team, along with AI's recommended resolution. For simple cases, like network degradation, our team can instruct the AI agent to automatically resolve the issue.

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Kyle Stromberg
CTO,
Navitaire, an Amadeus company

Augmenting revenue management

Although AI will not replace decades of revenue management science, it can augment the discipline, just as machine learning has done over recent years. The ability of agentic AI to continuously monitor data sources means revenue management teams now have the resources to track every single route.

For the first time, technology has the reasoning capabilities to track competitor activity as well as external factors—such as geopolitical shifts—and incorporate these qualitative signals into recommendations.

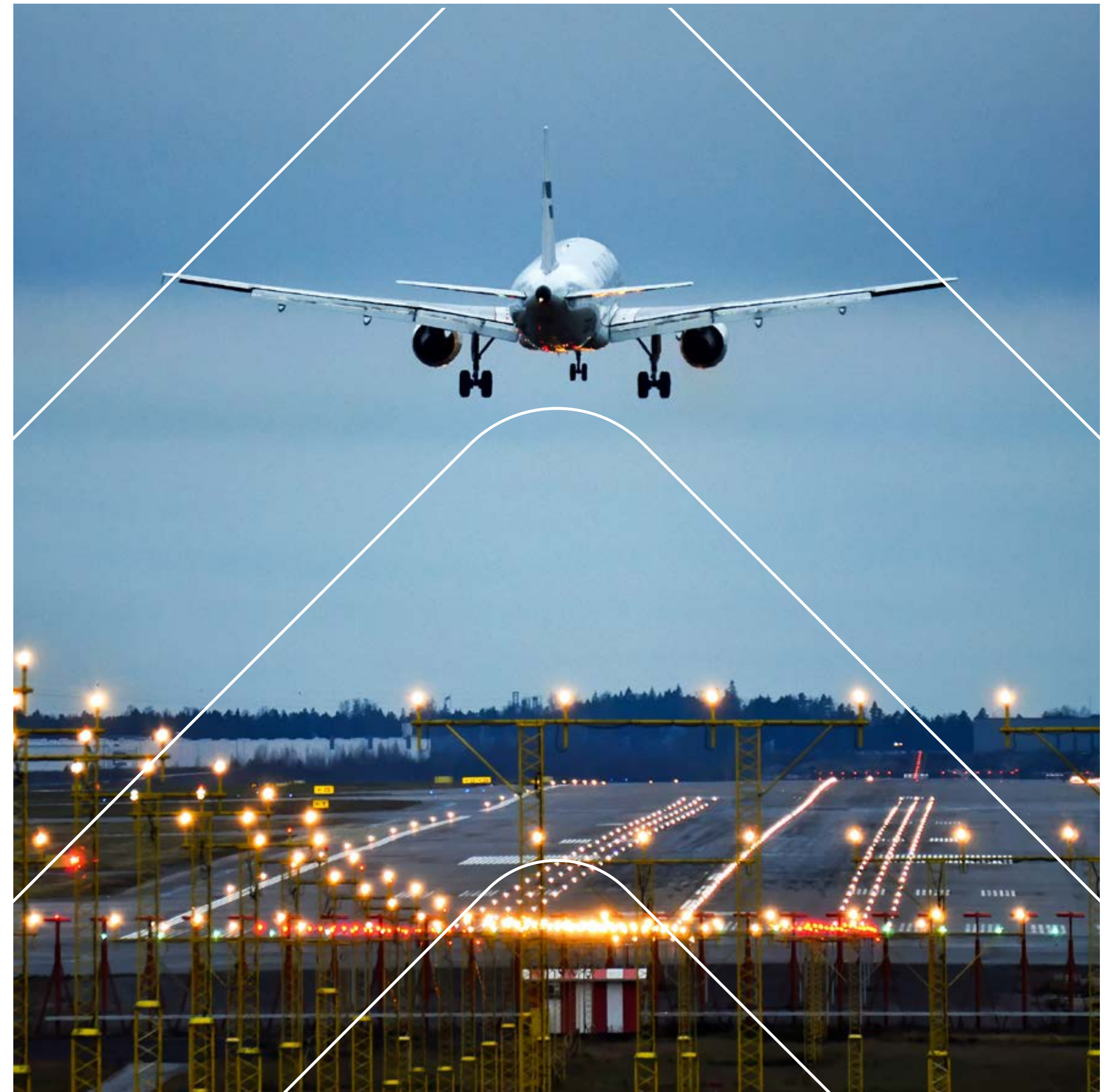
Alexandre Sbragia, SVP Engineering, FCS, Airline Solutions, Amadeus, says:

“Traditional Revenue Management Systems will continue to calculate prices using structured data. AI, however, can augment these capabilities by incorporating softer signals from news and other unstructured data sources. The greatest opportunity lies in integrating both approaches.”

