

What the tech?

ASTONISHING WAYS TECHNOLOGY IS CHANGING TRAVEL EXPERIENCES



BIOMETRICS

MOBILITY

ROBOTICS

SECURITY

G

A miniature figure of a traveler, wearing a blue jacket, green pants, and a brown hat, carrying a blue suitcase, is walking on the reflective surface of a smartphone screen. The screen shows a bright, abstract landscape. The figure's reflection is visible on the screen's surface.

TECH & TRAVEL

What the Tech?

We have the world at our fingertips – literally. Over the last decade, technology – and the connectivity it created – has become a critical part of our everyday lives. A whole new generation has grown up with 24/7 connectivity as much a necessity to them as air, food and water.

The impact that technology has had on those of us who travel for fun (or for a living) is nothing short of astounding. From railways and steam ships to commercial flights, the age-old world of travel has benefited from technological advances since time immemorial.

The latest advances are helping travel brands, large and small, to enhance their services and transform the ways travellers experience the world. With the tap of a touch screen, we can learn something about anything. There are apps for every service you could possibly want – from booking a room on the other side of the world or grabbing a cab in a foreign city, to translating

simple requests into the local language and making a dinner reservation at the best restaurant in town.

This report details the crossover between the travel and technology industries. Far from dehumanising travel, the latest technologies, like artificial intelligence, blockchain, machine learning, robotics, and virtual reality, are actually making travel experiences richer and more personal.

To succeed, travel companies of the future not only have to deploy technology intelligently, but also communicate the new services through the right channels.

Find out more by contacting us at insights@catchonco.com.

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How many of you are reading this trend report on your mobile device right now? It's undeniable that mobile devices are leapfrogging desktops in usage, and nowhere is this more evident than in Asia.

Let's start with the biggest kid on the block – China. The country topped the world rankings in tourism volume in 2017, making a record [4.53 billion domestic and overseas trips](#). Given its market weight, the mobile usage habits of Chinese consumers is something that no brand in the travel industry can afford to ignore. This mobile-first mindset will be further ingrained given a recent government announcement to develop and trial an electronic social security card system on WeChat.

Many in the hospitality and travel industry have gotten started. Major hotel brands such as Marriott International have dedicated WeChat accounts that not only function as a social channel for inspiration, but take on the practical aspect of a concierge service using chatbots and AI to instantly translate guest inquiries.

According to KLM Royal Dutch Airlines, about 30 percent of its Chinese consumers are already using an option to pay for flights via WeChat Pay (a feature added in August 2017).

Closely tied to mobility is the use of social media. Social media influencers such as travel Instagrammers and YouTube stars are fuelling the travel bug in millennials and Z-lennials around the world. These travellers are looking for truly local experiences which means that the travel industry must create mobile platforms that provide uniquely local content to capture and hold their attention.

