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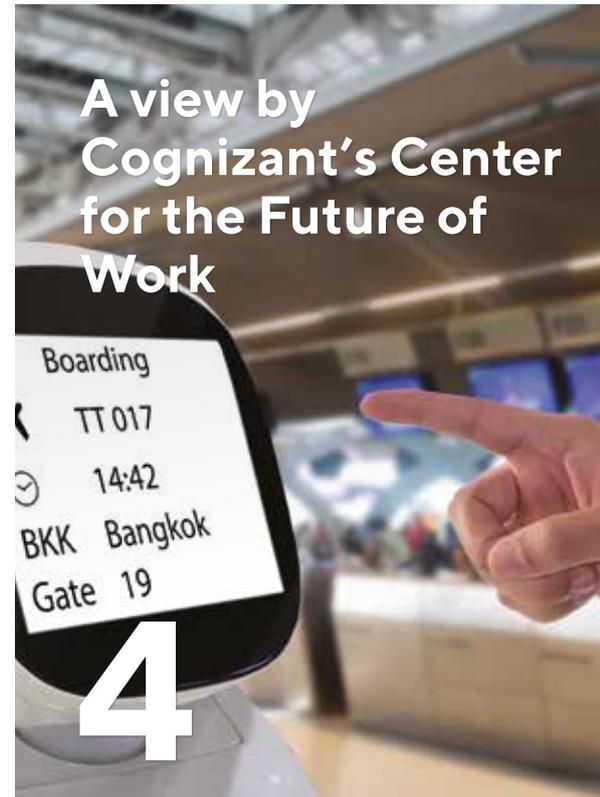
**The Future of
Travel &
Hospitality**

The future of travel & hospitality will offer a world of opportunities, but the transformation will require substantial steps and boldness. The industry needs to be open to new insights instead of being mentally closed by existing ones.

Each industry has its own challenges, and digital disruption is everywhere. Organizations must be agile and build new momentum that respects the new reality of their industry. As organizations strive to remain relevant, they need to adapt to changes not only today, but also tomorrow. Change is the only constant. Constant change requires scenario-based thinking, exploring several paths and crafting a digital strategy based on preparing for the future. For businesses to stay relevant, they need to explore the future and look at next generations.

No one can predict the future; organizations must actively explore various possible futures to anticipate what disruptions are coming. We believe that future winners in the digital economy will be those that can deliver on one key insight: put technology in the background, and focus on people first. Putting customers first does not diminish technology's importance; rather, a deep customer understanding should help guide the choice of which technologies to incorporate in your business.

Cognizant can bring together digital strategy, deep industry knowledge, human sciences, experience design and technology expertise to help companies design, build and scale digital business solutions. Cognizant has both the expertise and experience with digital transformation. Together with clients we can explore tomorrow's opportunities.



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Center for
The Future of Work

A view by Cognizant's Center for the Future of Work

Meet the customer of the future

Euan Davis leads Cognizant's Center for the Future of Work in EMEA. A respected speaker and thinker, Euan has guided many Fortune 500 companies into the future of work with his thought provoking research and advisory skills.

Within Cognizant's Center for the Future of Work, he helps ensure that the unit's original research and analysis jibes with emerging business-technology trends and dynamics in Europe, and collaborates with a wide range of leading thinkers to understand how the future of work will look. Previously, Euan held senior analyst, advisory and leadership positions at Forrester Research, IDC and CEB. Euan can be reached at: Euan.Davis@cognizant.com

Dennis wakes up with a smile. His holiday starts today! He's so glad his personalized travel app recommended an actual trip this year. Last year's VR holiday was fun, of course – it was amazing to experience all the fun of Hawaii without ever leaving his living room. But this year, the whole family will get to experience Rome in real life.

When the self-driving electric taxi picks them up to take them to the airport, Dennis opens the itinerary. He's curious to see what they're going to do. As always, the travel app has personalized the trip for each member of the family. A soccer-themed plan for his son, shopping and tourism for his wife and daughter, and all the historical highlights for Dennis. And of course, plenty of family time. Everything from meals to activities has been customized to their preferences. The hotel even has that extra-firm mattress he and his wife love, and has been alerted to everyone's food allergies and specific dietary needs.