Digital marketing optimization

Recent studies show that airlines invest in marketing between 3% to 5% of their gross sales per year, and a significant part of this investment flows into Origin & Destination promotion across the digital channel. On the other hand, industry trends highlight how digital marketing has been one of the first areas transformed by generative AI, with an increasing number of tools that independently perform analysis, planning, and creative tasks that previously required large, specialized teams and long, manual processes.

Within this context, Amadeus provides a modular set of AI-powered solutions, tailored to travel and airline businesses, to automate end-to-end digital marketing operations, from insight to execution, targeting ROI, CPA (Cost per Acquisition), and ROAS (Return on Advertising Spend) optimization.



The first module focuses on the content and asset generation, which today is a manual, long, and expensive process. The AI generates high-quality marketing assets, enriched with prices and relevant traveler content, translated into multiple languages, and exported as both landing pages and digital marketing creatives for campaigns across channels. By automating asset creation at scale, airlines benefit from a significantly lower cost per asset and higher ROI on marketing production.

The second module acts as an AI marketing analyst, helping airlines identify and promote their origins and destinations depending on commercial performance, ultimately optimizing both marketing spend and route load factor. The solution uses data science to identify which routes in the airline's network need to be promoted, connecting revenue management KPIs such as NRV (Network Response to Volume), digital marketing KPIs like CPA, and unique travel data sources including hotel occupancy levels and market competition. In this way, the airline marketing expert quickly identifies routes with the highest growth potential and gets recommendations on how to rebalance marketing budget allocation across routes to maximize ROAS.

The third module supports campaign creation, automation, and execution. It uses the generated assets, applies the recommended budget allocation, and deploys campaigns across channels such as Google, Facebook, and LinkedIn. With a single click, teams can generate an agency campaign brief or fully automate execution, including creatives, copy,

video, and landing pages. The system then runs the campaign and continuously reports on performance and results.

Together, these modular AI solutions enable airlines to move from insight to impact – combining content generation, network driven budget optimization, and automated campaign execution to drive better commercial outcomes with less effort and higher efficiency.

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Airlines run on repeatable processes, and AI has the potential to perform a lot of this work, freeing our human talent to focus on work that is creative, innovative, empathetic, and intuitive.

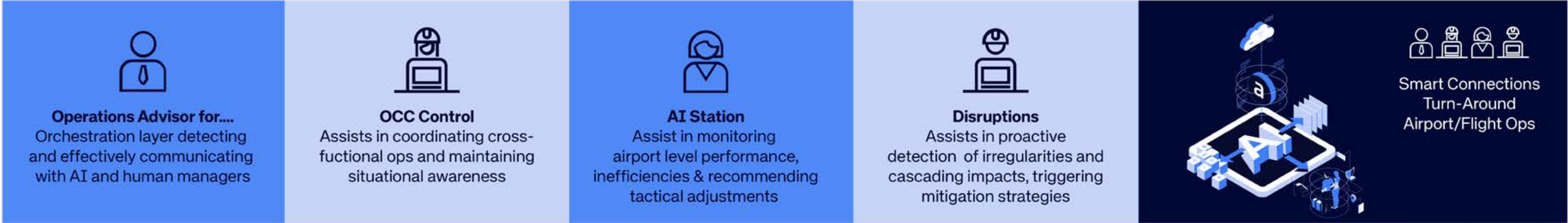
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Justin Bundick
VP AI & Intelligence Platforms,
Southwest Airlines



Operations: breaking down the silos




Airlines rely on specialists within the Operations Control Centre (OCC) that monitor flights, disruptions, and issues like aircraft turnarounds. Operations are complex to manage, and teams rarely have sufficient experts.

Amadeus already provides a suite of specialized AI agents that integrate with operational systems so airline and airport teams can ask questions of their data on any device. For example, if the OCC manager wants to understand expected passenger demand a week ahead, as it compares to crew availability, to understand the potential for a capacity crunch, they can receive that insight instantly using chat.

