Robosoft Technologies®
EMOTION ENGINEERING & DESIGN

Helping Travel & Tourism
Get Back on Its Feet with Technology

The time to travel is on its way back

Travel and tourism have been on a roller-coaster in recent years with restricted mobility and health concerns. Not only were airlines, airports and hotel chains affected, local businesses, and artisans dependent on tourism dollars also head to bear revenue hits and job losses.

However, the UNWTO World Tourism Barometer shows that International tourists arrivals have almost tripled in 2022 as compared to pre-pandemic levels in 2021. The study shows 474 million international tourists travelled between January and July 2022, compared to the 175 million in the same months of 2021. IATA found that total air traffic (in revenue passenger kilometres) increased 57.0% over September 2021-2022.

People are ready to revive their travel plans after being cooped up since the pandemic, wanting to experience more of the world, and local flavors of new travel destinations. It's one of the reasons that market volumes are expected to reach US$992.10 billion by 2026.

With strong growth continuing into 2023, Statista predicts that global travel and tourism revenues will go up 20% to reach US$852 billion – nearly all sectors or sub-sectors re-registering strong growth. However, experts at the World Tourism Organization expect a fuller recovery only after 2024.

Travel & tourism revenues predictions for 2023

Hotel industry
(the largest segment)
USD 406.5 billion

Vacation rental
(emerging segment)
USD 97 billion

Cruise industry (badly
impacted after pandemic)
USD 25.1 billion

Package holiday
segment
USD 279.7 billion

Source: Statista

User base in 2023

Hotels - **1.1 billion**
users worldwide

Vacation package -
513 million users

Vacation rental
industry – nearly
840 million

Cruise travelers –
24.5 million

The new age tourist
and how they travel

Today's travelers have recalibrated their travel expectations and priorities. IATA's 2022 Global Passenger Survey revealed that simplification and convenience were valued by travelers more than ever. They have embraced the convenience and freedom of digital and made their smartphones their travel buddies.

Millennial and Gen Z travelers research their trips and plan them entirely online. Even older generations who are not as trusting of technology are finding vast information online, and better deals. The experience economy is also gaining prominence in travel. New-age travelers are heavily influenced by social media and rely on experiences shared by other travelers through reviews on social media etc. as part of their research.

Another interesting trend is the growing digital nomad population – in excess of 35,000,000 globally in 2022 as per a Global Digital Nomad study. These are individuals who travel round the globe while working in some professional capacity online.

American Digital Nomad Annual Growth

Millions of Digital Nomads

20	
15	
10	
5	
0	

2018   2019   2020   2021
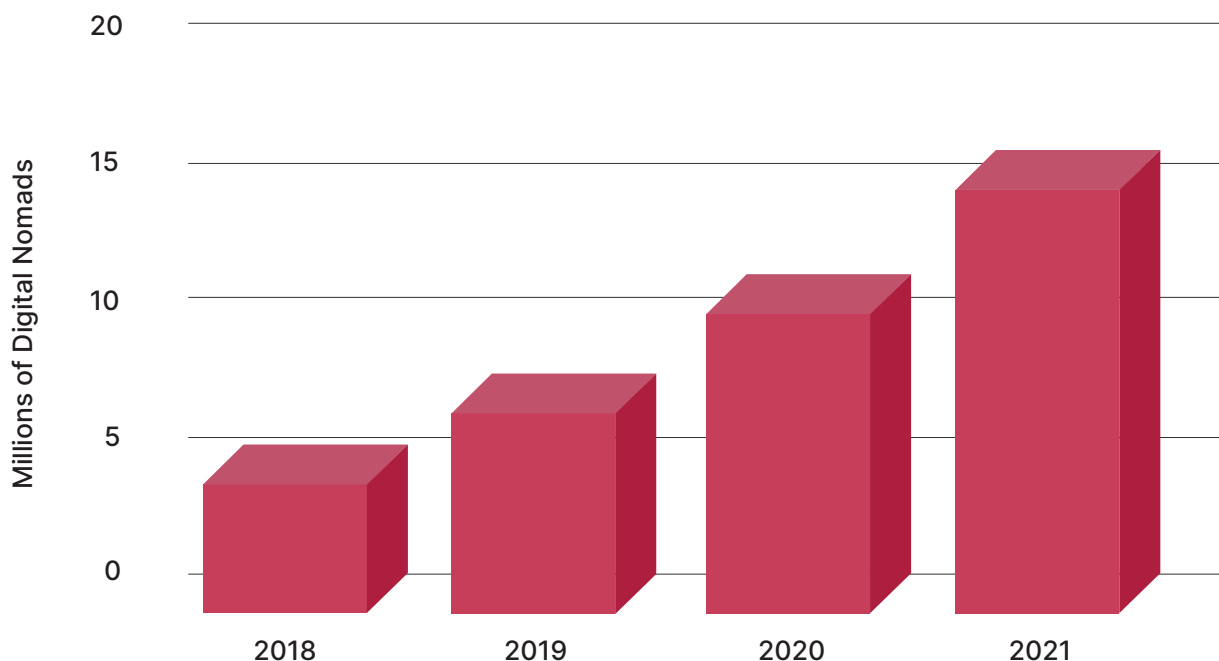
Travelers expectations have changed, from the way they get information about where they want to go, to how they make their travel plans, and even how they experience the tourist destination itself.