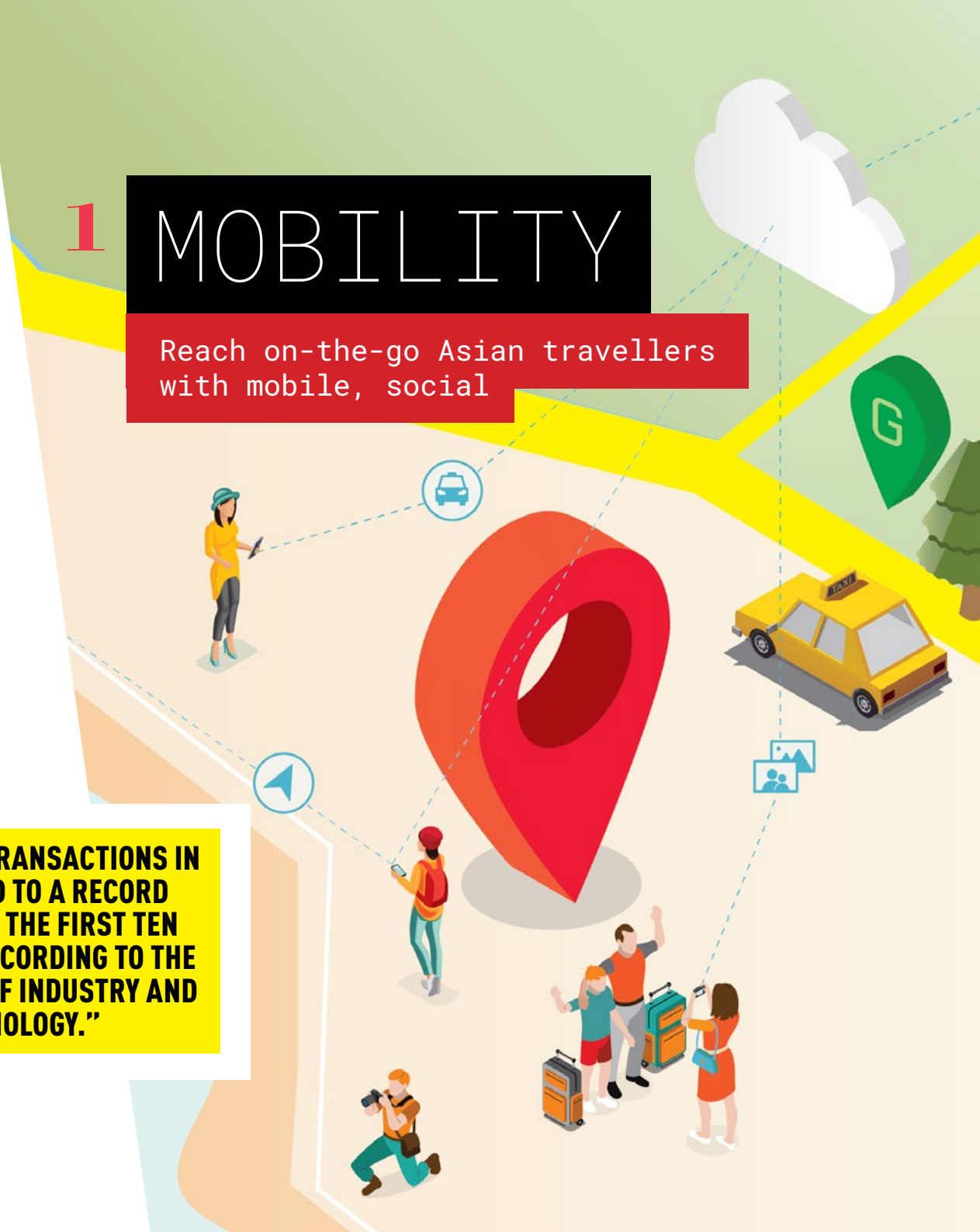
Mobile technologies can also augment the experiences of travellers once they arrive at their destinations or hotels. Marriott International offers app-based check-in services to members of its Marriott and Starwood Hotels reward programmes.

1

MOBILITY

Reach on-the-go Asian travellers with mobile, social

“MOBILE PAYMENT TRANSACTIONS IN CHINA SKYROCKETED TO A RECORD US\$12.8 TRILLION IN THE FIRST TEN MONTHS OF 2017, ACCORDING TO THE CHINESE MINISTRY OF INDUSTRY AND INFORMATION TECHNOLOGY.”





1.7 billion

active mobile social users in Asia Pacific

[Digital in 2018 Global Overview, wearesocial](#)



WHAT DOES THIS MEAN?

Hospitality and travel brands must transform themselves to serve the new mobile on-the-go generation of travellers. This means investing in online payment platforms, communication, m-commerce, and marketing.

The staggering growth of the number of Chinese travellers also means it's absolutely critical that brands invest in understanding and meeting the consumption preferences of this group. In order to reach travellers on their platform of choice, brands need to think about not just global social media platforms like Facebook and Instagram, but also regional or local ones like WeChat, Weibo and Line.

Another interesting trend is the parallel and contrasting desire for tech-free experiences. For example, Apple's new iOS will have reminders to look away from the phone and Instagram is reportedly working on a function to show how long you've spent mindlessly scrolling. Tech-free spa treatments, such as those offered by spas at Mandarin Oriental worldwide, are perhaps a testament to the fact that as great and useful connectivity is, untethered moments of reflection are just as important to a traveller's experience.

2 SECURITY

Making sure your data doesn't take flight when you do

The Cambridge Analytica scandal. The General Data Protection Regulation (GDPR) going live in May 2018. China's new policy and framework for cybersecurity and data protection.

These events are symptomatic of an age when travellers worry more about their online bank details getting hacked than about being pick-pocketed while on holiday. The travel industry needs to do its part to assure globetrotters that the personal data they store with travel companies will remain securely protected under (digital) lock and key.

From credit card digits and home addresses to passport numbers, travellers must share many critical personal details with parties such as airlines, hotels, car rental agencies, and tour companies. Some companies might also have records of other private information, such as dietary preferences or health status.

Although the travel industry might seem an unlikely target for cybercriminals, recent events show that this simply isn't true. In June 2016, cybercriminals stole almost [eight million records from JTB](#), Japan's largest travel agency. Between November 2017 and January 2018, [three major travel agencies in Hong Kong](#) were hacked in a blackmail scheme, although the culprit was subsequently caught.

"A 2018 BLACK HAT ASIA STUDY FOUND THAT MORE THAN 70 PERCENT OF SECURITY PROFESSIONALS PREDICT A MAJOR DATA BREACH ACROSS ASIAN COUNTRIES IN THE NEXT TWO YEARS."