Quick take Post COVID-19 impact

The travel & hospitality industry has been heavily impacted during the COVID lockdown; already we have seen the closure of some household brands in this space. However, post-COVID, digital could well be this industry's saving grace. Intelligent automation of services from bookings to hotel check-in will prove an effective means for travel & hospitality organizations to trim their cost base as they look to rebuild post-lockdown. Already, customers are beginning to expect seamless digitized experiences in ever-increasing facets of their travel experience. The push for post-COVID survival in this industry will provide the digital push many travel & hospitality firms need to ramp up their customer journey.



Boarding
TT 017
14:42
BKK Bangkok
Gate 19

Sound like a dream? Not at all. By 2025, travel and hospitality will be endlessly personal and exceedingly convenient. At least for travel companies that want to stay relevant.

The digital travel experience

The travel and hospitality sector is already serving customers with digitally enhanced travel experiences. From reservations to payments, from virtual tours to digital boarding passes to review apps, more and more travelers are booking their travel via their mobile phones, and embracing peer-to-peer apps and reviews that help them customize their travel experiences to their exacting preferences.

With the launch of the KLM Blue Bot in 2018, KLM became the first airline to have a chatbot "employee". The self-learning Blue Bot interacts with travelers to help them search for, find and book the trip of their dreams. And every day, the bot gets smarter and more helpful.

From convenient to customized

Digital tools that make travel more convenient are just the beginning. In the years to come, travelers will demand more ease, less stress and more personalization than ever before. Instead of discussing preferences with an intermediary, travelers will use AI-driven, personalized booking platforms that store and process personal data – from social media posts, previous experiences and reviews – to suggest appealing options for each individual traveler.

The travel experience itself will become more seamless and personal as well, as passports and security lines are replaced with smart security systems that scan biometric data and perform identity checks in seconds. In fact, Canada and the Netherlands are already experimenting with the Known Traveler Digital Identity infrastructure, which uses a distributed ledger, biometrics, cryptography and mobile interfaces to make check-in predictive, risk-mitigated and seamless.

Some start-ups are leading the way in creating more appealing travel experiences. [Airlinecheckins.com](https://airlinecheckins.com) is an app that automatically checks passengers in when the time is right, monitors their seating preferences, and even offers unlimited in-flight WiFi. And Skylights promises to immerse passengers in a full, 360-degree VR entertainment experience while on board an aircraft.

To take advantage of the explosion in peer-to-peer sharing networks like Airbnb, Slock aims to make the experience more secure and transparent. So it uses blockchain technology to help travelers securely rent an apartment or house, borrow a car or a bike, and more. The technology "locks" the asset with a Slock, making contract enforcement and payments automatic and scam-proof. And, as carbon footprint becomes a key factor in decision-making, travelers seek options that allow them to see the world with a minimal impact on the environment. Travel services that offer greener solutions and carbon neutrality will continue to grow in popularity as travelers take more interest in preserving the destinations they want to see.

Augmented reality goggles will enhance tours with information.

The journey of tomorrow

In less than two decades, AI and smart assistants will transform not only the way we travel, but also how we make travel decisions and prepare for the journey. Extreme personalization won't just be a pleasant extra – it will be the industry standard.

Think, here, of a personal travel assistant on your mobile phone that tracks your behavior, preferences and biometric data throughout the year. At the moment when your hectic life allows for (or demands) a little break, the travel assistant will suggest, book and plan a trip for you. It will assemble a list of things to pack, arrange the greenest forms of transport, ensure your hotels have all the amenities you prefer, and plan activities it knows you enjoy. And while you will still be able to change or modify the suggestions, you will likely be most happy with the suggestions of the smart system that knows you as well as you know yourself.

SeeVoov is already making headway. The video tagging platform uses object detection and machine learning to aggregate points-of-interest content. With the tool, travelers can choose curated content that helps them explore destinations from their preferred perspectives. Then, SeeVoov provides a suggested itinerary and estimated costs, so travelers can make a decision in a swipe.

The future of travel is human

Travel in 2025 will be more human-centered than ever before. With AI, machine learning and smart apps and assistants, the industry will change from a sales and marketing-led push to a hyper-personalized pull. Augmented reality goggles will enhance tours with information and extras that each participant finds interesting. Travelers will no longer need to spend time searching for things to do, but will receive a personalized list of options designed to give them a tailor-made dream holiday. Hotel selection and travel preferences will automatically adjust to key passenger needs and priorities.