However, agentic AI can go further with dedicated agents, each fulfilling a specialist role. For example, one AI agent may be responsible for analyzing the impact of changes on passenger connections. Another on monitoring performance levels at each of the airline’s stations. A third might focus on disruptions.

These agents do not wait to be asked a question. They are proactive and constantly monitor key data and KPIs, suggesting options for human review to improve performance in their domains. More excitingly, through orchestration, these agents can work together to achieve improved outcomes.

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We expect AI to be everywhere. On the tarmac, in the operations center and in the pocket of every agent at the terminal.
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Abhishek Krishna
 Head of Data, AI and Platform,
 Airports & Borders,
 Amadeus

For example, a flight from London to Tokyo is impacted by bad weather. The disruption agent can analyze the cost of various diversions and impacts caused by visa requirements. After consultation with the connections agent, it may recommend diverting to Frankfurt, rather than Istanbul, to avoid missed connections and resulting compensation. Once the new plan has been agreed with the human team, the agents can execute the required changes. Similarly, AI is already being used to optimize the aircraft turnaround process.

One major airline is leveraging a turnaround orchestration solution as part of a centralized collaboration platform to coordinate the full spectrum of activities required for an aircraft turn. To complement this solution, Microsoft is developing a turnaround orchestration agent that can act as a digital conductor, engaging specialized sub-agents connected to core operational systems—such as maintenance, crew management, and ground operations—to dynamically assess constraints and options in real time.

A maintenance-focused sub-agent can evaluate part availability and engineering resources, while a crew sub-agent simultaneously assesses staffing implications in the event of delays. The system is able to continuously synthesize these inputs to determine whether work can be completed at the gate or requires escalation, and then recommends an optimized plan across all stakeholders.

By surfacing this intelligence directly within a unified collaboration environment, teams can achieve shared situational awareness while AI orchestrates decision-making across dozens of interdependent roles—transforming the aircraft turn into a coordinated, data-driven operation.

Julie Shainock, Global MD for Travel, Transport & Logistics at Microsoft, says: *“Agentic AI collapses silos and turns fragmented workflows into real-time, intelligent action. By combining human judgment with autonomous agents, airlines can automate the predictable and elevate every aspect of operations and customer experience.”*

According to **Justin Bundick, VP AI & Intelligence Platforms, Southwest Airlines,** *“Our human talent is smart and capable, but we’re just not capable of processing the volume of information needed to manage at massive scale in a real-time environment. AI plays a unique role in identifying what is most important in the operation so our human talent can*

analyze, and decide on the best path forward. At Southwest, AI has given us an enhanced ability to simulate decisions and analyze outcomes proactively, making real-time decision making more efficient and effective.”

Southwest has built predictive machine-learning models that simulate the impacts from delay across its network. The system allows operational teams to simulate the impact on crew, bags, customers, and its technical operations (MRO). With the new system, Southwest can improve On Time Performance (OTP) by deciding where and how it’s best to absorb any delay to ensure the best outcome for customers and the airline.

Icelandair is also looking at optimizing its operations with a similar system, that simulates the potential costs of different operational decisions and AI agents that improve turnaround.

“**Being able to simulate the cost of an operational decision before we take it has delivered significant ROI. Operations is where we’ve seen the greatest return from agentic AI so far.**”



Jóhann Valur Sævarsson
Director, Enterprise Architecture
Icelandair



Connecting the dots between departments with multi-agent systems

AI agents shouldn't be viewed in isolation. The long-term value of agentic AI lies in multi-agent systems where teams of agents communicate and share insights to optimize decisions and complete complex tasks by working together.

For airlines, this promises cross-domain decision making and automation that unlocks significant value.

For example, a revenue management agent detects a deviation between actual bookings and forecasted demand on a given route. After searching the web, it identifies a large conference for surgeons at the destination. It consults a CRM agent, which confirms that surgeons typically travel in business class. This triggers a network planning agent to assess whether aircraft can be swapped to expand business-class. In parallel, a marketing agent is tasked to create a campaign offering business-class fares to conference attendees. Once feasibility is confirmed across teams, the AI system schedules a meeting with relevant human experts to review the plan before executing the changes.

The role of orchestration

In the above example, it's clear that connectivity between agents and the ability to orchestrate their interactions will be critical to realizing value from agentic AI. Amadeus is now offering a range of AI agents that perform core functions, connect to existing applications, and handle low-level transactions like bookings and re-bookings.

For airlines managing complex systems with a requirement to improve time-to-market, our trusted and neutral role in the ecosystem, combined with our proximity to airline and industry systems-of-record, mean Amadeus is well placed to provide agentic orchestration that supports improved outcomes.



