Spotlight
Travel

HKSTP 香港科技園 | GLOBAL ACCELERATION ACADEMY

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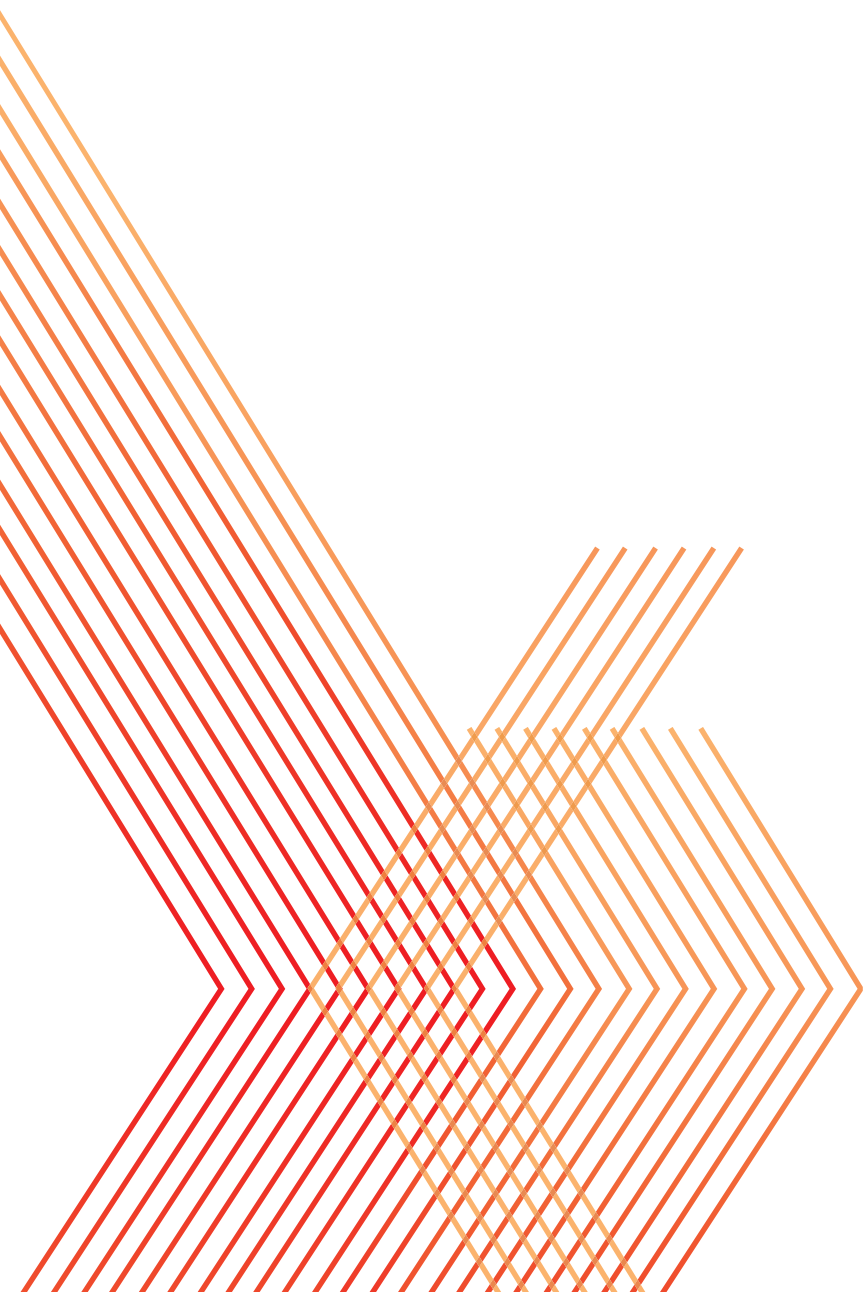
Spotlight
Travel

A report commissioned by Hong Kong Science and Technology Parks Corporation (HKSTP) with the research methodologies and results delivered by Euromonitor International
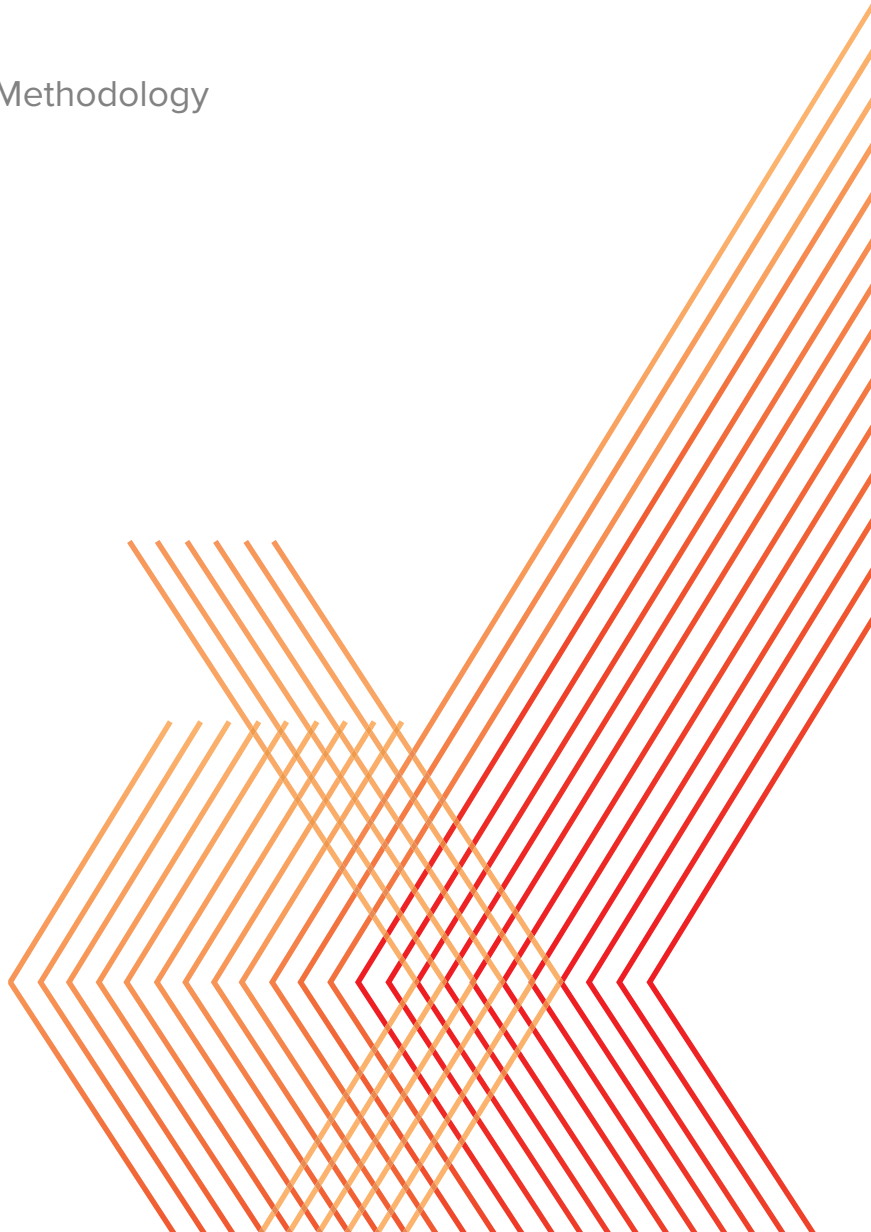

Industry Advisors

Startups

For any comments, please contact gaa@hkstp.org

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Foreword: Travel in the Future

Online Booking

REBECCA LEUNG
Regional Executive Director,
Southeast Asia, KKday

Travellers are becoming increasingly digital-savvy that they prefer to use smartphones for researching travel information and products, as well as planning their itineraries and even making purchases of tours or travel necessities. This trend shows that mobile devices undoubtedly are the flawless travel partner.