And all this technology can help solve big issues at the destinations themselves. Cities are already using sensors, connected infrastructure and smart traffic lights to control crowds and manage traffic. That data will also help tourists avoid high-traffic areas by planning convenient routes on less congested roads. And smart assistants can suggest travel destinations that travelers may never have thought of themselves. That can create memorable, one-of-a-kind experiences for the traveler. But it can also reduce congestion in classically popular destinations, thereby spreading global travel revenue more evenly and further reducing the crowds, long lines and congestion that can negatively impact the travel experience.



“the **future** of
travel
is human”

On the way to personalized travel

The travel and hospitality industry already embraces technology more than many other industries do. But there is still a long way to go. As the traveler of tomorrow becomes more selective, more environmentally conscious and demands more convenience, travel and hospitality companies will use the power of AI, smart assistants and machine learning to change the travel game for good.

The result? Seamless, secure airport operations. Environmentally conscious travel options. Less overcrowding. And reviews from thousands of satisfied travelers who have the trip of their dreams. Tailor-made trips that keep a traveler smiling from door to door. So, while Rome may have looked different to every member of Dennis’s family, they all return refreshed, invigorated, and full of praise for the amazing experience each one of them had.



Tony Bosma (1973) is a futurist and trendwatcher. He is the founder of futuring and consultancy organization Extend Limits (www.extendlimits.nl). Extend Limits does not predict the future but helps organizations anticipate it. Do not ask yourself why things are happening. Ask yourself why hasn't it happened yet? This is the mindset companies need to adopt in this era of change.

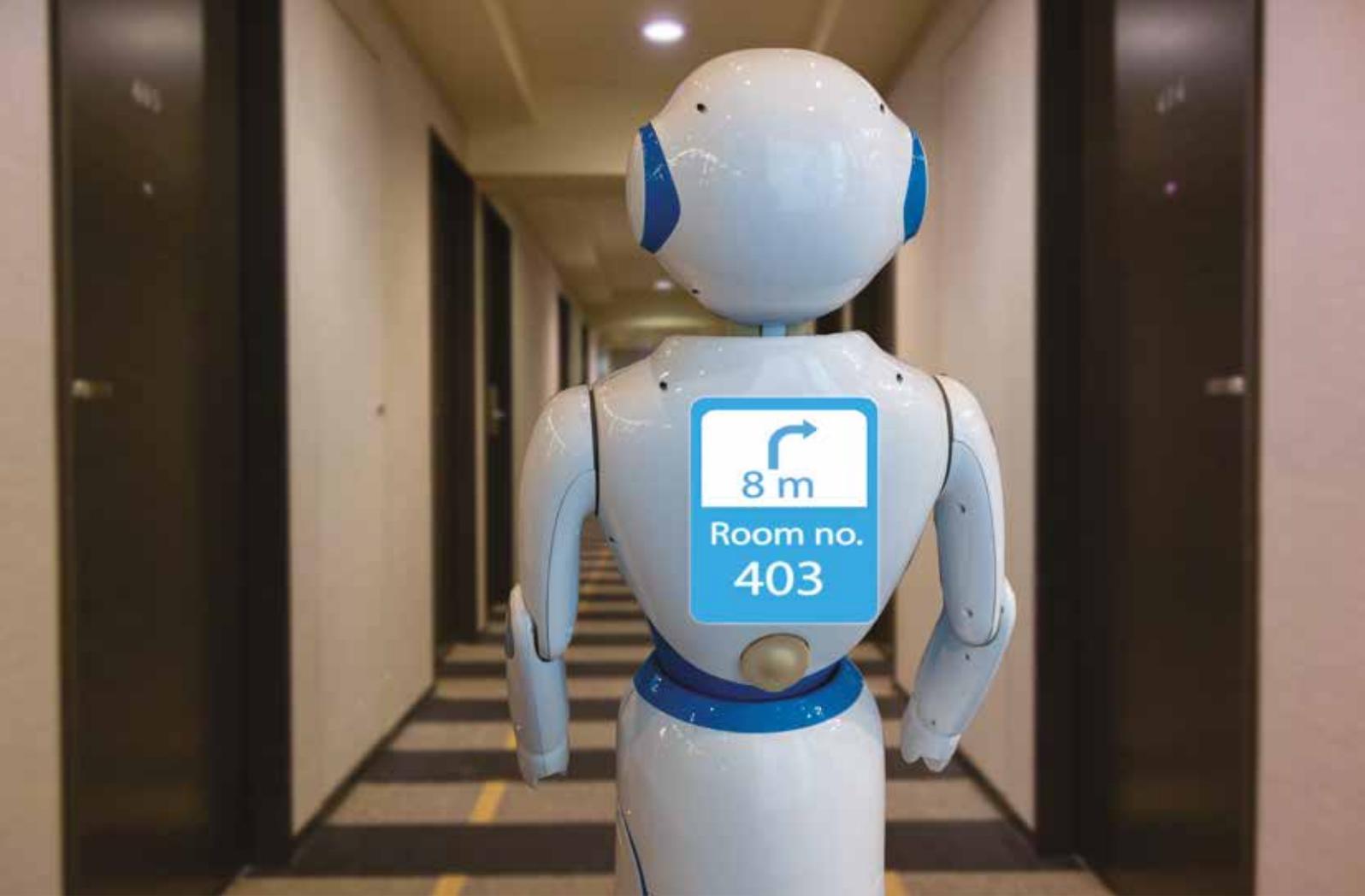
Tony Bosma is an authority in future thinking and trendwatching and was nominated in The Netherlands several times for trendwatcher of the year. He is an internationally renowned keynote speaker. He is known for his confronting, inspiring, visually attractive and surprising sessions about a wide variety of topics. He also works for a variety of companies and governments, helping them anticipate the future and, more important, challenge and question today's world and mindset.