Governing AI agents

Like any new technology, AI introduces risk. While manageable, AI adoption requires airlines to carefully address issues including the potential for bias, unintended sharing of sensitive data, and the potential impact of AI hallucination.

What if an AI agent recommends or takes a decision that negatively impacts the traveler or the airline? A simple example could be a hallucination that results in a chatbot pricing a transatlantic flight at €10. Or if an airline exposes proprietary data to its agent, how can we be sure the agent will not exchange that data with a third-party agent? Airlines must minimize risks like these with strong governance.

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The question isn't whether the model will provide an answer, it's whether airlines can place their trust in that answer. Agentic AI becomes real when we achieve the governance balance – enough to build trust without so much we squash the entrepreneurial spirit.
”



Matthew Walsh
Senior MD, EMEA,
Microsoft

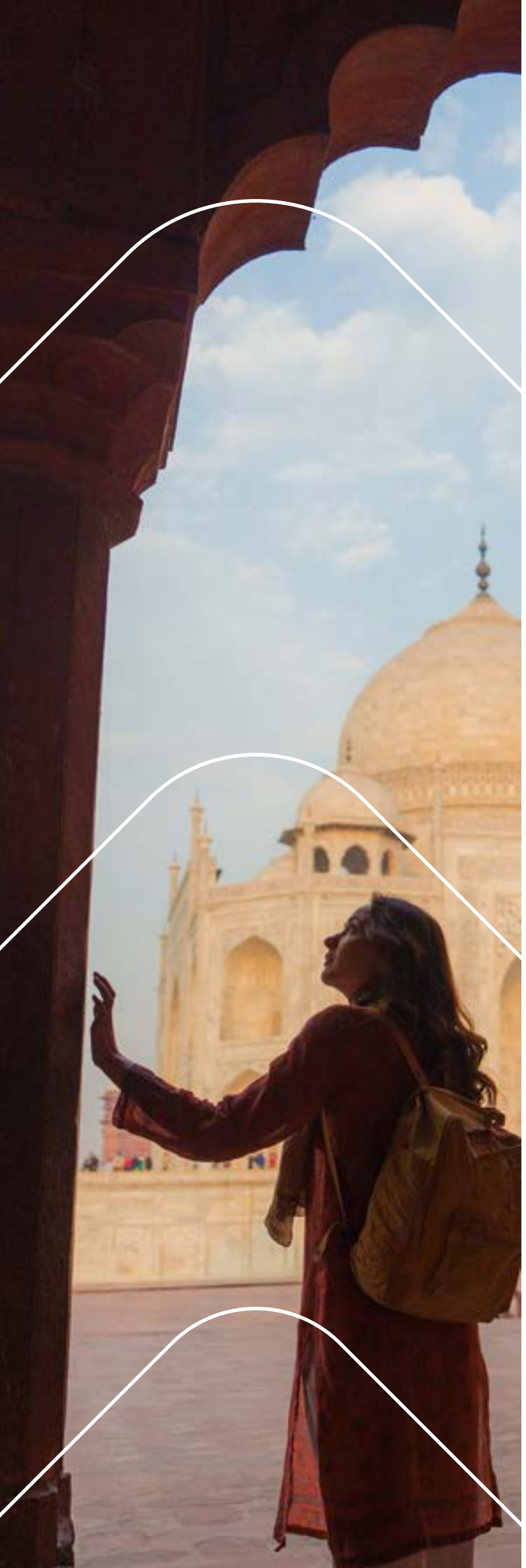
Deterministic governance

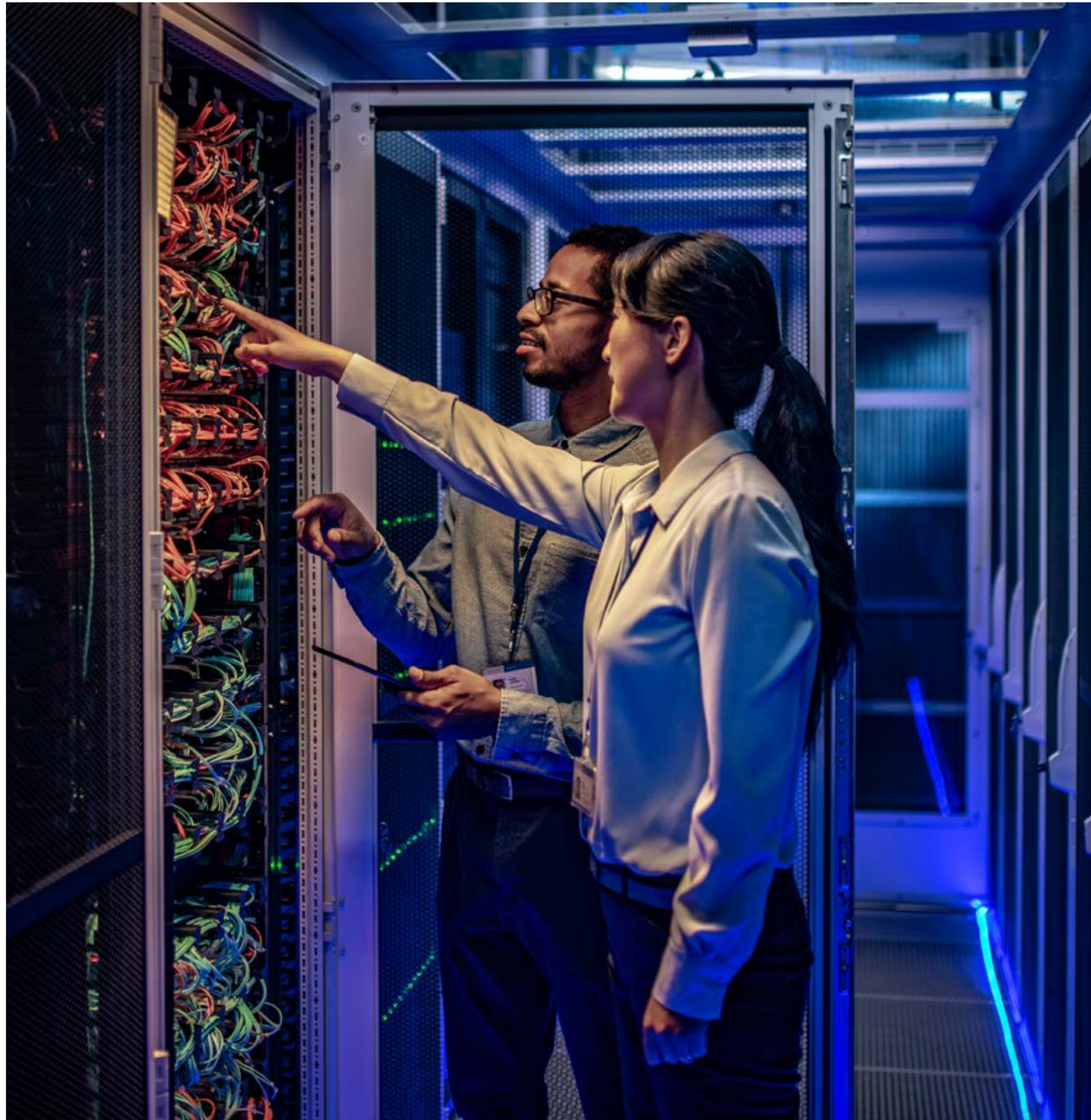
If you ask today's deterministic systems the same question 100 times, you'll get the same answer because they work with fixed rules. AI introduces probabilistic systems into enterprise IT, with powerful reasoning capabilities. However, AI models are probability-based by design and come with the risk of hallucination. In short, they can be flat-out wrong.

Even in AI's short lifespan, we've seen high profile examples of rogue agents. An agent at a large e-Commerce company decided the optimum way to meet its objective was to delete a poorly organized database and start from the beginning. Unfortunately, the database was essential to operations, and its deletion caused a service interruption.

Deterministic governance reduces such occurrences by checking the recommendations and actions an AI agent proposes using rules-based systems in the background. By building a set of governance rules covering areas like regulatory compliance, data protection, authorization, identity and pricing, we can build a safety net that continually monitors AI.

The European Union's AI Act requires that AI work is classified according to the risks it entails, which is the first step to achieving strong governance. For many use cases, Amadeus expects airlines to introduce a human-in-the-loop to bolster tech-enabled governance still further.