KKday endeavours in giving travellers the most exclusive and diversified local tours and experience in the world. Apart from the provision of such a decent experience, instant booking and confirmation are the biggest highlights to meet the expectation of digital-savvy travellers who want seamless online experience. Providing 24-hour service at the tip of their finger is also one of the competitive edges.

Online Gift Card is definitely a ground-breaking product in the travel industry. Users can promptly send the Cards to their loved ones via email to purchase any day tours, theme park tickets, and travel essentials such as portable Wi-Fi, SIM cards, transportation passes and so on via online booking platforms.

The prominence of mobile technology as part of the travel research and booking journey will persist. Regarding online booking, there will be a surge in digital experiences and services from airlines, online travel agencies, accommodation and travel experience providers, whom all play a crucial role in shaping the future of travellers.

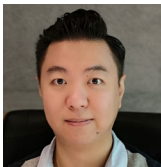Explicitly, online booking for travelling will continue to be the mainstream.
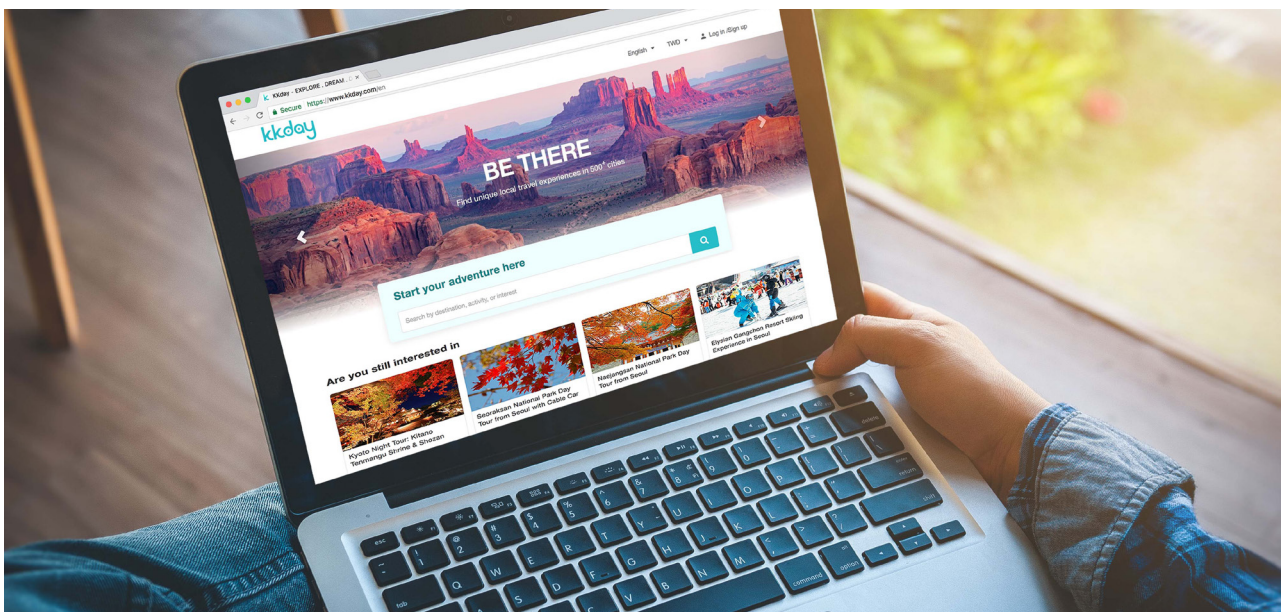
Source: KKday

Source: ROLLOGO

Luggage

STEVENSON LAU
Founder, ROLLOGO

Travelling used to be a luxury and associated with freedom because it was not easy to move from one place to another. Back then, luggage were like mobile closets. Travellers were likely going for an extended period of time so they travelled with all of their belongings. Due to airplanes and its accessibility, travelling has changed and made easier; can even be on a whim. Many will travel for work, leisure, or other purposes. For those reasons, luggage comes in different shapes, sizes, colours and materials to address various needs. Besides the luggage functionality, people will also consider luggage as a fashion item.

Currently and even more so in the future, the world is becoming more attached to smart devices, especially phones. The future of luggage will not only be treated as a shift in belongings from one place to another, but also assist travellers' journey. The smart luggage will provide an external source of power for travellers' electronic devices, reminding them what and how to pack efficiently; also alerting travellers if their luggage are lost or stolen.

The creation of ROLLOGO is to make travelling more efficient while embodying sophistication. The ESCAPE luggage has patented electric generating wheels, which provides clean energy to charge electronic devices. It is an internationally award-winning design; inspired by the historic travel trunk. Travellers can easily attach and detach compartments for their needs along with other smart features. The ESCAPE luggage is expected to bring a taste of the future to today's travellers.

Airport

CHRIS AU YOUNG
General Manager, Smart Airport,
Airport Authority Hong Kong

At the Hong Kong International Airport (HKIA), we use innovation and new technologies to shape the future travel experience and create a fast, easy, joyful journey for our passengers.

One of our key missions is to transform the departure process into a fully automated, self-serviced journey. Passengers who used our patented smart mobile check-in kiosks and self-service bag drops avoid long queues at check-in counters. In September 2018, we launched e-security gates with facial recognition technology to automate entry into the security screening area. In the near future, we will make travel even easier by using passengers' facial biometrics as a single token from check-in to boarding, and by allowing baggage check-in at more off-airport locations such as convention centres, theme parks and even at home.

Mobility and personalisation are essential elements for a smart airport. Our "HKG My Flight" mobile app, for example, is designed to help our passengers fly smarter. With "HKG My Flight", trip planning, flight tracking, wayfinding, car-park booking, signage translation, chatbot assistance and mobile shopping can all be done at travellers' fingertips. Another innovation is "MyTAG", a smart luggage tag invented by HKIA that provides notice to passengers via smartphone when their baggage arrives at the reclaim belt.

We also embraced six key technologies in formulating our smart airport development roadmap. These include Artificial Intelligence, Big Data, Advanced Biometrics, Digital Twins, Robotics and Mobility. By innovatively applying these throughout our operation, we are constructing a smart airport ecosystem that provides a holistic passenger experience both online and offline, reaching new heights in operational excellence and building a safer, more secure journey for our passengers.

We could not accomplish all of this alone. The strong technology research and startup incubation capabilities in the Greater Bay Area have been pivotal in HKIA's transformation into a smart airport. We have achieved great success partnering with local institutions such as HKSTP, LSCM, HKPC and ASTRI in recent years. Together, we are building a smart airport of the future.

Source: Airport Authority Hong Kong

Retail, Food and Beverage

LEON CHAN
Director, Technology,
Hong Kong Disneyland Resort

As travellers become more technologically savvy, the expectation that these conveniences also translate to their destinations continues to grow, with convenient apps and services to make experiences seamless, fast, fun and — in the case of The Walt Disney Company — magical.

Being the leading provider in entertainment as various destinations worldwide, Disney creates new technology to provide guests with completely immersive experiences. Cutting-edge technology is at play from when guests first purchase an admission ticket to the plethora of awe-inspiring moments on hundreds of attractions, which operate 365 days a year.

A recent customer improvement initiative in Hong Kong Disneyland Resort (HKDL) showcases the great strides that the travel industry is making in terms of new offerings. A pioneering eTicket and Entitlement solution was developed by HKDL to bring the magic straight to guests' fingertips. Direct consumers and wholesale/online travel agents are now able to make direct purchases online with instant redemption via QR codes, which allow them to enter the theme park with ease and enjoy discounts via digital coupons.

The power of eTicketing also includes the ability to redeem offers at all HKDL point-of-sale locations. Simply put, these eTickets shorten transaction times and reduce queues, with the added bonus of real-time updates on mobile devices. This means more time for guests to enjoy the magic and less time in line or worrying about other clumsy payment options.