WHAT DOES THIS MEAN?

Customers will demand more transparency, and want to know how travel companies are storing, managing, using and protecting guest data. We will start to see hotels using sophisticated data encryption and even biometric digital security measures. Some believe that with the introduction of stricter data privacy laws, many travel companies will actively reduce the data they record. Like the concierge or the bellhop, data protection officers, responsible for regulating the privacy and transparency of data collection, will become a common feature at hotels.

While many developments in the realm of data security entail restrictions, hotels might begin to see opportunities for advanced management systems in today's more regulated data climate. Hotels might begin to increase the fluidity of guest data processing. The GDPR has mandated that private information be easily transferable between different parties at the request of the data subject. Hotels might take this one step further and provide loyalty apps that are near-field communication (NFC) enabled, allowing guests to "swipe into" accommodations at all partner hotels. Blockchain, a technology premised on data privacy, might be an effective tool to put such a programme into effect.

Travel agencies, hotels, and other businesses in the industry will need to ensure that their wireless, IoT, and data storage sites are secure.

Another potential cyber threat stems from "social engineering" – where numerous employees at a business are deceived into divulging seemingly harmless individual information. These can be compounded and manipulated to extract more sensitive data at a later point.

Top travel players have begun to integrate more stringent cybersecurity measures in recent years. For example, Mandarin Oriental Hotel Group has installed specialised data monitoring and protection software and has added individual access keys to its hotel wireless networks. Others, like the Dorchester Hotel, have taken advantage of new technologies to enhance their physical security systems.

Travellers around the world, fed on a diet of data breaches as well as regular breaches in cybersecurity, are understandably concerned about how travel companies are keeping their data safe. Even in markets such as China, where concerns about personal data privacy have historically been minimal, attitudes are shifting.

KEEPING AN EYE ON THINGS.



The Dorchester Hotel uses state-of-the-art, high-definition security cameras and interchangeable looped camera feeds as part of a security programme designed by Milestone Systems and TM.

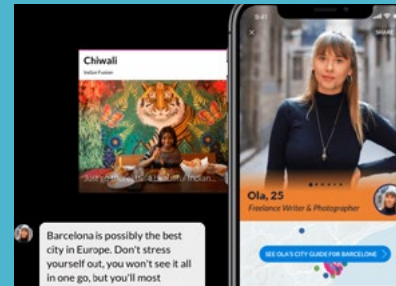
BLOCKCHAIN

3

New kid on the block

A NUMBER OF START-UPS ARE ALREADY MAKING WAVES IN THE INDUSTRY USING BLOCKCHAIN TECHNOLOGY.

[Cool Cousin](#), for instance, is challenging the likes of Lonely Planet and TripAdvisor to provide better guidance to tourists. The company's blockchain-based ecosystem incentivises local guides to monetise their local knowledge to offer a more accountable and authentic tour opportunity to the app users.



Blockchain has been creating quite a buzz in recent years and practically every sector is trying to figure out how it can be applied to unlock new possibilities. [IDC](#) expects spending in blockchain to be close to US\$10 billion by 2021. While the financial industry is the first mover in blockchain adoption, the decentralised and transparent nature of blockchain has the potential to benefit the travel and consumer industry by offering a more secure, cost-effective and frictionless system.

How? The complex and fragmented travel ecosystem involves multi-party transactions with data passing from one party to another in the value chain several times over. A traveller's details are often passed from travel agencies to airlines to hotels and other service providers. With blockchain technology, there will just be one record of this data, accessible to all parties involved. It will be reliable and secure because it's the responsibility of the whole network to ensure that it's accurate and up to date.

From the payments perspective, fintech is exploring how travellers can move money easily and pay seamlessly to avoid the headache of cross-border payments. Innovations in payment management can bring immense value to all players and consumers in the travel space. Transactions built on blockchain technology can be simplified and secured, enabling instant payment between different parties. Going forward, we will continue to see trends in smart contracting, automatically reconciling contracts between parties once payments are made.



WHAT DOES THIS MEAN?

Imagine travelling to an airport, catching a plane, arriving at a hotel and walking straight to the room without ever encountering a single queue or having to share any personal information. If a passenger's authentication process could be developed on blockchain-based biometric devices, the travel experience could be seamless. They can verify identities or purchase travel products and services at any point in the customer journey. Once the industry learns to embrace and monetise blockchain, this queue-free journey will be a reality.

As with almost every industry, blockchain offers great potential for the travel industry. Challenges in its adoption, including lack of readiness and clarity on the regulations, are expected at this nascent stage. As it takes shape, it will help travel companies streamline processes and introduce innovations at a faster pace.

To find out more about communicating in the brave new world of tech and travel, talk to us at insights@catchonco.com.