For **Microsoft's Chevillotte** 'explainability' should also be a priority: *"AI shouldn't be a black box. It needs to be auditable and explainable so airlines can access the AI's chain-of-thought to understand how it reached its recommendation."*

At Amadeus, we take a proactive and structured approach to global compliance. We have established robust governance frameworks and dedicated teams to ensure we stay aligned with evolving legal and ethical standards across all regions. This includes the implementation of a comprehensive AI Compliance Program that aligns with the EU AI Act and other global AI regulations, and we are working to advance industry-wide standards and sustainable operations. We have a corporate AI Office that coordinates our approach to AI in a consistent, responsible, and transparent way. This includes an ethics framework which guides how we design and deploy AI, making sure we always follow defined principles and meet regulatory requirements and industry standards.

Privacy and data responsibility are foundational to this work. Amadeus' solutions are designed around data minimization and purpose limitation: only the information needed is used, and personal data is handled in line with applicable privacy requirements and any applicable agreements with our customers and partners.

“

Our systems of record already hold the rules airlines have to follow. That makes them the natural place to check what an AI agent is proposing before it acts. Airlines get the value of AI without taking on the full compliance burden alone.

”



Ghaleb Rostom

SVP Product Management, Airline Solutions,
Amadeus

Five recommendations for successfully adopting agentic AI

Agentic AI is a once-in-a-generation change, comparable to the introduction of the internet. Just like the web, how ready an airline is will be an important factor in their success.



1. Focus on where it can have most impact

Take an iterative approach that focuses on one or two workflows that are expected to deliver the greatest revenue or cost benefits. When selecting them, ask if AI is necessary, or if traditional automation would work just as well. This approach limits risk, builds organizational knowledge, and focuses effort, so ROI is easier to measure. A targeted approach also means any data quality or architecture issues will become apparent and can be addressed before significant resources have been committed. Agentic AI is new, and it's important to plan for experimentation, pivots and learnings during initial deployments.

Microsoft's Walsh mentions: *“Today, companies are excited about how many AI agents they've spun up—but very few have scaled. My advice is to focus—one agent that's scaled and delivers a tangible return is more valuable than 100 agents in pilot.”*



“**At Azul, we continually review our workflows, both at the departmental and corporate levels, seeking the appropriate balance between impact and effort in the development of agentic automation. The adoption of AI involves meaningful investment, and clearly identifying the opportunities that deliver consistent returns is an essential aspect of our approach. Experimentation and continuous adjustment are part of our strategy.**”



Henrique Rabenhorst
CIO,
Azul



2. Prepare your data

The results achieved from AI depend heavily on the quality and availability of data. Indeed, most of the work required does not relate to building AI agents. Nor does it relate to developing AI models, which are readily available.

For airlines, the main effort lies in ensuring that the specific data and business logic within their own applications is made available for AI agents. This may require:

- Re-engineering systems so they provide a stream of event data that's fed to a central data lake and made available to AI for analytics and real-time inference
- Re-engineering APIs so they can be used by AI agents e.g. MCP
- Improving data quality (agents working with poor or inconsistent data will recommend or execute incorrectly)
- Ensuring semantic understanding of aviation-specific business processes. Generic AI models are trained on broad datasets and will not inherently understand the precise terminology used in airline and airport operations (e.g., IROPS recovery procedures to slot management and load control). Fine-tuning models on aviation-specific language and processes is often the difference between an AI agent that performs reliably in production and one that fails at edge cases.