At HKDL, this type of technological implementation is just one of many. HKDL provides unforgettable memories through immersive storytelling, service excellence and continual growth. The resort is thrilled to be welcoming guests to a new Marvel attraction called Ant-Man and The Wasp: Nano Battle! in 2019 as the next step in a multi-year expansion.

As technology continues to increase in scope and power, so too should its ability to provide convenience, efficiency, fun and whenever possible, a dash of magic.

Source: Hong Kong Disneyland Resort
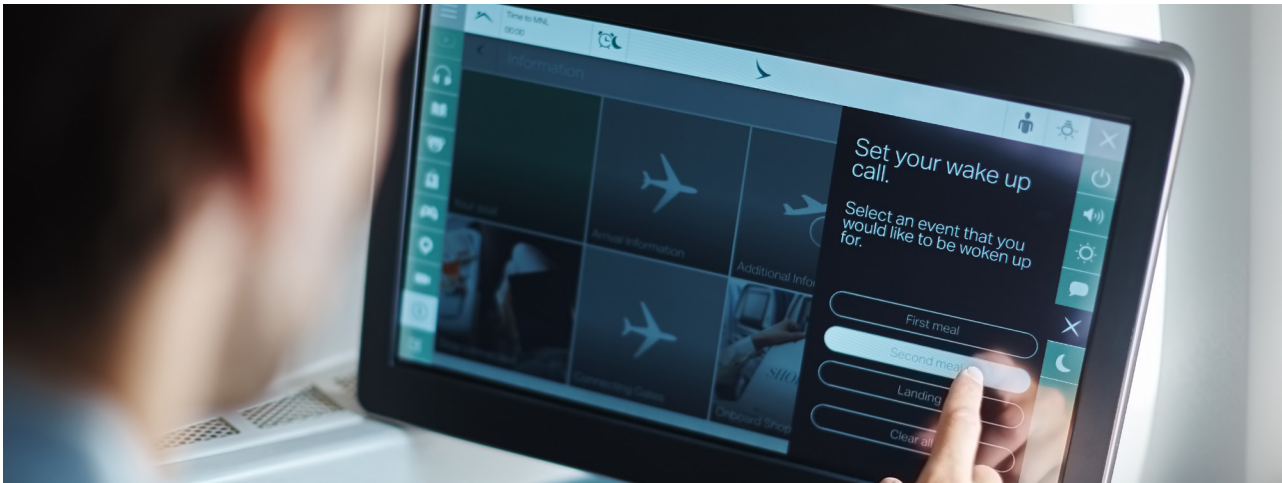
Source: Cathay Pacific Airways

Premium Service

LESLIE LU
General Manager Digital,
Cathay Pacific Airways

As Hong Kong's home airline, Cathay Pacific is fully committed to investing in digital advancements together with the Government of the HKSAR and our industry partners to further strengthen our city's status as a global aviation hub.

Our future is led by being customer centric. It is therefore strategically important that we leverage our technological capabilities to make our customers feel valued and special by our ability to know what they like and anticipate their needs. To that end, we are striving to develop a Single Customer View for all our passengers — to include their preferences and consumption patterns — which will enable our frontline teams to deliver customised and proactive services.

We are also developing a number of self-service tools such as Chatbot so that our customers can enjoy a higher degree of flexibility and have greater control throughout their journey. For example, during times of weather disruption, customers will automatically be transferred to the next available flight and will be kept informed about the situation, saving them the time and trouble of personally contacting our customer service agents. These digital efforts will enable a more proactive recovery in the case of unforeseen disruption.

Another trend that will become a part of the future travel experience with us is the use of biometrics. This will fundamentally change our passengers' ground experience, by enabling them to move through the airport with their facial identity as a single token replacing travel documents and potentially even boarding passes.

All of this is only possible with our continuous collaboration with the Airport Authority of Hong Kong, the local innovation community, including the Hong Kong Science and Technology Parks Corporation. We are excited to take the lead in developing a brand new travel experience in the digital era.

Inflight Experience

ISABEL ZISSELSBERGER
Partner, Head of Customer &
Operations, Hong Kong KPMG China

In search of growth and improved margins, the airline industry faces ongoing pressure. Intense competition and more empowered customers have led airlines to embrace customer experience (CX) as a way to build brand loyalty, gain market share and improve margins by shifting away from price wars. But a key challenge is that customers define expectations on their best experiences, regardless of provider or sector. This means airlines need to look beyond their industry to understand CX best practice and design savvy solutions.

CX leaders in other sectors have turned to emerging technology such as mobility, digitisation, biometrics, AI and IoT through the service chain. At the same time, our research[1] identifies empathy and personalisation as important differentiators in delivering an exceptional travelling experience.

So how does the airline industry bring personalised service in a digitised and robotic world? One approach has been to bring technologies on board to enhance the inflight experience and create memorable journeys. Cabin crew are being equipped with mobile devices to identify individual passengers to wish them happy birthday, celebrate an anniversary, or track their personal food and drink preferences. More leading edge approaches are trialling facial recognition to facilitate inflight payments; harnessing Big Data to develop music and film playlists based on individual preferences; and giving smart bands to children travelling unaccompanied so that guardians can receive updates along their way and have peace of mind.

Technology goes beyond digital solutions and data. Innovations in seat design are improving comfort, functionality and customisation, while intelligent lighting helps to create a relaxing mood and reduce the effects of jet lag. Connecting these cabin improvements with other enhancements — like tailored meals and pillow menus — will help to build smart ecosystems capable of predictive personalisation.

In all these approaches technology plays a key role, but technology alone is not enough. Our research shows that companies who make a trusted and personal connection with customers along the entirety of their journey will increase brand loyalty and advocacy. Understanding how technology can enable this is critical to success.

Airport Hotel

POMAN LO
Vice Chairman and Managing Director, Regal Hotels International

Technology has always been a top priority because we aim to offer personalised, quick and reliable experiences that not only meet but also anticipate and exceed our guests' needs and expectations. Only by integrating the latest technology and human insights can we adjust to all the robust trends and forces that have disrupted the travel industry: internet booking, emergence of budget airlines, mobile first. The travel industry has consistently been an early adopter and beneficiary of new technologies.

Travel patterns have changed drastically and are becoming more experience-centric. As a result of their daily experience in ecommerce, video streaming and social media, guests expect the hospitality industry, an industry that prides in offering the best services, to provide unique engagement experiences, anytime anywhere. At Regal, we envision the travel experience our hotels offer to be holistic, encompassing online/offline touch points and incorporating pre-stay discovery and post-stay sharing to the guests' entire experience. We employ cutting-edge technologies in content creation, social media and CRM, to create a seamless, synergistic and special experience that every valued guest deserves.

In comparison to in-town visitors, airport hotel guests have distinct characteristics, habits and needs. Technology can help meet the most diverse needs at the right time for the right guests. Over the past years, we have implemented a series of innovative services at the Regal Airport Hotel, including interactive kiosks for automated room check-in, membership registration and airline check-in, virtual reality room viewing, automated and private smart security services, 3D mapping projections and smart LED displays at our conference facilities. In the near future, our second airport hotel will offer a unique selection of financial, shopping and entertainment services enabled by the newest technologies to proactively serve the next generation of travellers.

This "Spotlight - Travel" provides insight to where we are collectively as an industry, and shed light on where emerging opportunities lie ahead. Delighted to see all the recent infrastructure developments that will propel the tourism industry to new heights, we thrive on the opportunities offered by hardware and software technologies to strengthen Hong Kong's strategic leadership as a top travel destination and Asia's world city.

Source: Regal Hotels International

Airport Authority x HKSTP Smart Airport Accelerator

PETER MOK
Head of Incubation & Acceleration Programmes, Hong Kong Science and Technology Parks Corporation

Fintech, Cyber-security, Blockchain, and AI Robotics — the buzzwords which you may hear from technology field lately. Can you imagine if some of these technologies are exploited into travel industry with the intention of heightening customer experience of travellers?