Technology is bridging the gaps in many ways for the industry, which is preparing to bounce back, both locally and globally. And more than ever, technology is bringing alive every stage of travel. Be it for researching, planning, booking, reservations, exploration, and various other aspects – they are relying heavily on their smartphones.

Good-to-haves

✓ Personalized information and offers

✓ Experiential travel

✓ Flexible choices

✓ Value-adds

Must-haves

✓ Safe and hygienic conditions

✓ Well-planned travel experiences from start to finish

✓ Convenience

✓ An omni-channel experience across apps

Delightful

✓ Digital enhancements from research to destination experience

✓ Unexpected luxuries and thoughtful gestures as add ons

With Technology as an
Enabler, Travel & Tourism can Reinvent Itself and Recover Faster

These changing expectations and trends offer opportunities for airlines as well as airports, governments, and other stakeholders in the travel and tourism ecosystem to accelerate the industry's revival. Even as digitalization of bookings, of airlines, hotels, cabs and even tourist events has become the norm, digital holds much promise to enhance the travelers experience entirely. With a mobile phone in every tourist's hand, this is the chance for the tourism industry to speak directly to them and create new experiences.

Here we list some of the technology trends that are infusing new energy into the industry to deliver delightful, memorable experiences for the connected traveler.

1. Artificial Intelligence (AI) for personalized travel assistance

AI and bots are gradually taking over the most burdensome tasks of administration and customer service in the travel industry. The biggest advantage with AI is that it keeps learning and improving with every interaction. They're helping drive down costs and time and enhance service efficiencies and reliability for hotels, travel agents, tour operators etc. Especially in the hospitality space, staff shortage can be filled in by bots and AI to focus on customer service aspects like personalized recommendations and high levels of responsiveness. Chatbots are taking over interactions with customers in the absence of customer service staff and able to handle volumes and speed of response that are beyond human capacity.

Chatbots in travel

✓ Using bot-building platform-as-a-service such as SnatchBot, travel companies with minimal coding skills can set up a booking platform and use chatbots to interact with customers, ask them questions and respond intelligently to capture preferences and specifications.

✓ Travel Professor, a virtual travel assistant chats with prospective travelers, interprets preferences, and notifies them of flight hacks – cheap flight deals and travel destination recommendations.

✓ Sam is an intelligent business travel bot assisting busy travelers on their mobile devices – weather alerts, scheduling local commute, and more relevant updates throughout a business trip.

Airline apps can engage and enhance customer experiences through innovative and intelligent AI-based solutions like:
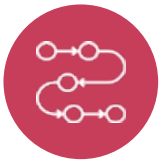
Personalized itinerary planning: Say an airline app offers a social community experience with travel-related feeds, which are destination/interest specific with reviews by friends/travel influencers on experiences, photos, tips, recommended places etc. Based on the user's preferred dates of travel and interests, the back-end AI engine generates a personalized itinerary ideal for that user – flights to take, places to visit, hotels, time required etc. This saves the traveler a lot of headache and time in doing it themselves. At the same time, the airlines operator can look to forge stronger partnerships and expand their ecosystem to increase their wallet share. They can also upsell or cross-sell the inventories of their group companies and find ways to flourish while offering a seamless experience to their travel customers. They can also look to incentivize and reward travelers for using this wider range of services and sharing reviews etc. when they're simply browsing and not necessarily on the app itself.

Omni-channel presence: Say, a user is searching for fares on the phone while on a bus or train and then that gets disrupted. An omni-channel presence will ensure they can resume from the point they left and complete all the transactions without losing any data or time.

Automated push notifications: On air fare drops for those destinations that a traveler may have shown interest in the past, even when they're simply browsing and not necessarily on the app itself.

Value-adds: A facility for users to measure and check whether their bag size (not weight) is compatible with the airline restrictions as this can be a big concern for the traveler. Through the camera feature on the app, the user can utilize the QR code and automatically populate their passport information and save a lot of time in the bargain.