3. Understand how technology interacts

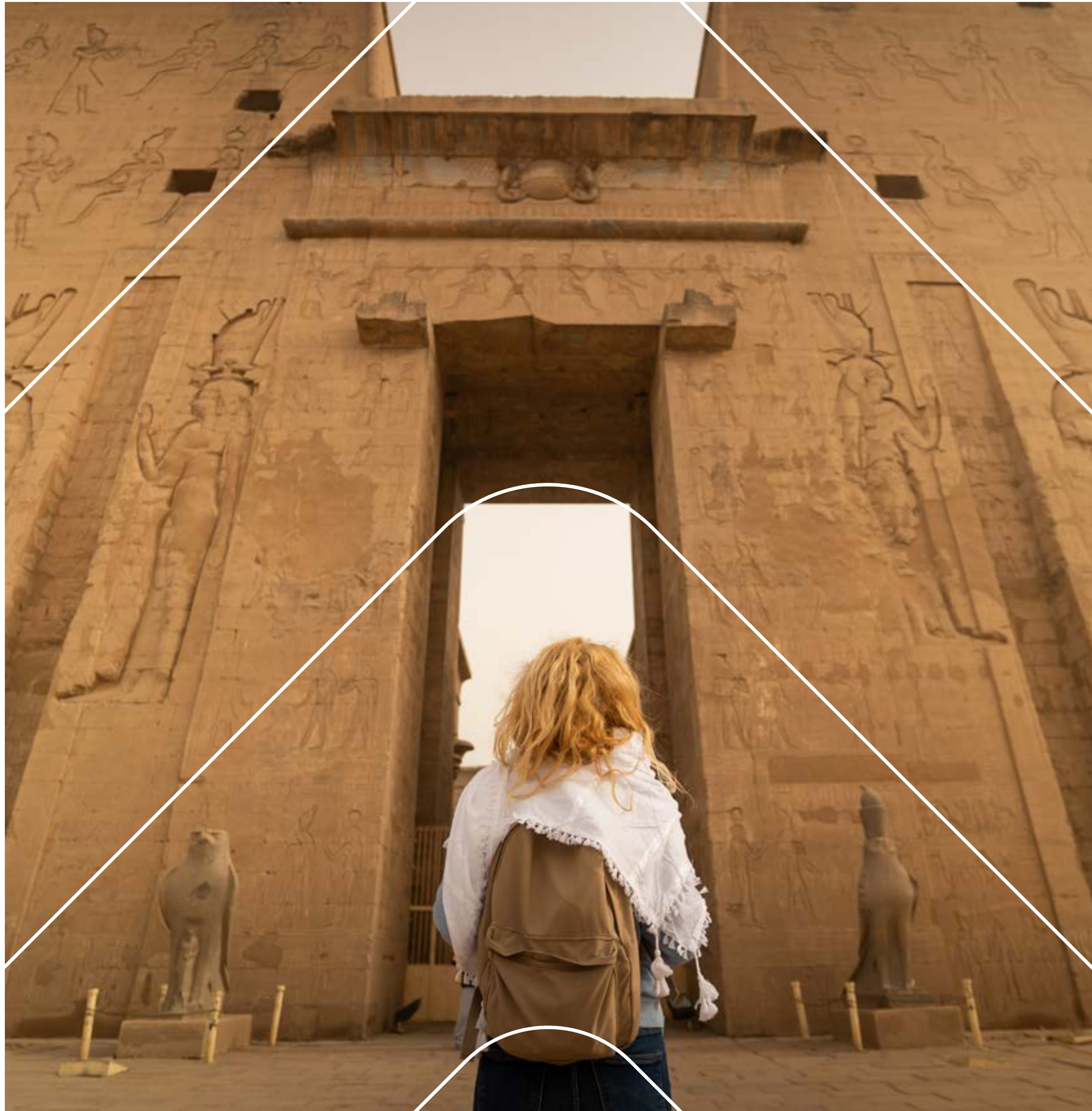
It's important for airlines to identify any system limitations for the AI projects being considered. For example, attempting one-to-one personalization with AI will only deliver maximum value if the airline has first progressed with the move to Offer and Order standards. The airline's products need to be cataloged for the AI to personalize at a granular level. While airlines can benefit from AI irrespective of the underlying systems they choose to run their business, it's important to identify system limitations from the outset.



4. Build in governance by design

Governance cannot be an afterthought. It's important to consider technical, legal, and process measures for AI governance from the outset. Striking the right balance between tech-enabled deterministic governance and human-in-the-loop oversight for each specific use case is critical for risk mitigation.





5. Start change management on day one

Introducing AI is likely to change the nature of multiple job roles. Without clear communication that explains the change, why it's happening, and how it can benefit employees, there's a risk of low adoption. While AI is poised to automate transactional tasks, humans will continue to play a fundamental role. Airlines have an opportunity to redeploy human experts to new positions focused on creative thought, AI orchestration, and customer service. When the basics are automated, we can focus on more complex scenarios that were previously out of reach.

Justin Bundick, VP AI & Intelligence Platforms, Southwest Airlines, says: *“The world underestimates the change management necessary for AI, but we are focused on getting it right at Southwest. It is a multi-layer approach starting with overall AI literacy. Everyone at Southwest has access to our AI literacy program, from beginners to AI engineers. Everyone is empowered to play a role in the change.”*