With a vision of creating a vibrant innovation and technology ecosystem to deliver social and economic benefits to Hong Kong and the region, Hong Kong Science and Technology Parks Corporation (HKSTP) aims to connect stakeholders, facilitate knowledge transfer and nurture talents to accelerate technologies, innovation and commercialisation.

Global Acceleration Academy (GAA), an intensive business acceleration programme empowered by HKSTP, which invites startups from around the world to Hong Kong and transform their technologies into practical solutions that have marketable and local value for Asia.

GAA has kick-started Airport Authority x HKSTP Smart Airport Accelerator on 1 October 2018. It is a three-month vertical-specific programme under "Travel & Hospitality" while partnering with Hong Kong International Airport operator & developer — Airport Authority Hong Kong (AA). By obtaining eight business developing trainings, three mentorship meetings and two airport visits, 11 local and overseas acceleratees were shortlisted among 21 admitted applicants to be offered gap analysis and in discussion of POC (Proof of Concept) with AA. Ultimately, five acceleratees have moved on to Demo Day, a springboard for selected acceleratees to showcase solutions, gain publicity exposure and network with top travel industry players and investors.

Contrary to pain points emerging in travel industry, startups adhere to develop the best solutions for satisfying demand from travellers. What is the gap between market demand and supply of technology adoption in travel industry? How to fill such gap? What are the key megatrends for addressing the needs from travellers and industry players? We believe you will retrieve the answers and insights of those doubts from "Spotlight - Travel".

Source: Hong Kong Science and Technology Parks Corporation

Market Demand from Travellers

To better understand the market demand from travellers, it is wise to have a look at the overall travel behaviour by assessing what travellers like and dislike and whether they consider their travel experience positive on their travel journey. To ensure that the entire travel experience is fully captured, the assessment was made on the entire travel journey, from scheduling and planning of a trip, to embarking to the desired destination. This travel journey consists of (i) online booking, (ii) luggage, (iii) airport, (iv) retail, food and beverage, (v) premium service, (vi) inflight experience, and (vii) airport hotel.
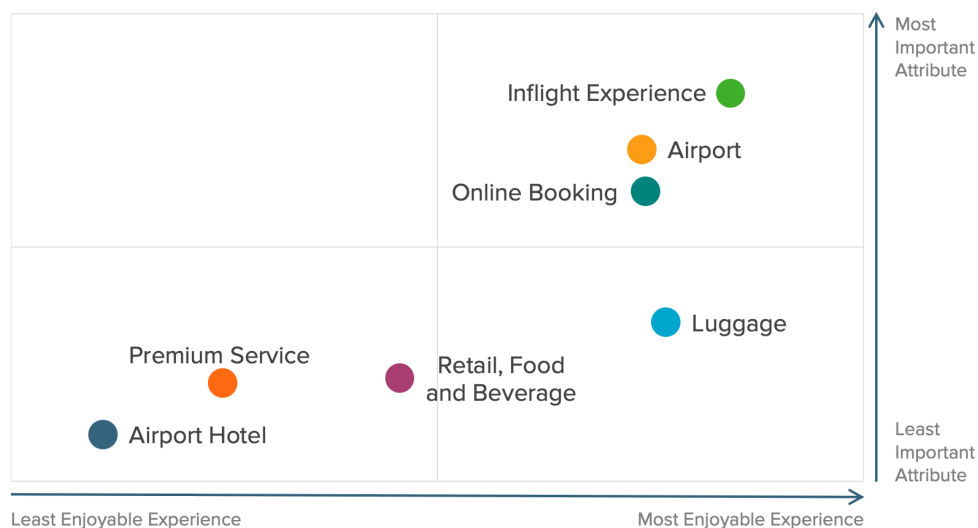
The Traveller's Journey

Online Booking

Luggage

Airport

Retail, Food and Beverage

Airport Hotel

Inflight Experience

Premium Service

Source: Euromonitor International

Key Findings

Key Attributes

Source: Euromonitor International

Inflight experience ranked as the most important and most enjoyable experience attribute in the traveller's journey

Inflight experience is considered to be the most important and most positive experience by majority of the travellers. Flights are considered the longest part of the travel journey and a positive experience can definitely help elevate the entire trip. Even with its top ranking in the specified travel journey attributes, travellers are craving more improvements to further enhance their overall experience. On the other side of the scale, is airport hotel. Comparatively, airport hotel is perceived as less important and have less positive experiences associated with the attribute. However, this is due to the lack of people that have stayed in airport hotel, especially in Hong Kong. Despite this, travellers feel that if airport hotel is able to simplify and make their overall travelling experience more convenient, they are more inclined to stay at the airport hotel.

Travellers demand an even faster airport and greater convenience

While Hong Kong International Airport (HKIA) is generally considered to be a highly efficient global airport by travellers, continuous demand for even more convenient and time-saving elements has been the common theme throughout the market demand analysis. As other international airports become highly automated, travellers cannot help but compare HKIA with more technologically-advanced airports, especially Singapore's Changi Airport. With the growth of technology, Hong Kong travellers' expectations of an automated travel process will continue growing.

Mainland Chinese travellers view the entire travel experience as a "service"

Mainland Chinese travellers are Hong Kong's most frequent visitors. In 2018, over 67%[2] of inbound travels (minimum stay of 24 hours) to Hong Kong were arrivals from Mainland China. This number is even higher when looking at same-day travellers. In view of this vast flow of Hong Kong's visitors, their views on travel experience should be heavily considered.

Mainland Chinese travellers have a different perception of travel compared to the Hong Kong traveller profiles. Mainland Chinese travellers have a greater expectation of travel services starting from the moment they plan their trips. Despite being highly technologically-savvy travellers, they still heavily enjoy interactions with retail service providers, premium services, flight attendants and other services involved during travel through the HKIA. In contrast, Hong Kong travellers are more practical and want higher levels of convenience and efficiency across the entire travel journey.

Travel demands differ across generations

There has been a shift in consumer lifestyles, especially between the baby boomer and Generation Z segments. Older generations are more conservative and value different services within their travel plans. For example, the mentality of being at the airport two to three hours in advance is still prevalent. Due to this mentality, certain services such as retail, food and beverage and resting facilities are more important to them. The younger generations, on the other hand, have more energy and are more flexible and engaging in all parts of their travel journey. If possible, they will seek for the best possible experience in all aspects of their travel. This is reflected in their activities in online booking, tendency to purchase new luggage more frequently, higher usage of airport facilities, frequenting different shops and restaurants more often, higher usage of premium services, and higher expectations of inflight experiences and airport hotels.

Online Booking

Which Activities Did You Book Online During Your Most Recent Trip?
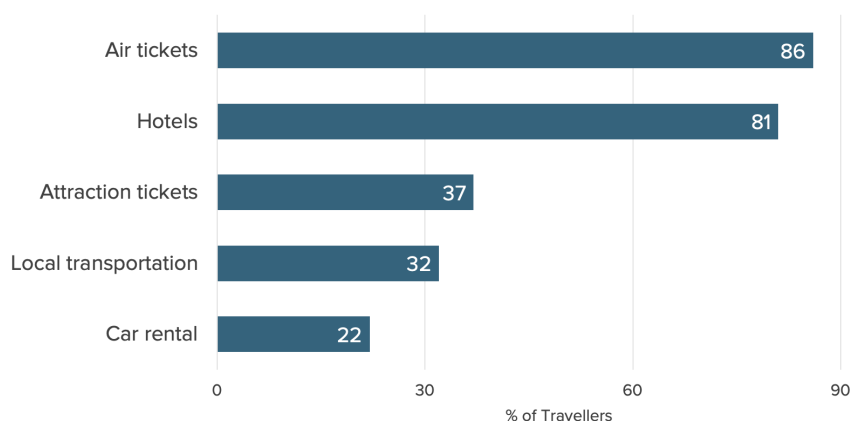
Source: Euromonitor International