4 BIOMETRICS

My face is my passport



BIOMETRIC BOARDING PASS

British Airways is using facial recognition technology at boarding gates, matching passengers' biometric information to passport, visa, or immigration photos to verify their identity. This biometric 'boarding pass' enables British Airways to board flights of 400 passengers in as little as 22 minutes, dramatically reducing the time passengers spend waiting on runways.



Biometrics refers to an individual's unique physical characteristics, from fingerprints or hand geometry to retina and iris patterns, voice waves, or DNA. With advances in technology, biometrics has become a common and reliable method of verifying a person's identity.

Over the last two decades, more passengers have taken to the skies, travelling both for work and leisure. [World Bank data](#) reveals that the number of international travel departures across the globe has more than doubled from 600 million to 1.4 billion during this time. Yet at every step of the journey, especially across international borders, queues are the bane of every traveller's life. Whether for check-in, security, immigration, or boarding, travellers are used to standing in line every step of the way.

In high-traffic locations like airports where security is paramount, biometrics can be a saviour, putting an end to snaking queues. In fact, the use of biometrics can also enhance safety by allowing security to focus on tasks that cannot be automated as easily.

Hotels too will greatly benefit from biometrics. In the future, fingerprints will replace the check-in process and hotel key cards. Aside from room access, biometrics can help hotels manage access to amenities such as the spa, fitness centre, clubhouse, and meeting rooms. Using biometrics can help property managers know the exact occupancy of any space at a given time, which can be extremely useful for manpower allocation and in times of emergency.

Biometrics can also be used to enhance guest wellness services. Six Senses Resorts and Spas record biometric health data at the start of a guest's sojourn to structure a personalised wellness programme. By analysing what the company refers to as its guests' "biomarkers," Six Senses can identify areas of strength and improvement in a guest's wellness journey and provide specific insights into how guests can achieve their wellness goals.



WHAT DOES THIS MEAN?

In the next decade, biometrics will become the universal remote for identity verification. As this happens, travel companies will find themselves in a position to personalise the experience for every guest without introducing additional hurdles for them each step of the way. The key to success will lie in being savvy enough to use this technology to create unique consumer experiences and make even the most tedious parts of travel enjoyable.



78%

of travellers willing to use biometrics

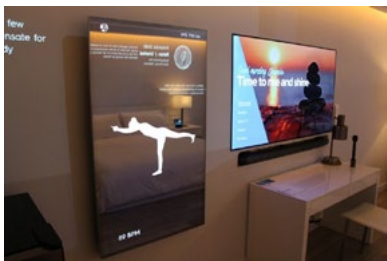
This includes fingerprints and facial recognition. It would speed up the process of customs and immigration, checking in and boarding.

OAG STUDY, 2018

The Internet of Things (IoT) is taking the world by storm. The number of connected devices is growing every day, and with it a corresponding opportunity to leverage this in the travel industry. In fact, we have already seen benefits from IoT on several fronts, from streamlining consumer interactions to back-of-house operations.

Thanks to IoT, consumers can wake up to the scent of a perfect cup of coffee at the click of a button. Bluetooth-enabled wearable fitness trackers can be linked to the smartphone to monitor the depth and breadth of sleep patterns. To help guests kickstart their day, their shower can be programmed to come on at an optimal temperature.

This is farther from science fiction and closer to reality that you would think. The big brands are certainly investing in making this happen.



Late last year, Marriott International teamed up with Samsung and Legrand to launch the [IoT Guestroom Lab](#) which explores concepts with the potential to

elevate the guest experience and create more efficient hotel design, as well as contribute to the brand's sustainability efforts.

Intelligent sensors are simplifying life for travellers today, especially at high traffic transportation hubs like airports, tourist hotspots, stadiums, and conference centres.