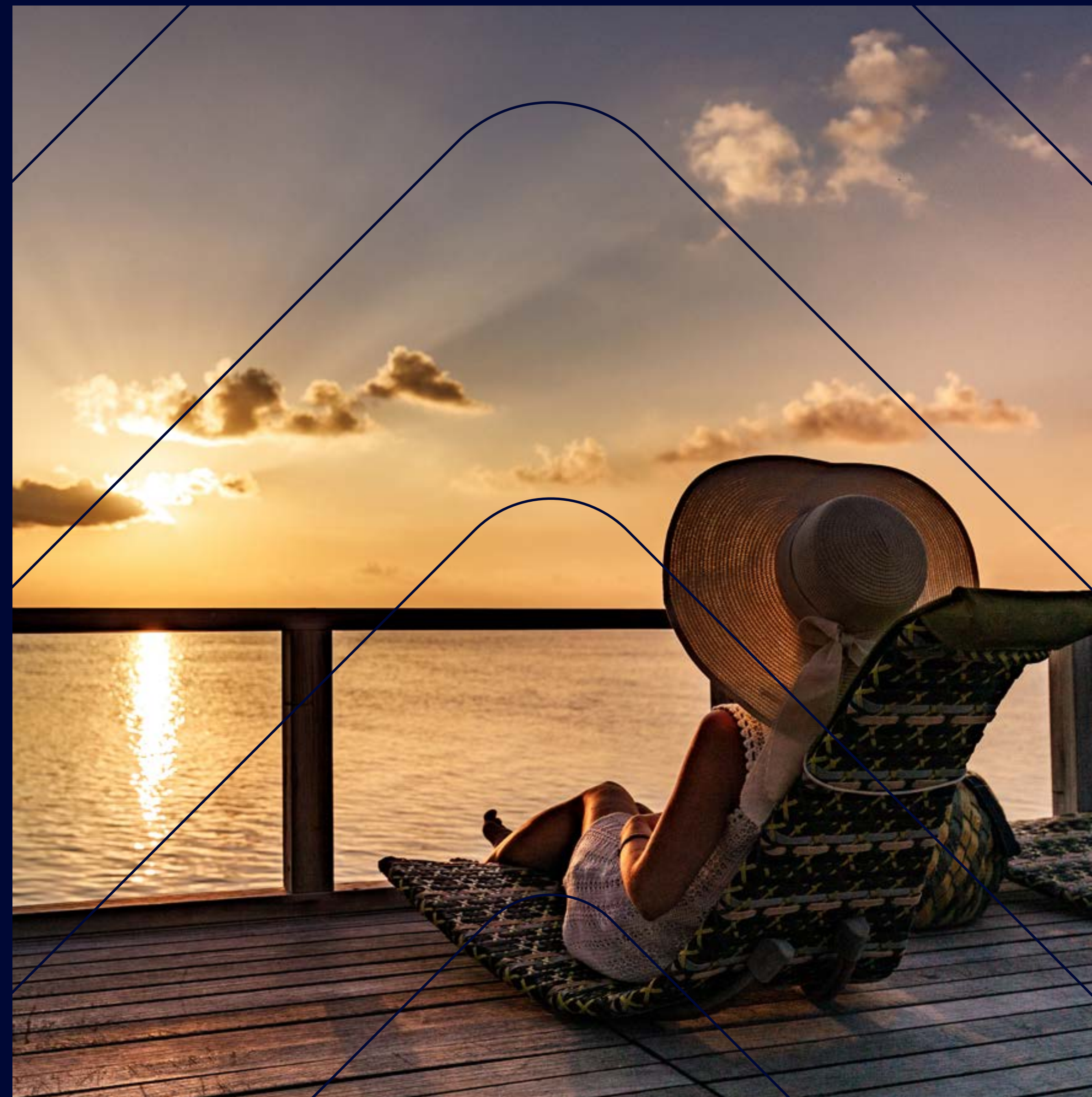
Conclusion

By providing abundant cognitive resource, agentic AI allows airlines to do more.

Predictable processes can be automated, and significant reasoning can be applied to the most granular decision an airline takes. These new capabilities are already proposing offers that boost revenue, supporting new product launches, automating digital marketing, proposing optimal turnaround plans, and handling traveler interactions across the journey. Airlines that are engaging with AI today are well positioned to achieve significant competitive advantage.

Beyond their own operations, airlines should not overlook the broader context. By allowing travelers to search for the perfect trip in one go, AI is radically changing how people view travel. It's no longer a linear search and shopping process. Traditional boundaries, flights, ground transport, hotels are merging. AI meets the traveler's desire in one shot.

Travelers are beginning to think in terms of trips and expectations for a smooth experience across the entire journey are rising. No single organization can meet this expectation – it's only through cross-domain collaboration that we can deliver consistently for travelers.



aMaDEUS |  **Microsoft**