Air tickets and hotel bookings are the most common travel-related activities booked online

Online booking has risen as a popular means of travel planning as 93% of travellers use online booking platforms to schedule at least one travel-related activity (i.e. air tickets, hotel rooms, car rental, attraction entry tickets or local transportation services). Air tickets and hotels are the primary travel-related activities booked online as 86% of travellers use online booking for air tickets and 81% booked hotels online, either through online intermediaries such as Booking.com, Hotels.com, Expedia and Skyscanner, or directly with hotels and airlines. This is largely due to the increasing number of options available in the market. Travellers are seeking a more convenient way to aggregate all information and an easier way to complete the booking process. As it stands, online booking platforms are able to address travellers' pain points. In addition, Hong Kong and Mainland Chinese travellers believe that online booking provides the best value for money and can assist in cross-comparing available options through different online booking platforms. In fact, 67% of travellers use different online booking platforms when scheduling a trip, regardless of leisure or business travel. On the other hand, online booking for secondary travel-related activities such as car rental, attraction tickets and local transportation booking services, is significantly lower as travellers do not plan far in advance. However, if trips are being planned with elderly people, travellers feel the need to ensure that the travel schedule is set in place and they can focus on taking care of the elderly.

Younger generations are more inclined to use online booking platforms

Younger generations such as Generation Z (those born from 1995 onwards), were born into the technology era. In Hong Kong, these represent 10% of the population in 2018. Being more technologically savvy by nature, they have a higher tendency to use technology wherever possible. Only 1% of Generation Z travellers have not used online booking for any trips within the past six months, whereas, on the other end of the spectrum, among older generations such as baby boomers (born between 1946 and 1965) over 15% have not used the internet for trip planning over the same period. One of the main drivers for the younger generations' high predisposition towards online booking usage is a strong "value for money" mindset associated with services booked online.

8 out of 10
Gen Z or millennial travellers believe that the best value can be sought from comparing prices through online platforms that they are familiar with, such as Booking.com, Hotels.com, Agoda and Skyscanner.

Women prefer to have peace of mind when it comes to planning trips

Women have been taking the lead in online booking for travel, booking more frequently than men for travel-related activities such as hotels, car rentals, attraction tickets and local transportation services. Women tend to enjoy doing all the trip plannings and prefer to have the travel plans set prior to departure, especially when travelling on large family trips with children and the elderly. In addition, there is a growing trend of women travelling alone worldwide, leading to more frequent booking to ensure safety upon arrival to the destination.

The Most Recent Experience with Online Booking
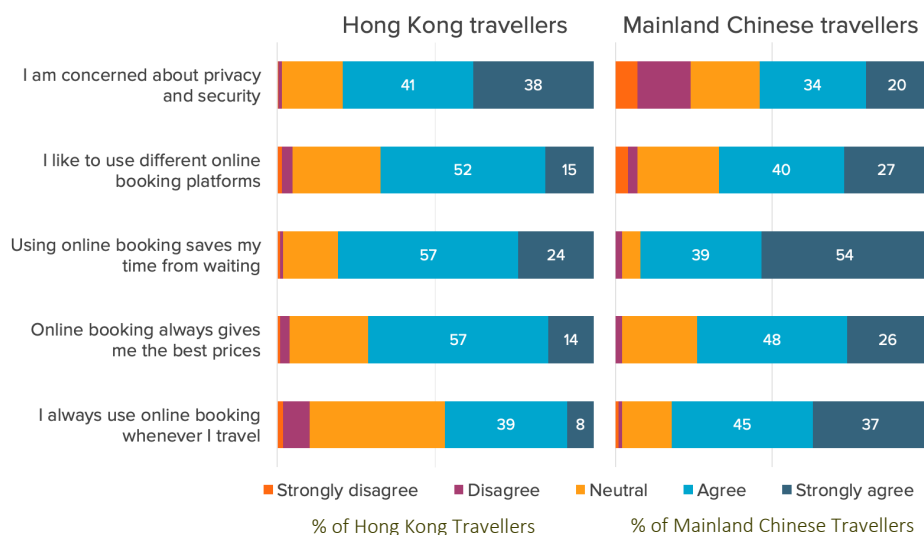
Source: Euromonitor International

Mainland Chinese are highly connected travellers

Mainland Chinese travellers are becoming increasingly connected and open to experiment with technology. 82% of Mainland Chinese travellers confirmed they always use online booking for every trip, while only about half of Hong Kong travellers use online booking for every trip. This is mainly due to the fact that Mainland Chinese travellers generally have a perception that online booking offers the best value as well as saves time.

Hong Kong travellers concerned about online booking data privacy

Hong Kong travellers tend to be more sceptical about travel technology than Mainland Chinese travellers. Four in five Hong Kong travellers acknowledged they were concerned about their data privacy when booking any travel-related ticket online. In contrast, only half of Mainland Chinese respondents mentioned any concern on the matter. The difference in mindset is set by the different technology regulations between Mainland China and Hong Kong. For example, Mainland Chinese enjoy an open and cashless society which is enabled by the integration of innovative technologies, while Hong Kong still lags behind.

Looking forward: More options for online booking in the future

Aside from increasing the overall efficiency and convenience of the travel experience, travellers are also seeking more options in future online booking platforms. A higher level of customisation of trip planning, such as trip suggestions through Artificial Intelligence or being able to aggregate all planned trips onto one single platform, are within the desires of Hong Kong's young travellers. Older generations, in contrast, would prefer to see easier options to complete booking processes online such as using voice recognition to fill in applications and booking form fields.

Luggage

Purchase New Luggage Every...

Place of residence	Hong Kong	30 months
	Mainland Chinese	13 months
Generation	Gen Z	17 months
	Millennials and Gen X	22 months
	Baby Boomers	30 months
Purpose of travel	Leisure Travellers	20 months
	Business Travellers	12 months

Source: Euromonitor International

Shorter time span between buying new luggage

In general, consumers seek to purchase new luggage almost every two years. However, this replacement cycle is shortened for some specific segments of the consumer groups:

i. The younger the traveller, the more likely they are to buy new suitcases more often. Generation Z travellers on average buy new luggage every year, contrasting with baby boomers who are more patient to wait for about two and a half years. As Generation Z are more cost cautious, they tend to buy more affordable luggage, which is more susceptible to damage, resulting in a higher replacement cycle.

> **I always use my suitcase until it gets old or breaks.**
>
> Baby Boomer, Hong Kong

ii. Regular business travellers tend to purchase new luggage more often due to the high level of usage resulting in rapid wear and tear. On average, business travellers replace their luggage once per year.

iii. Mainland Chinese generally own multiple suitcases per traveller, hence the greater need to purchase new or replace old luggage more often. Half of Mainland Chinese travellers buy at least one new piece of luggage every year, and one in 10 buys one every season. On the other hand, Hong Kong travellers value practicality more and limit the amount of luggage they have. Restrictions such as living space and cost are often the main reasons why buying new luggage is less frequent. Most Hong Kong travellers would prefer to replace luggage only after their old luggage has fully worn out. However, certain Hong Kong travellers are interested in buying a new suitcase if new and innovative options are available, given that they address their fundamental pain points of travelling (i.e. upgrade from two-wheel luggage to four-wheel).
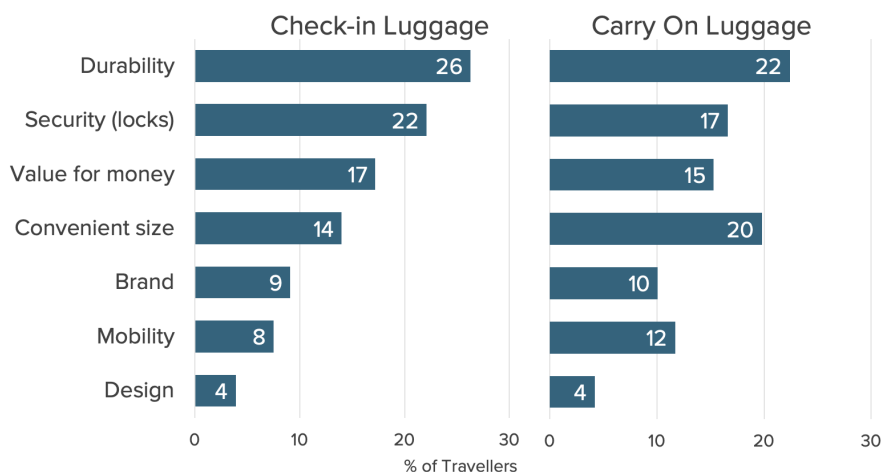
Durability, convenient size and security: Top factors to consider on the path to purchase