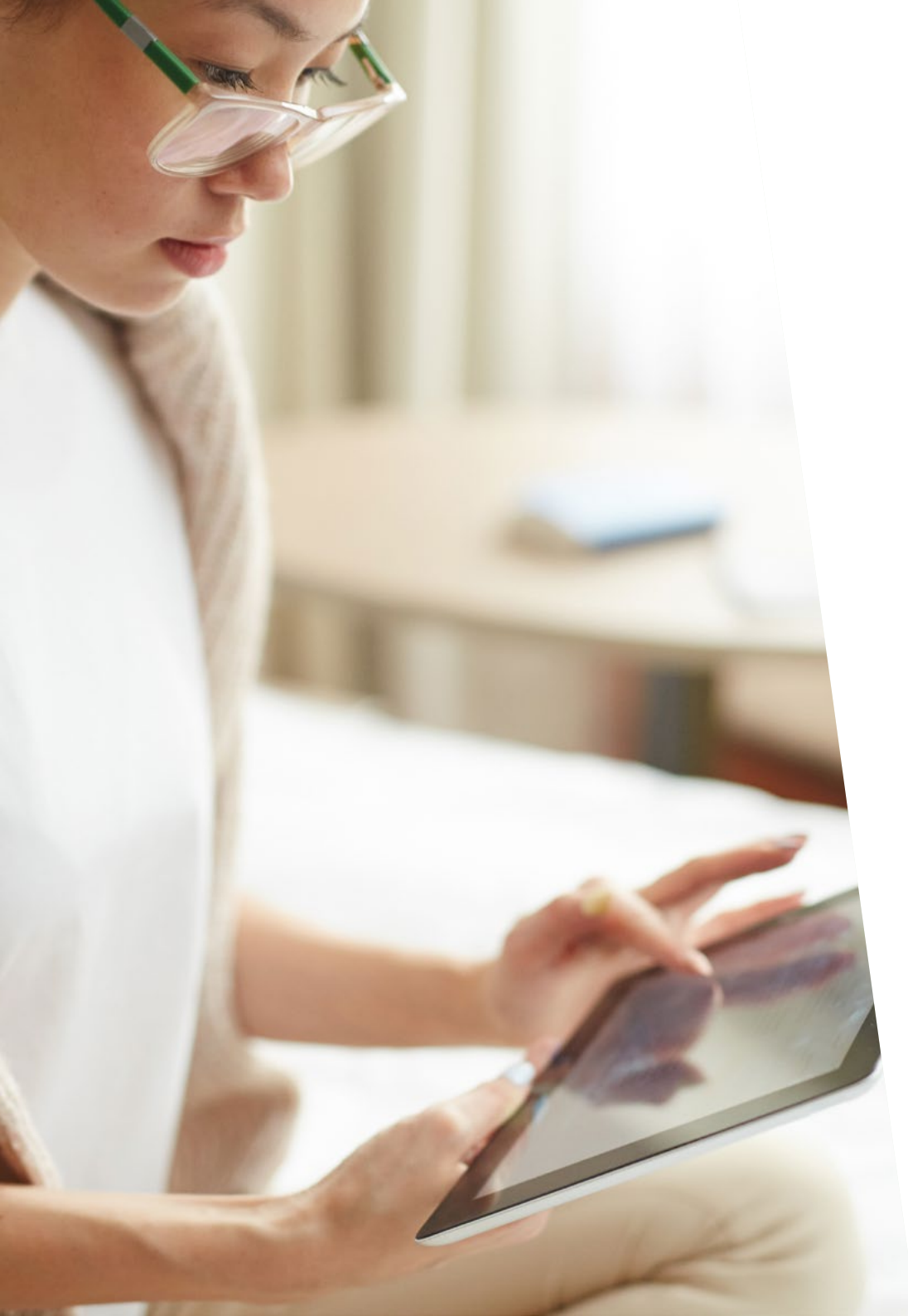
At [Disney World](#), all guests get Magic Bands – equipped with RFID technology and a long range radio – which function as tickets, FastPasses, even hotel keys. Park-wide sensors transmitting data non-stop enable Disney to track guest locations and patterns, anticipate requests, minimise waiting times, and deploy resources as needed, creating the magical experience they are so well known for.

5 INTERNET OF THINGS

Connecting devices to travellers around the world



“SINCE 2016, IOT HAS BEEN BOOSTING REVENUE FOR AIRPORT OPERATORS WHILE IMPROVING THE OVERALL PASSENGER EXPERIENCE, ACCORDING TO A DELOITTE REPORT.”



Real-time notifications of connecting flights are available to passengers at a snap. At some airports, passengers can now easily locate their bags through their smartphones using RFID luggage tags and find the real-time location of their belongings, along with strengthened security.



At Hong Kong International Airport, specially-designed "MyTag" luggage tags have been engineered to sync with the airport's HKG My Flight mobile application. Passengers who attach a "MyTag" to their checked luggage will be sent a notification when their suitcases arrive at the collection point, allowing the baggage claim process to be streamlined.

With IoT, the travel and automotive insurance industries are also transforming in terms of risk assessment, management of claims, and policy pricing. For instance, do travellers using self-driving cars on holidays reduce or increase driving risk? The ability to answer this and other questions using real data and sophisticated software can help insurance companies develop better, more intelligent policies and the most appropriate insurance rates.



WHAT DOES THIS MEAN?

The sheer number of devices connected by IoT brings an explosion of data, which will require advanced systems powered by AI to manage and optimise operations and identify actionable insights. According to [ABI research](#), the segment shows no sign of abating, with IoT device management revenues predicted to climb to US\$20.5 billion by 2023. Make no mistake, IoT has the potential to improve business operations and our daily lives, whether we are at home or on the road.

