

BLOGS

New technology accelerates digital transformation in the travel industry

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Digital transformation in the travel industry is driven by simplicity.

An international, end-to-end journey typically involves a travel seller, ground transport provider, at least one airline, two airports, border control authorities, a hotel and – last but not least – a destination.

It's not possible for any one of these travel industry stakeholders to define and deliver the whole experience on their own. They must all come together to build an end-to-end, seamless experience.

This is a great opportunity and responsibility, shared by everyone across the travel ecosystem. When done right, it makes the experience of travel better for everyone, everywhere.

Traveler behaviors continue to change at every touchpoint of the journey - from how they are inspired, to how they shop and book, to how they can create stress-free and memorable experiences. More than ever before, stakeholders across the industry are working together and leveraging transformative technologies to unlock new opportunities and digitally transform the travel industry. All to satisfy the unwavering desire of people to travel.

In this piece, digital transformation in travel and tourism is mapped out, looking at the barriers to change today and the tools that can be used to accelerate the transition.

This article forms part of a larger series, each looking at the wider digital transformation taking place across the travel industry.

What is digital transformation in the travel industry?

We can all imagine what a perfect, integrated travel experience looks and feels like. Every step, from booking to departure, arrival, and beyond, is seamless and personalized. Effortless planning, tailored recommendations, minimal paperwork and queues, and flexible communication, especially during disruptions. Less time spent on processes means more time creating unforgettable moments.

Digital transformation in the travel industry is an opportunity to rethink processes, building toward more seamless, personalized and efficient experiences for travelers.

Driven by the widespread deployment of new, [transformational technologies](#), including AI, cloud computing and biometrics, travelers will receive more relevant offers tailored to preferences. They will enjoy faster and more autonomous services throughout booking and travel and gain greater transparency and control over their journey through real-time updates and flexible options.

Travel transformation involves smarter, connected experiences where flights, accommodation and mobility services are synchronized. Technology providers are supporting travel providers and sellers of all types in order to create better travel experiences, delivering seamless, end-to-end journeys that enhance every stage of the experience.

The opportunity for digital transformation in the travel industry

Digital transformation means collaboration, coordinated technology investment and a strategic approach to tackling the common customer experience pain-points.

This represents a significant opportunity, with the travel sector continuing to see growth. [According](#) to the latest World Tourism Barometer from UN Tourism, an estimated 1.4 billion tourists travelled internationally in 2024. This equates to an increase of 11 per cent over 2023, or 140 million more international arrivals, with results driven by a robust performance from large source markets and an ongoing recovery of destinations in Asia and the Pacific.

Elsewhere, data from the World Travel & Tourism Council (WTTC) [revealed](#) a record-breaking year for travel in 2024, with the global economic contribution of the sector reaching an all-time high of \$11.1 trillion. According to annual [Economic Impact Research](#) (EIR), tourism contributed an additional \$770 billion in 2024 when compared to the previous year, accounting for one in every ten dollars globally.

To take advantage of this growing demand—and to meet evolving traveler expectations—the travel ecosystem must come together to overcome shared customer experience pain points. Technology providers are driving this transformation hand-in-hand with travel providers, bringing deep expertise and working across the ecosystem to scale the new ideas that will help to deliver simpler travel.

Challenges to digital transformation in travel

Digital transformation in travel is accelerating, but key challenges remain. These include:

Data fragmentation:

Siloed data remains one of the biggest challenges for the travel sector, with information spread across multiple stakeholders in often incompatible formats. This fragmentation makes it difficult to generate a unified view of the customer and deliver personalized, consistent experiences across touchpoints.

Legacy systems:

Many travel companies rely on decades-old legacy systems, which are often rigid, costly to maintain and poorly suited to the developing digital landscape. These systems cannot easily integrate with modern platforms or support the seamless, real-time interactions that travelers expect.

New standards:

A lack of consistent technological standards across the travel industry is an obstacle to digital transformation. Disparate systems, uneven adoption of frameworks and incompatible APIs hinder collaboration between suppliers, intermediaries and technology providers.