Automatic synchronization: After a network disconnect or failure – facility of prefill booking applications helps large groups or senior citizens – who might otherwise be disrupted by technical glitches and have to repeat the entire process.

2. Sample what to expect with Virtual Reality (VR)

VR is already popular for gaming, watching interactive videos, and viewing 360-degree images. Now with affordable headsets, it allows the potential traveler to digitally explore and identify destinations, landmarks, places to see, stay options, local attractions and more.

Even a simple 360° image that can be shared on social media easily and offers a VR perspective can be a powerful marketing tool for tour operators. By packaging various elements of an extraordinary travel experience using VR, they allow the traveler to sample the most exotic or dream destinations even before going there and make it a temptation that's hard to resist. Deciding on the right hotel and stay will also become easier with smart hotels offering VR tours of their premises. Travelers can find and book hotel accommodations after a virtual viewing of the rooms and other facilities to ensure there are no rude surprises later. Organizers of corporate events and outings can offer a virtual preview of the venue and facilities to prospective clients who won't then need to do an in-person recce.

3. Travel larger-than-life with Augmented Reality (AR)

The advantage of AR is it can be experienced through any smart device. The connectedness of everyday devices, its affordability and compatibility with GPS tracking, image capture technologies make AR-based features popular among smart travelers. For example, augmented tourist destinations such as museums can incorporate AR into their physical exhibits – their actual appearance can be juxtaposed against an augmented version of the same object. Or tourists get to learn more about a heritage site they are visiting – all they do is point their smart device at the building and all the related info pops up on its screen.

AR is also taking gamification to the next level and opens up opportunities in the hospitality space as well. With the help of novel solutions such as YU Anywhere, guests can design and personalize every aspect of their stay to suit their preferences and live out their travel fantasies to the fullest. This could mean being able to change the décor of their rooms with AR enhancements, see celebrities appearing virtually in the hotel. And a real treat is in store for younger guests who can have virtual manifestations of their favorite Disney characters popping up wherever they are staying.

Tour operators can offer AR-supported highly imaginative viewing experiences to tourists visiting landmark venues and sites wherein digital elements are superimposed on physical structures to give them a touch of the surreal. Tech start-ups like AR Tour who are innovating with AR glasses etc. are making such experiences possible for today's travelers.

4. Voice control technology: Smart assistance on the move

With increased connectedness of everyday devices, voice control technology is helping life easier for people throughout the stages of their travel – packing for their trip, tracking flights, hotel bookings, enhancing their hotel stay, renting cabs and more.

Those in hospitality can use this technology to make travelers feel 'at home' during their stay at the hotel and make it a repeatable experience. They can offer hotel guests value-added customization features using smart speakers or a voice-controlled hub or app.

For example, Alexa for Hospitality is a voice-operated device, which is based on the Amazon Echo home hub can be redesigned for the hotel room environment where guests to speak to it and instruct it to control lights, heating, play music of their choice, get real-time, accurate info and so on. At the same time, they can keep security and privacy concerns at bay by giving guests the flexibility to turn off the device or opting not to use the feature.

5. Value-added travel with the Internet of Things (IoT)

With IoT, everyday devices become smart and help streamline tasks for both travelers and industry professionals. The uses of IoT in travel include:

✓ Controls for lighting, temperature etc that can be operated and set to personal preferences by individuals in their hotel room or on flights. This can be a great energy saver too and make travel more sustainable.

✓ Sensors to pick up on baggage arrivals and trigger alerts to passengers on their smart devices so that they can locate it quickly.

✓ Beacon technology to feed smart airport apps with passenger-specific info such as flight details, shopping options, lounge passes, route maps etc. and guide passengers through the airport. The data generated can also be shared with the stakeholders to ensure they deliver a seamless, personalized experience.

✓ Real-time info captured to provide on-the-ground situational and logistical updates to airport staff and travelers to ensure smooth, hassle-free, and secure transit.

6. Metaverse tourism for dream destinations to come alive

Travel and tourism in the metaverse is set to take the industry into the next generation. It promises exciting, novel ways to capture and engage new-age travelers with destination, accommodation, and tourism ideas. Here are some possibilities of immersiveness in metaverse tourism:

✓ In the form of concerts, entertainment events, or business meetings that can be virtually experienced by people in the comfort of their homes.

✓ Online trade shows and exhibitions that facilitate social interactions similar to the real world but with avatars of others in the same metaverse as the user.

✓ Virtual theme parks, museums, zoos that build up the excitement around local and well-known landmarks by giving would-be tourists a taste of what lies ahead.