In collaboration with Cognizant, Tony Bosma did extensive research into near future trends across industries. Together with Cognizant, he made abstracts of the most dominant developments – not far fetched futuristic worldviews – but realistic developments which are seen right now. These are not only plausible future developments but also the challenges of technological developments.

An external perspective by futurist & trendwatcher Tony Bosma

Travel & Hospitality reinvented

Global tourism has grown significantly in recent years and will continue to expand, especially as dramatic changes in the consumer landscape lead to new means of tourism and travel. In addition to technological advancements making it easier and more accessible to plan and book a trip, other factors like cheaper airlines, digital platforms providing access, changing demographics, a growing middle class and rising education levels will also change the face of tourism in the upcoming decades. As the long-standing models of the visitor economy change shape, not all signs are positive for the travel and hospitality industry. Over-tourism is leading to negative impacts on the environment and local communities. Travel companies need to set aside their addiction to their past successes and anticipate these changes, as well as other future trends and developments.



Remaining relevant in the age of uncertainty and change means being open to other insights instead of being mentally closed by existing ones. The industry needs to be willing to disrupt itself by anticipating the right trends instead of mindlessly adopting the speed of change.

The changing structure of the consumer landscape in travel will greatly impact demand and services. An aging population will have fundamentally different needs from upcoming generations like Generation Alpha (the children of the millennials). As the global population becomes richer and travel consumption shifts to a more environmentally-aware model, travelers will want to radically minimize the negative impact of travel on the local environment and society. Rather than view travel as an outlet for rejuvenation and fulfillment, it's increasingly the experience that counts.

And while technological developments have always had a huge impact on the travel industry, new peer-to-peer digital platforms are creating new tourism markets, with travelers connecting directly with service providers instead of intermediaries.

We share our travel experiences in real-time with our friends and connect easily with locals. But while digital has become ubiquitous in our increasingly connected lives, this same lifestyle also leads to the desire to unplug and to have authentic experiences as an alternative to our technology-driven day-to-day lives. So while digital adoption is the only way to meet the fast-changing demands of future visitors, the biggest question is which technologies will radically change tourism and travel and what will be the biggest challenges.

“International tourist arrivals reach 1.4 billion two years ahead of forecasts.”

***United Nations World Travel Organization's
World Tourism Barometer, 2019***

Artificially intelligent visitor economy

Data-enabled hyper-personalization

The travel and hospitality industry is very data-intensive. Through the many contact points and transactions, massive amounts of data are generated, from reserving tickets and virtual tours, to making inquiries and payments.