Luggage is considered to be an important part of the travelling experience as it is the main medium of transporting one's personal belongings. Both business and leisure travellers highlight that when purchasing new luggage, they mainly consider a suitcase's durability, convenient size and safety. This latter attribute (safety) becomes especially relevant when purchasing check-in (medium to large size) luggage, as travellers do not have direct oversight of their luggage once it is checked in and transported to the aircraft. Given that the majority do not replace luggage frequently, the ideal is to keep the same luggage for as long as possible.

As long as it's durable and has four wheels, I don't pay attention to what brand it is.

Baby Boomer, Hong Kong

The Most Important Factor to Consider When Buying New Luggage

	Check-in Luggage	Carry On Luggage
Durability	26	22
Security (locks)	22	17
Value for money	17	15
Convenient size	14	20
Brand	9	10
Mobility	8	12
Design	4	4

% of Travellers

Source: Euromonitor International

Looking forward: The more convenient the luggage is, the more potential it has in the future

The introduction of four-wheel luggage was the first step in adding convenience to the traveller experience in Hong Kong. However, our findings indicate that Hong Kong consumers are only willing to spend more on their luggage, or replace it more frequently, if it increases considerably the level of convenience when travelling. Innovations that assist when packing luggage in any forms will be popular in the future. For example, built-in vacuum bags for compression of thick jackets, safety air-cushioned pockets for storing fragile items and personal belongings, and greater mobility of luggage on high fraction surfaces such as carpets.

Airport

Airport Facilities Used at the HKIA During Travellers' Most Recent Trip

Free Airport Wi-Fi and/or charging stations: 82
Baggage services (packing and wrapping, porter…): 53
Free resting facilities: 40
Business centres: 21
Family and children facilities (play areas, nursing rooms…): 13

% of Travellers
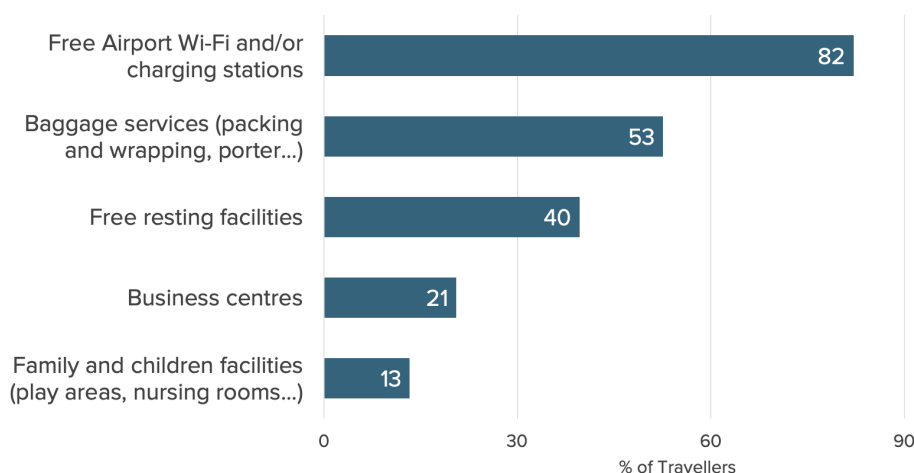
Source: Euromonitor International

Among all available airport facilities, Wi-Fi considered the most important

The availability of free Wi-Fi connection is considered crucial by users of the HKIA, with a great majority of them having utilised it during their most recent trips.

There are two main reasons why Wi-Fi is considered important at the HKIA. Firstly, travellers are becoming increasingly connected and have higher possession of smart devices. Being able to connect to the internet allows travellers to kill more time while waiting in lounges/at gates through options such as usage of social media, mobile games and streaming video content. Secondly, Wi-Fi allows travellers to save mobile data as over-usage could result in additional charges by service providers. The majority of these users also believe that the HKIA delivers a reliable connection throughout the entire airport.

82% of travellers used HKIA's free Wi-Fi during their last trip

65% agrees that there is strong connectivity everywhere at HKIA

Business centres and children's facilities are losing their original purpose

The usage of business centres at the HKIA is losing its original purpose as only one quarter of business travellers visited them on their most recent trip. Having strong and free Wi-Fi connectivity throughout the airport, together with a preference to work on personal laptops and smart devices may explain the

decreasing popularity of these centres. Similarly, children's facilities are also relatively low in usage as only 13% of travellers have visited the facilities in the past six months. Travellers with families have expressed that with smart devices and a number of shops, there are plenty of options to keep children distracted prior to flights.

Travellers' Opinion on Airport Facilities

Availability of different options	😊 😊 😊 😊
Airport's free Wi-Fi Connection	😊 😊 😊 😊 😊
Resting facilities	😊 😊 😊 😊

Source: Euromonitor International

Highly praised e-channel immigration control

The HKIA's smart arrival and immigration control process has proven to be very popular among travellers. 83% of travellers have expressed positive impressions of the border control process as it provides greater convenience and helps travellers save time when boarding their flights or getting into the city. Furthermore, the positive impact boosts the overall image of the HKIA, as this tackles one of the most critical pain points of travellers worldwide, i.e. time "wasted" in other international airports where security and immigration processes are slow and traditional. Some travellers mentioned it can take up to two hours to pass through immigration in some other Asian airports, for instance.

Looking forward: Demand for further convenience at HKIA

While convenience and time saving are set to continue being the main features demanded by travellers regarding airport facilities, frequent travellers in particular demand faster transportation within the terminal itself as well as between terminals. As the airport expands, travellers have expressed concerns about the amount of time and effort to reach remote gates.

> I'm always grateful that from the moment I get off the plane to getting on the Airport Express usually does not take more than 20 minutes.
>
> Millennial, Hong Kong

> Some of us are very last minute. Do more airport terminals mean that I need to arrive even earlier to make sure I don't miss my flight?
>
> Millennial, Hong Kong

Retail, Food and Beverage

Travellers Spending
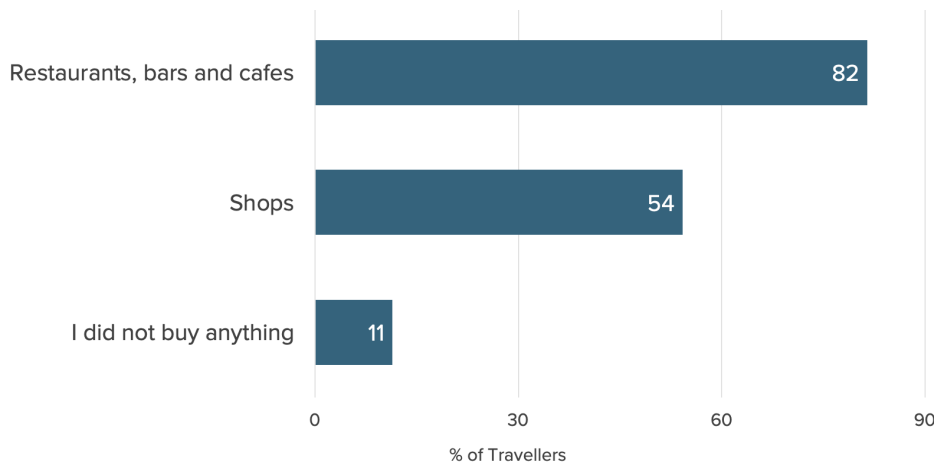
67% of business travellers more willing to shop compared to 51% leisure travellers

Source: Euromonitor International

Greater emphasis on restaurant and shop options at the HKIA

Restaurants and retail shops are still regarded as important elements within the HKIA, with only 11% of respondents not having spent any money within the airport. The importance of retail, food and beverage is largely driven by restaurants, bars and cafés where 82% of travellers spend money in eateries at the airport, compared with 54% of travellers that spend money at retail shops. Most travellers that spend at retail shops are not discouraged by the higher prices as they expect a premium while they are at the airport, even with the presence of duty-free shops. However, the indication of spending money at restaurants does not mean that they enjoy the experience. In many cases, travellers visit restaurants out of necessity but do not enjoy the long queues, high traveller traffic and lacklustre food options.