For these technology use cases to be realized fully, an ecosystem play is essential. For example, recent developments have compelled airlines to pivot to a retail model. While full-service carriers and low-cost carriers exist today, the former model has historically relied more on business travelers for revenues. However, business travel has reduced since the pandemic. As a countermeasure, airlines need to look at the low-cost carrier model that requires a minimal ticket fare – everything else is an add-on and must be paid for separately. They have to expand ecosystems and build partnerships in which tech can play a huge role.

The connected **traveller**

With the lift off given to the industry by these technologies, travel and tourism is preparing to make a comeback. The connected traveler couldn't ask for a better reason to resume their holiday bucket-lists and plans. Location independence, traveling, and remote working are choices increasingly exercised by people since the pandemic struck. And all they need to get going is their smartphone.
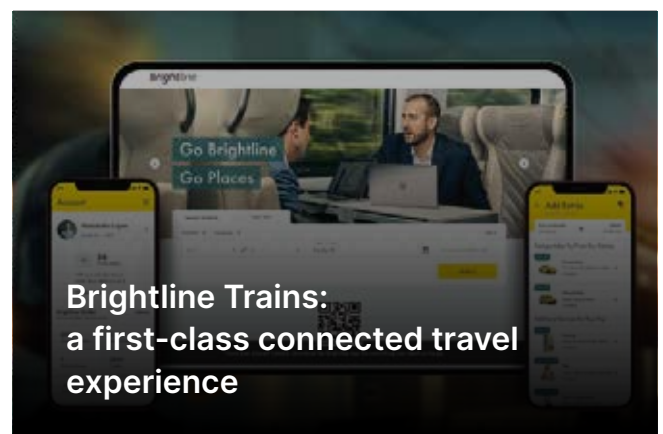
Typically travel can be split into:

Pre Travel

Research

Booking

Planning

Reservations

During Travel

Local tourism

Hotel accommodation

Local commute

Social media updates

Post Travel

Feedback

Reviews

Ratings

Connected travel integrates different components of travel like transport, accommodation, tourism, local shopping, local cuisine tasting, excursions etc through modern technologies (big data, AI/ML. IoT, chatbots, AR/VR etc).
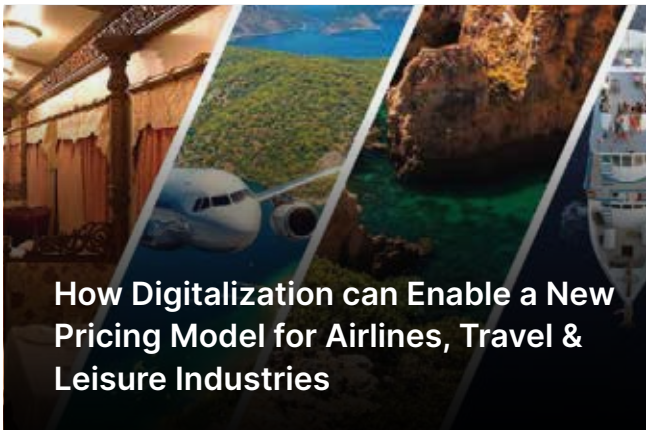
Conclusion

While the technologies and use cases we have described in this e-book are not exhaustive, they are certainly infusing new energy and limitless opportunities to innovate throughout the travel and tourism spectrum. Those in the business should look at the future with greater optimism, knowing they can rely on technology to not only survive and revive but also make a sustainable comeback while they are at it. Connected ecosystems will gain prominence as these enable seamless integration, innovative partnerships, robust, intelligent systems to realize greater potential collaboratively.

Related reading:

How Digitalization can Enable a New Pricing Model for Airlines, Travel & Leisure Industries

New Age Flyers Want a Seamless Airport Experience [7 Tips on How Technology Can Help]

New Technologies Enhancing UX in Airlines Industry

Brightline Trains: a first-class connected travel experience

The Robosoft
Advantage

Robosoft is a full-service digital experience company with a mission to Simplify Lives. We offer end-to-end solutions in product advisory, design, engineering, and analytics - a one-stop partner for digital solutions.

The delightful and intuitive digital experiences we craft help enterprises offer great customer experiences and drive brand preference. In 1996, when we started operations, our first customer was Apple Inc. Since then, we have played an active role in the ever-changing world of digital experiences – from mobile app development to emerging technologies in digital experiences.

We have partnered with several prestigious brands around the globe in crafting digital experiences across banking & financial services, media & entertainment, travel & lifestyle and more. We have crafted over 2000 digital experiences and our apps have garnered over a billion downloads. Our customer-centric solutions are tailor-made to suit our client's requirements and sure to deliver business results.

Brands you trust,
trust Robosoft

discovery+	brightline	ESPN	McDonald's
Mercedes-Benz	hp	PEPSICO	AAA

Let's connect to craft delightful digital experiences.

Write to us with your product vision to

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