All this data will enable extreme personalization in the industry. Being able to generate valuable insights from travelers' data will boost business and add to a positive, personalized experience. The travel and hospitality industry will have to leverage smart data to enable real-time improvements in the traveler's experience and even anticipate changing consumer needs. To cope with this, the industry will move to the usage of artificial intelligence-driven assistants, from bots to personalized booking platforms. The visitor economy will be driven by algorithms that harvest and act on data.

“Within 10 years, travelers will “have no need to encounter a single human being” from the moment they check in.”
Skyscanner

Artificially intelligent visitor economy

In the data-intensive visitor economy, travel and hospitality companies need the help of smart technology, such as self-

learning machines that embrace the possibilities of intensified contact between business and traveler. Advanced technologies like smart bots will reduce the friction in check-in, occupancy, maintenance and the customer experience, freeing hospitality staff from rote tasks that machines can do more efficiently. These workers will be able to give actual attention to travelers who really want it, using intelligent machines to generate tailored offerings that add a personal touch and make the experience unique.

Meanwhile, the Instagram world will continue to gain power, making reviews an even more important element in the hospitality industry. Brand reputation will become an even greater driver of customer decisions, and hospitality organizations will turn to artificial intelligence to manage it. Transparency and authenticity in reviews will become more important as fake reviews also dominate today's world. AI will provide the tools to craft appropriate human responses in the right situations, freeing time for human interaction and assistance when needed.

The smart recognition world

Technology has made travel not only more affordable but also more easy and simple. But while convenience in travel has become the Holy Grail for a positive customer experience, the growth in the number of travelers and their changing demands will also have security and safety consequences.

With more pressure on securing travel mobility and monitoring and controlling the flow of people, AI-driven recognition technologies will be applied to check-in/check-out processes, maximizing both security and convenience. Biometrics will fundamentally change the way we interact with authorities and businesses. Airports are already experimenting with the latest technologies that enable them to scan people for identification and security check.



Security is also shifting toward a more prescriptive model in which risks are predicted and minimized via technology. Personal recognition will increasingly be handled by technology in a ubiquitous way. Our airports will become immersive worlds in which the surrounding technology infrastructure identifies us and guides us in our travel. Smart recognition technologies will also be applied to payments and check-in/check-out at accommodations.

Similarly, our cities are also adopting smart technologies. Tools like connected infrastructure, LiDAR sensors, 5G, mobile apps and smart traffic lights will make it possible to manage issues around congestion, infrastructure or otherwise. Many cities are already working on tracking tourist movements to manage crowds and notify and guide tourists to certain locations at the most efficient times. In this smart and interconnected world, passports will be relegated to the past, replaced by biometrics. Smart borders are already here, and our bodies will become our passport.

Virtual tourism

With the rise of global awareness about the negative impacts of our physical journeys, there is a need for new solutions allowing people to see the world. This may lead to new types of tourism, driven by advanced technologies. For example, virtual tours of potential destinations are already here, enabling tourists to visit the most beautiful spots in the world while sitting in a chair, without the hassle of traveling to overloaded touristic hotspots or enduring extreme weather conditions. Virtual tourism will become just as normal as driving around Europe by car. The first cities have developed augmented reality tours that are able to guide tourists into less congested spaces by dynamically adjusting their routes.

At the same time, the future of tourism will most likely blend the best aspects of the physical world with those of the virtual world. It will not fully replace our physical holidays but will become an addition to physical tourism.

“ People will just be able to walk through, and they’ll be scanned. We’re planning to totally eliminate the presence of immigration officers by 2020. ”

Major General Dr Ahmed Al Raisi, UAE, 2019



“ In the 1950s, around 25 million people traveled internationally each year. By 2016, that leapt to 1.2 billion and is forecast to hit 1.8 billion by 2030. ”

World Economic Forum

Imagine, one day...

By letting go of our mental barriers, we can think freely about a possible future of travel and hospitality. Imagine that in 2050, we no longer manually choose and plan a vacation; instead, our smart devices decide the best way to spend our holiday by gathering data on our behaviors, needs and desires. While we can decide to organize everything ourselves, most of us will let the machine become our smart travel assistant, suggesting personalized destinations and experiences.