> It is more expensive, but it is expected since it is at the airport.
>
> *Millennial, Hong Kong*

> It would be great if there are more restaurant options. I do not enjoy trying to fight for my food and wait in long queues.
>
> *Millennial, Hong Kong*

Business travellers are more willing to spend money

67% of business travellers tend to shop at the airport. There are three main reasons why business travellers have a higher inclination to shop at the airport. Due to tight time constraints while on business trips, 44% of business travellers shop for things that are related to their trips, and 56% of business travellers shop for items that they have forgotten to bring. Business travellers are more inclined to spend out of necessity and have the disposable income to spend on such items.

Source: Euromonitor International

Mainland Chinese travellers are a vital consumer group within the airport ecosystem

While it is not a surprise, Mainland Chinese travellers are key consumers of the retail services at the HKIA. Compared to only 42% of Hong Kong travellers that have bought at least one item at the airport in their last trips, 77% of Mainland Chinese travellers did. Hong Kong travellers have a lower tendency to buy things at the airport as they feel that the prices are too high to justify the purchase. In addition, Mainland Chinese travellers have a different view of the overpricing and are generally less price sensitive than Hong Kong travellers. This largely stems from the different cost of living between Mainland China and Hong Kong.

Our traveller consumer survey shows that 58% of Mainland Chinese travellers use shopping as a way to kill time, while only 40% of Hong Kong travellers have the same practice.

> Only 16% of Hong Kong travellers believe that shops are cheaper at the airport while 48% of Mainland Chinese travellers agree with this statement.

Looking forward: Demand for more shops and restaurants in the future

While most travellers have a positive experience with the retail, food and beverage services at the HKIA, many voice concerns about the lack of available options. 82% of travellers would like to have a wider variety of shopping and restaurant options, which is especially true for business travellers (89%) and millennials (90%) as well as Mainland Chinese travellers (91%).

> **I'd love to have healthier options to compensate for the food of the plane.**
>
> Millennial, Hong Kong

Another factor of concern is that users of the HKIA feel that food courts and other casual dining restaurants are usually busy, and it is difficult to find a table. The lack of seating as well as the limited variety of food options represent some pain points felt by travellers. Although it is not vital, the majority of travellers would enjoy more fast food and casual dining options as they are more reasonably priced. Mainland Chinese travellers in particular have more interest in high-end fine dining restaurants compared to Hong Kong travellers. This is largely due to Mainland Chinese travellers viewing the whole travel journey as a service and seek to indulge themselves with more luxury goods and services.

What Kind of Restaurants Do Travellers Want More of in the Future?

Source: Euromonitor International

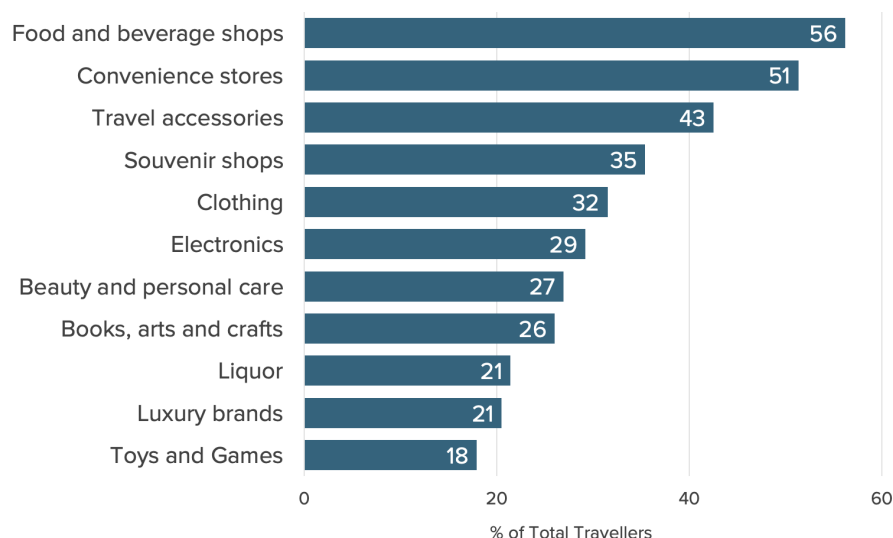|		
FAST FOOD Leisure 59% Business 48%		**FINE DINING** Mainland Chinese 25% Hong Kong 16%
CAFÉ AND COFFEE SHOPS Leisure 40% Business 60%		**CASUAL DINING** Men 64% Women 78%
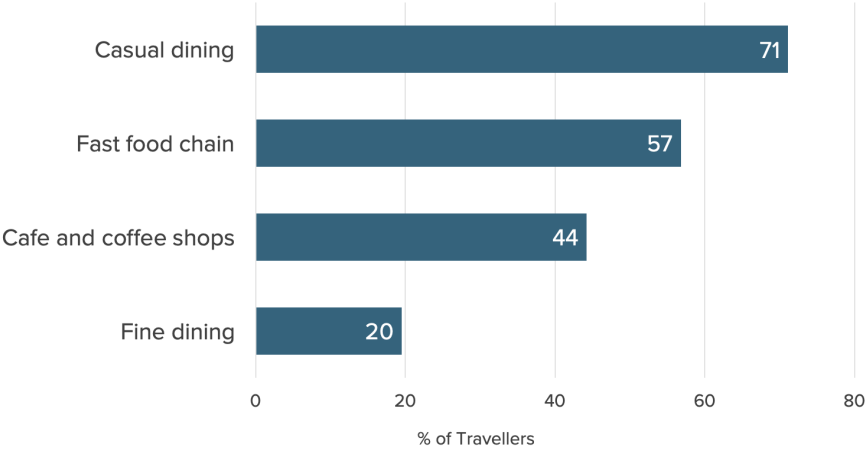
Source: Euromonitor International

Café and coffee shops are in high demand as business travellers and millennials believe there is a lack of healthy food options at the airport. The salad and sandwiches served in these outlets are considered a good, fast and healthy alternative.

Source: Euromonitor International

What Shops Do Travellers Want More of in the Future?

Food and beverage shops — 56
Convenience stores — 51
Travel accessories — 43
Souvenir shops — 35
Clothing — 32
Electronics — 29
Beauty and personal care — 27
Books, arts and crafts — 26
Liquor — 21
Luxury brands — 21
Toys and Games — 18

% of Total Travellers

Source: Euromonitor International

For shops, the top three shop preferences for the future are food and beverage shops, convenience stores, and travel accessories.

The reason that these shops are the most in demand is due to last-minute shopping for essential goods such as water, tissues, snacks and any travel accessories such as charging cables or adaptor heads by travellers prior to boarding flights. However, taking a closer look at the main consumer groups — Mainland Chinese travellers show higher demand for more variety of shops such as apparel, electronics, luxury brands, souvenir shops, and liquor stores compared to Hong Kong travellers

What Shops Do Travellers Want More of in the Future?