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Artificial Intelligence (AI) is demonstrated by machines that are designed to think and act like humans, displaying behaviours such as planning, learning, reasoning and problem solving.

Indeed, AI-powered chatbots have been used to handle customer queries for some time. However, they have been limited in usefulness by their inability to deal with complex enquiries. This might not be a limitation for much longer. Google's new Assistant feature, Duplex, shows just how far the technology has come. Featuring a natural-sounding voice, Duplex can place calls on behalf of the user and can understand complex sentences, fast speech and long remarks.



Amazon has also entered the travel industry with Alexa for Hospitality, bringing the voice-activated assistant to hotel rooms. Alexa can provide hotel information and services, play music as well as take control of in-room settings such as lighting, blinds and temperature.

With insights gleaned from AI, companies have an opportunity to make personalised recommendations. Travellers making an online flight booking are likely to be offered options for hotel and car rentals. Taking it further through machine learning, AI can make recommendations for cheaper flight times, sightseeing options and even offer alternative destinations based on search parameters such as price.

“THE ABILITY TO PROCESS COMPLEX HUMAN INTERACTIONS IS AN ENORMOUS STEP FORWARD, WITH MASSIVE POTENTIAL FOR TRAVEL COMPANIES ONCE THE TECHNOLOGY CAN BE SCALED TO BUSINESSES.”

6

ARTIFICIAL INTELLIGENCE

Applying machine learning to the human experience





WHAT DOES THIS MEAN?

Travel operators can use AI to assess customer sentiment by analysing comments about a company on social media platforms. This information can be used for training purposes, to improve hotel amenities and facilities, or even to anticipate challenging situations.



The Dorchester Collection, for instance, uses the Metis AI system to analyse and “learn from” the direct online feedback of hotel guests. By analysing online reviews, Metis was able to tell the luxury hotel group that their guests really cared about their breakfast options. After changing its breakfast strategy, The Dorchester Collection saw an increase in customer satisfaction.

While AI technology has been in development since the 1950s, we are now at the dawn of its mainstream use. Modern facial recognition technology (powered by AI) is capable of scanning thousands of faces each minute with 99.9 percent accuracy. Sooner rather than later we may be able to easily move through airports and board planes without any physical documents at all.

Applying AI to the abundance of data available in the travel industry will continue to improve how people travel. This is a win-win situation for everyone. Consumers will benefit from shorter wait times and more personalised options, while companies will see more resource efficiency leading to higher conversion rates and cost saving. Most importantly, companies will be able to free up staff to deal with tasks that require human intuition and engagement skills, leading to an overall improved customer experience.



99.9%

how accurate AI-powered facial recognition technology is

The travel industry has gone through its share of consolidation and investment as players work to adapt to a changing world. There is an increased focus on improving efficiency and the customer experience. While technology can automate or even personalise pre-travel processes like check-in, many believe there's no replacing the human customer service agent. Or is there?

Enter robotics – the interface sitting between the digital and physical world. They never tire, provide a predictable and consistent experience worldwide, and can perform tasks far more efficiently than any human. In a joint study on digital transformation in the aviation, travel, and tourism industries by the [World Economic Forum and Accenture](#), the ability of humans and machines to collaborate effectively will be the defining feature of the next-generation workforce.



Most famously, the [Henn-na Hotel in Nagasaki, Japan](#), restructured traditional hotel staff positions and

replaced them with robots in guest relations roles, from concierge to bellhop. Biometric security measures and humans, meanwhile, were used to oversee the robotics.

Some companies are already placing long-term bets on the rise of robotics. Tesla's innovations in coming up with driverless vehicles have set it up to take on the ride sharing economy. Owners might be able to rent their vehicles out while they are at work, with seats that will shift forward in preparation for a known ride share passenger, and robotic self-charging already installed.

7

ROBOTICS

Robots at your service

WE ARE ALREADY SEEING ROBOTS TAKING ON A BIGGER ROLE.



They're guiding passengers and cleaning up after them in [Incheon Airport, Korea](#), taking passenger bags from the roadside in [Geneva, Switzerland](#), ferrying baggage autonomously in [Heathrow](#) and [Gatwick](#) airports, England, and even taking cars and parking them in [Lyon, France](#).

Once inside your hotel, you may find a robot behind the bar if you're at the [Hard Rock Hotel in Biloxi, US](#), which will have data about your home preferences, know exactly how you like your drink, and make it exactly to your specifications, shaken not stirred.