Meanwhile, travel is done fully autonomously and is environmentally friendly. In addition to visiting our place of choice physically, we can visit and experience our holiday destinations virtually, managed by a virtual assistant, eliminating all the stress and hassle about what to pack or how to get somewhere in time. Multilingual devices help overcome language barriers, and while borders still exist, we no longer notice them because smart machines provide us with the needed safety and control. There are no overpopulated tourist spots because technology minimizes the local impact of tourism. Legislation is enacted to protect the most popular destinations on earth.

As travel becomes more responsible, full freedom of travel becomes a thing of the past. The impact on the local environment is taken into account and has an effect on destinations. A "one-size-fits-all" approach is replaced by hyper-personal accommodations and experiences, made possible by AI. In 2050, travel is fully focused on adding value to destinations instead of extracting it. It's about learning things instead of just visiting places.

What does this future mean for our need to explore our planet? What will the consequences be for privacy and human values like freedom of movement? Can technology create real progress by fundamentally changing our means of travel, holidays and hospitality? Time will tell.

Travel & Hospitality reinvented

New challenges and questions

A new array of digital solutions and opportunities for the travel and hospitality industry is being introduced every day. But are we addressing the right challenges with all these new technological possibilities? As technology has made travel more accessible, more people are traveling to more places on this planet than ever before.

On the one hand, it's very human to explore our world and work across borders. Travel connects people with the world and each other, and encourages us to be open to other insights and get out of our ever-growing mental and digital boxes.

But there is another side to this story. A tourism backlash is occurring in response to the side effects of the success of travel, including over-tourism, climate change and even doomsday tourism. Popular destinations are struggling to protect the local environment and citizenry or even restore the places that once attracted tourists. Meanwhile, technologies and platforms are being developed to make travel and hospitality even more frictionless, available and personal.

So while travel answers real human needs, it's essential to ask whether our digital innovations actually address the real challenges within travel that we face today or in the near future. Creating real human progress is about changing our current world instead of digitizing it.

“Global tourism has **experienced** steady growth for over **six decades.**”

Consumerism is the leading mindset in today’s societies, and the travel industry reflects this. We consume the places that we want to be in. Today’s technologies and businesses make it possible to be anywhere, experience everything and see anything. New technologies stimulate the ever growing commoditization of our consumption model within travel.

To future-proof the travel and hospitality industry, however, we have to become aware of this destructive approach and shift from our consumption mindset toward a “mattering,” purpose-driven mindset. Technology can help us focus more on adding value to the places we visit and helping to protect them instead of mindlessly consuming and exploring the views, products and services that local destinations provide.

While the trend toward hyper-personalization within travel and hospitality will bring enormous opportunity and new services, the line between better experiences, desired services, ease of use, privacy and ethics is blurring. We already read headlines

about cameras in planes or hotels analyzing passengers’ behavior. As we move toward pervasiveness of modern data technology in the travel industry, are we aware of the information we continuously provide to companies while we’re on the move or staying in a hotel? Travel data could be used to discover things beyond travel patterns or hospitality. As the travel industry collects high volumes of information, data ethics and privacy protection are becoming business assets. Excellence in this field will become a unique selling point, which will become more important as data and data analytics in travel become more sophisticated.

“**Last year, there were 1.4 billion tourist arrivals, up from 25 million in 1950, with Europe absorbing half of them. The nation generating the most tourists is China.**”

United Nations World Tourism Organization



“ The tourism sector is estimated to contribute approximately 5% of global emissions. ”

United Nations World Tourism Organization



The future is already here

Travel and hospitality will be dominated by new technologies that can be used to create real human value. We will see the industry shift from a system based on selling and marketing travel to adding actual value to destinations. Rather than the current supply-driven commodization of visiting unique places in the world, travel and hospitality will shift to designing and creating personalized experiences.

Technology will play a key role in meeting this goal. By analyzing needs and preferences, artificial intelligence-driven systems will match destinations and experiences with individual travelers. AI technologies will also prevent over-tourism by helping travel and hospitality organizations merge the best of the virtual and physical worlds. As mixed-reality experiences become more prevalent for travel and exploration, the virtual world will help to regain a healthy balance in the number of visitors to popular

destinations. Virtual exploration will become so real that it will actually serve as an alternative to real-life visits and experiences. Travel will also become frictionless and paperless. The passport will be replaced by the human body, and transportation will become autonomous and environmentally friendly, driven by a circular mindset. Consumption of travel and hospitality goods and services will add value to the environment instead of extracting from it.