Compliance:

Travel companies operate in a complex environment of national and international regulations covering data privacy, cybersecurity, taxation and sustainability. Compliance requirements can vary dramatically by region, adding legal risk and administrative burden to transformation efforts.

Sustainability:

Travel businesses are under pressure from travelers to reduce carbon footprints and report on sustainability metrics. Digital transformation can support these aspirations—for example, by optimizing flight paths or reducing paper use—but this also brings challenges.

Building a seamless travel experience with transformative technology

The travel industry is transforming as traveler behavior evolves at every touchpoint of the journey - from how travelers are inspired, to how they shop and book, to how they create memorable experiences. Travelers now expect more intuitive, more personal and more inspiring choices than were once thought possible.

Travel technology providers understand this and are embracing the impact and implications of these transformative changes, striving to be the partner of choice for travel sellers and providers. They are helping deliver on objectives by providing the stability, resilience and reliability customers demand, with the inventiveness and imagination they expect, offering support and unlocking the retail transformation that has long been talked about.

Never before have so many enabling technologies been available:

- Public clouds provide the backbone for fast, widespread computing at scale.
- Robust platforms make data widely available, more organized and better connected.
- Modular solutions built on open technology provide greater flexibility.

- Breakthroughs in biometrics and artificial intelligence create new dimensions of automation.

Transformative technology can, and is, transforming the travel and tourism industry.

How do you transform the travel and tourism experience?

Partnerships and collaboration will power this transition. Truly transforming the end-to-end traveler experience with technology requires partnerships and a connected ecosystem. The industry can only progress by working together.

- An ecosystem approach, bringing together the best combination of leading organizations, from startups to large enterprises, will drive digital transformation in the travel industry.
- Co-creating and developing capabilities to envision, design and deliver cutting-edge travel solutions. This is how innovative technology creators can guide, enable and empower the ecosystem to help drive and implement change.
- Sustainability is a challenge and opportunity that demands strong collaboration. A collective responsibility to protect and improve the people and places travelers want to visit. By working together, transformative technology providers can support the industry in delivering more open and accessible solutions that also have a lesser impact on the environment, accelerating our journey towards a more sustainable travel industry.

Wider technology trends accelerate digital transformation in the travel industry

Digital transformation in the travel industry is accelerating, driven by broader shifts in the technology landscape:

Artificial Intelligence

The impact of **AI** will be felt throughout the whole traveler experience. The planning phase will be enhanced as Generative AI creates inspirational, traveler-centric search and shopping experiences. On-trip, Generative AI chatbots will be used to ask the right questions to understand traveler preferences. Post-trip, Generative AI will help evaluate customer sentiment and allow travel businesses to respond to online reviews, boost their online reputation, stay in contact with customers in a more meaningful way, drive repeat business and maintain traveler relationships over sustained periods.

Cloud technology

The move to the **cloud** is enabling the digital transformation of the travel industry by enabling companies to offer seamless, scalable and personalized services. Rather than investing in and maintaining physical infrastructure, travel businesses—from airlines and

airports to hotel chains and online travel agencies—can rely on cloud-based computing resources, allowing them to scale their operations up or down based on demand.

Biometrics

Airlines, airports, cruise lines, seaports, border authorities and other industry players all need to be able to efficiently perform passenger recognition (determining who someone is) and authentication (establishing that someone is who they say they are). **Biometric** solutions use facial recognition to create a seamless and contactless experience for travelers. Travelers can enroll via mobile device prior to arriving at the airport or hotel and use their face as ID at checkpoints. This in turn is providing travelers with shorter queues and faster passage through the airport or border crossings; and travel providers, airports and border authorities benefit from more efficient processing and stronger security.

These transformational technologies support airlines on a journey toward modern travel retailing, creating simpler, more personalized trips for travelers. For airports, they open the doors to simplification and optimize valuable space at terminals, while travel sellers see more efficient corporate and leisure booking and payments processes.

For hotels the development of AI, cloud, biometrics and more means gaining insights to drive profitable demand and decisions, while delivering differentiation and loyalty to guests. Additionally, if changes occur, like flight times, all travel partners are automatically informed, ensuring smooth operations.