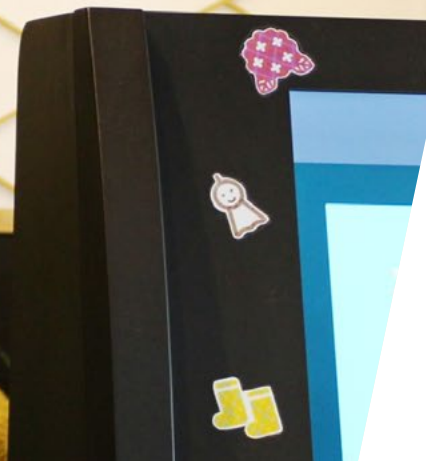


WHAT DOES THIS MEAN?

This is only the tip of the iceberg. The car might already know where you're going and how many pieces of baggage you have, but there may soon be a time when you won't need to bring baggage with you in the car at all. The use of autonomous drones means you will only need to leave your baggage on your doorstep for an automated robot to take to the airport. Depending on your destination, you may even have your bags delivered straight to your hotel.

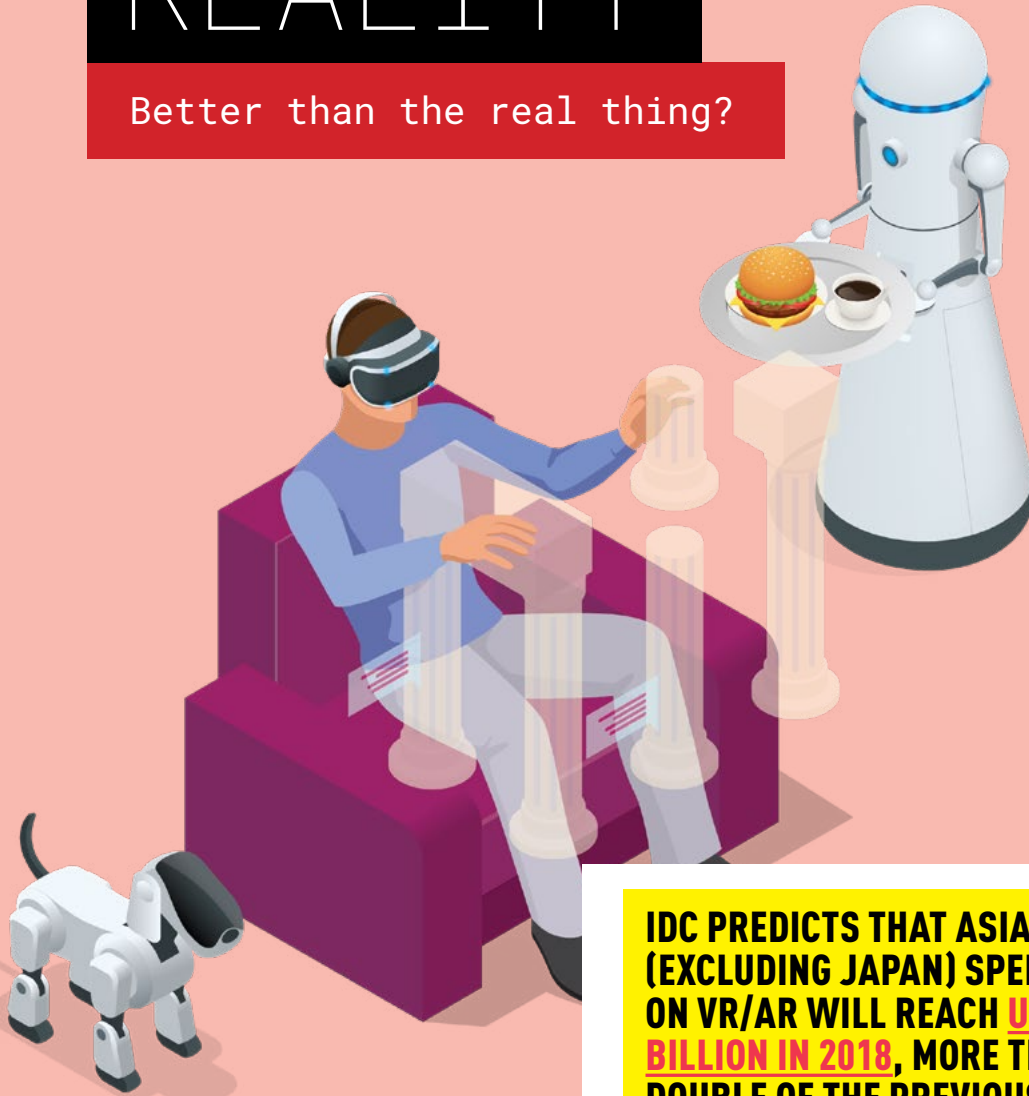
Finally, travellers of the future might rest just that little bit easier knowing things are okay back home. We already have vacuum-cleaning robots, and sensors that can detect intruders. It's not too much of a stretch to imagine that one day you might receive a video call from your home robot informing you that they've just tended to your garden and provided an update on the orchids.