A man with a backpack and suitcase is seen from behind, looking out a large window at an airport tarmac. The scene is brightly lit, suggesting a sunny day. The man is wearing a plaid shirt and jeans. The suitcase is a dark, rolling one. The window frame is visible, and the tarmac below shows some aircraft and ground service equipment.

Real-life cases

The following cases are inspirational and show how travel and hospitality industries are changing. Startups and innovative ideas can grow but also fail fast – that is innovation at the frontiers of an industry. No business relationship exists between the cases below and Cognizant.

AirlineCheckins

This startup offers automated check-in capabilities based on the traveler's preferences and personal wishes. The service automatically checks in airline passengers as soon as check-in is available, optimizing seat selection. In addition to other services, like discounted lounge access and in-flight WiFi, the service also alerts subscribers to changes in flight schedules.

www.airlinecheckins.com

KLM BlueBot

This chatbot system can search, find and book trips for travelers. The bot interacts via Facebook Messenger and Google Assistant (depending on the traveler's native language) to book flights, find a destination, make packing suggestions and advise on airport arrival times. As the self-learning bot becomes smarter, it will be able to help with more services in the future.

bb.klm.com/nl

SeeVoov

SeeVoov has created a video-tagging platform that uses object detection and machine learning to aggregate content on points of interest. With this tool, travelers can choose curated video content for destinations, estimate costs and create a daily itinerary.

www.seevoov.com

Typsy

Typsy aims to help businesses easily train hospitality staff by providing personalized online courses and videos that automate and support individual training. The organization shoots lessons on location, and for online courses, it uses instructors from hoteliers and hospitality schools.

www.typsy.com



“Technology changes all the time; human nature, hardly ever”

Evgeny Morozov

Skylights

Skylights offers in-flight 360-degree virtual reality entertainment. Passengers can immerse themselves in the latest blockbuster films and other new content via a lightweight VR headset throughout their trip.

www.skylights.aero

Slock.it

Slock.it wants to make the sharing economy honest and transparent. The company uses blockchain technology to efficiently and securely rent a flat, house, bike, car, washing machine, lawn mower, etc. just by locking it with a Slock. The system also handles contract enforcement and payments.

www.slock.it

Eddy Travels

Eddy Travels is a travel assistant powered by AI. Operating within popular chat applications such as WhatsApp, Facebook Messenger and Slack, the bot offers guidance on cheap flights, cool accommodations, best restaurants and travel tips.

www.eddytravels.com

The future is human

Humans excel at being creative, at seeing, identifying and investing in opportunities, and solving problems. Our emotions – anger, sadness, love – will drive the future of travel and hospitality. While technology will grow increasingly intelligent, it will never replace the human need to experience unique feelings.

The challenge for the travel and hospitality industry is to use technology to reinvent its old-fashioned business model and realize the opportunities to add value. This goes beyond seeing guests as just a source of revenues and finding the right balance between selling unique experiences and adding value to the destinations visited. This attitude will create real value for all stakeholders.

The industry can use technology to enhance our humanness. Let's be curious and not fearful about the future. Let us, as a society, create and discover the future of travel and hospitality by reinventing it.

Key take-aways

1. Put customers in control of their own data, and help them get the most out of it.
2. Use technology to minimize the ecological impact of travel.
3. Challenge the status quo in reducing the societal and environmental impact of travel and over-tourism.
4. Frictionless is the new normal. Bots will increasingly handle lower level customer engagement, while human interaction will continue to provide luxury and cultural immersion for travelers.
5. Never underestimate the power of human contact. Train your staff to cooperate with bots and technology. Unlearn and relearn.

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ABOUT COGNIZANT

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 193 on the Fortune 500 and is consistently listed among the most admired companies in the world.

Driven by a passion to help our clients build stronger, more agile and more innovative businesses, we enable global enterprises to address a dual mandate: to make their current operations as efficient and cost-effective as possible and to invest in innovation to unleash new potential across their organizations. What makes Cognizant unique is our ability to help clients meet both challenges. We help them enhance productivity by ensuring that vital business functions work faster, cheaper and better. And, our ability to conceptualize, architect and implement new and expanded capabilities allows clients to transform legacy models to take their business to the next level.

Learn how Cognizant helps clients lead with digital at
www.cognizant.com

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