A ROBOTIC DINOSAUR RECEPTIONIST AT HENN-NA HOTEL, NAGASAKI, JAPAN.



VIRTUAL REALITY

Better than the real thing?



IDC PREDICTS THAT ASIA/PACIFIC (EXCLUDING JAPAN) SPENDING ON VR/AR WILL REACH US\$11.1 BILLION IN 2018, MORE THAN DOUBLE OF THE PREVIOUS YEAR."

Virtual reality (VR) technologies have traditionally lived in the realm of gamers and technophiles. Today, VR is breaking out of computers and into the world of travel.

VR can be applied at various stages of a guest's travel experience, from the booking process and planning of day trips to the "hosting" of "experiences" once a guest arrives. Why wonder which site you should see? Travellers will soon be able to throw on their VR headsets, virtually visit each attraction, and decide which one is worth visiting for real. For the time-pressed business traveller, VR helps them "see" renowned landmarks without leaving the hotel or conference room.

VR can bring the history of landmarks and sites to life. Famed Ancient Roman sites such as the Domus Aurea and the Baths of Caracalla have combined historical research with VR and augmented reality (AR) technologies to animate daily life, reconstruct architecture, and restore objects that have been lost through the ages. In China, the city of Sanya recently launched a WeChat-based VR platform that allows users to explore local sights and scenery in 360 degrees by simply attaching a cheap VR headset to their smartphones.

Not to be left out, hotels have joined the fun. Marriott International tested out a programme called



"Vroom Service," whereby VR headsets that showed immersive, personal travel documentaries were made available to guests. The Landmark Mandarin Oriental, Hong Kong has launched The Entertainment Suite, a hotel room kitted out with the latest in VR and other technologies.

VR has also moved into fine dining. Airplane-themed First Airlines restaurant in Tokyo, Japan, uses VR to give diners the experience of a travel-themed meal on a first-class flight.

VR can become a powerful marketing tool for hotels looking to attract new guests and event partners. The Dorchester Collection, Hardrock Hotels, The St. Regis Macao, and the Sheraton Grand Macao all feature VR tours of their rooms or event venues. The Sheraton Grand Macao, a popular MICE destination, has VR apps that allow meeting planners to experience the space without going on a site visit. Indeed, the use of online VR to introduce potential guests to hotels has been associated with up to a 135 percent jump in earnings from digital bookings, according to Radisson Blu.



WHAT DOES THIS MEAN?

Expect to see more VR being integrated into travel experiences over the coming years. And the VR "experience" that wows the most will win the most travellers' dollars. Travellers may soon be able to choose their next destination from a VR catalogue. Increasingly, historical locations will invest in VR experiences that allow visitors to step into the past, or indeed the future. For those who abhor crowds, travel companies can offer VR tours for a less hectic experience. It might soon become just as common for travellers to find a VR headset in their room as the traditional chocolate on the pillow.

73%

of younger travellers
desire VR availability

RESEARCH BY
MARRIOTT INTERNATIONAL

- Over 50% of guests who stayed in the hotel where VR use was being tested were interested in seeing a company-wide expansion of this technology
- Since 2017, VR access while organising travel was desired by 62% of surveyed travellers in China



CONCLUSION

This is an incredible time for the travel industry. The world today is a “book” that is now accessible to almost everyone. Technology and connectivity combined have opened up people’s minds to new places and experiences even before they step out of their homes. AI, robotics, IoT and VR provide travel companies with new ways to deliver innovative and more customized travel experiences without breaking the bank. Indeed, travel companies have the opportunity to reach customers earlier in their planning process than ever before.

The key is creating as compelling a digital experience and narrative as a physical one, and communicating effectively and often to stand out from the crowd. There is no time like the present to start that journey.

Find out more by contacting us at insights@catchonco.com.

**“THE WORLD IS A
BOOK AND THOSE WHO
DO NOT TRAVEL ONLY
READ ONE PAGE.”**

— ST AUGUSTINE



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Founded in 2011 on the core principles of innovation and collaborative partnership, Finn Partners has more than tripled in size in six years, becoming one of the fastest growing independent public relations agencies in the world. The full-service marketing and communications company's record setting pace is a result of organic growth and integrating new companies and new people into the Finn Partners world through a common philosophy. With 600 professionals, Finn Partners provides its clients with global access and capabilities in the U.S., Europe and Asia, in addition to PROI worldwide. Headquartered in New York, Finn Partners' other offices are in Chicago, Detroit, Fort Lauderdale, Frankfurt, Jerusalem, London, Los Angeles, Munich, Nashville, Paris, Portland, San Francisco, Shanghai, Singapore and Washington D.C.

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