CLOTHING Leisure 29% Business 41%	**BEAUTY AND PERSONAL CARE** Leisure 22% Business 46%
ELECTRONICS Leisure 27% Business 38%	**LIQUOR** Leisure 17% Business 38%
LUXURY BRANDS Leisure 17% Business 35%	**TRAVEL ACCESSORIES** Hong Kong 48% Mainland Chinese 33%

Source: Euromonitor International

## Looking forward: Bringing day-to-day lifestyles into the airport

Aside from restaurants and shops, travellers have expressed a demand for more variation in services and options such as hairdressers, laundry mats, sleeping pods, gym facilities and even Virtual Reality/Augmented Reality booths. This demand stemmed from the repetitive options currently available and the long waiting time to board a flight.

It would be a good idea to spread the shops and restaurants out to different terminals. Right now, there are too many people packed together after the immigration control.

Millennial, Hong Kong

Premium Service

Premium Service Usage Over the Past Six Months

■ Never been

■ At least once

43%

57%
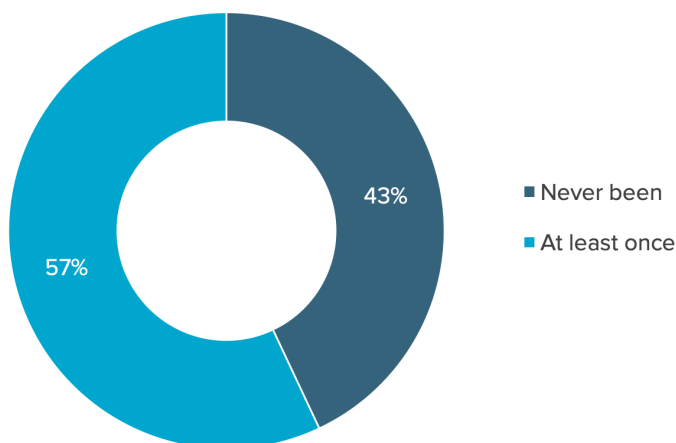
Source: Euromonitor International

Easy access leading to mainstreaming of premium lounges

Premium airline and corporate lounges are overcrowded by travellers. 57% of travellers have used the premium lounges at least once during the past six months and many have expressed concern about the number of people within lounges. There are credit card offers and promotions from credit card operators such as American Express, Citibank and HSBC, which make the premium lounges into more communal resting lounges at the HKIA. Aside from losing their "premium" status in the eyes of travellers, this has led to a busy environment where only 45% travellers still go to premium lounges to relax.
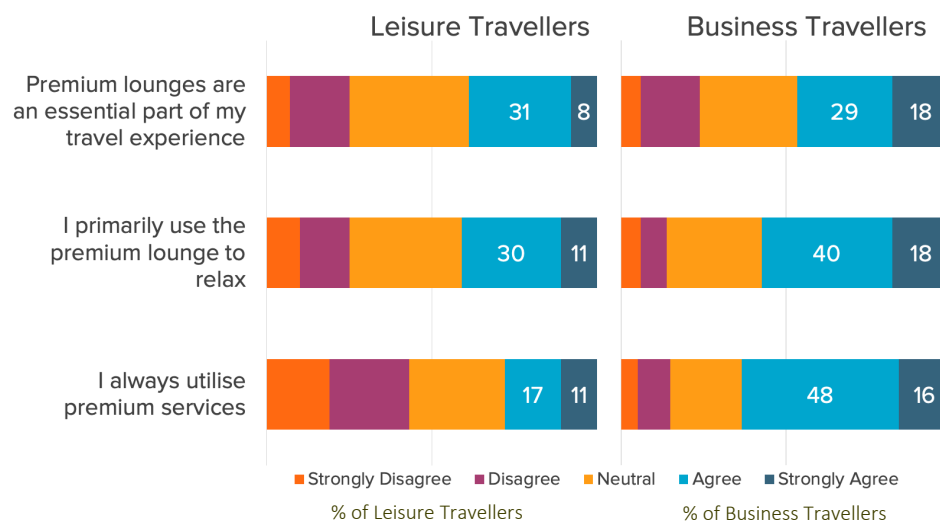
The premium lounge just seems like the food court now. I go inside, grab some food and a bottle of water, then I'm out. I'd rather sit outside the terminal gate earlier as there is more space there.

Millennial, Hong Kong

Business travellers enjoy premium lounges and services

Business travellers find premium lounges and services to be more vital to their travel experience compared with leisure travellers. 64% of business travellers feel strongly about premium lounges compared to the 39% of leisure travellers that express the same views. The importance of premium lounges is also reflected in the usage of these facilities by business travellers. 76% of business travellers have been to premium lounges at least once over the past six months, compared with 52% of leisure travellers. Business travellers enjoy using the premium lounge privileges, primarily for food. Due to the scarce eatery options and crowded food courts, premium lounges offer a somewhat better environment to relax, work or kill time.

Premium Services Experience at the HKIA: Leisure vs. Business Travellers

	Leisure Travellers	Business Travellers
Premium lounges are an essential part of my travel experience	31 8	29 18
I primarily use the premium lounge to relax	30 11	40 18
I always utilise premium services	17 11	48 16

■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

% of Leisure Travellers   % of Business Travellers

Source: Euromonitor International

Premium lounges and services are more appealing to Mainland Chinese travellers than Hong Kong travellers

Mainland Chinese travellers have also expressed the same views as business travellers. 65% of Mainland Chinese travellers have accessed a premium lounge over the past six months. Similarly, use of premium services such as fast tracking, concierge services and premium transfer services, is popular among business travellers and Mainland Chinese travellers. The main premium service highly utilised is the fast-tracking service through security control and immigration as it is one of the best time-saving options available.

As someone that travels for business all the time, having somewhere to rest while waiting for my next flight is crucial for me... even though if it (premium lounges) is crowded.
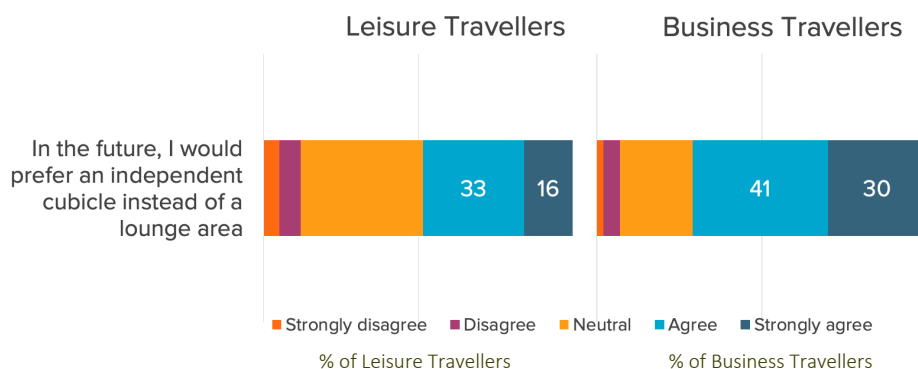
Millennial, Hong Kong

Looking forward: Privacy is the new premium in the future

With premium lounges becoming highly populated, waiting time and security are starting to become concerns. As a solution, travellers are seeking more secluded options to provide them more privacy, especially Mainland Chinese travellers and business travellers. Both traveller types, 67% and 71%, respectively, would like to see more private cubicles instead of lounges in the future.

With how crowded the lounge is now, I am a little worried about my luggage as it seems that everyone can just get into the lounge. A private cubical will give me some privacy and a better peace-of-mind.

Millennial, Hong Kong

Future Need of Privacy in Premium Services: Leisure vs. Business Travellers

Leisure Travellers   Business Travellers

In the future, I would prefer an independent cubicle instead of a lounge area

Leisure: 33 | 16
Business: 41 | 30

■ Strongly disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly agree

% of Leisure Travellers   % of Business Travellers

Source: Euromonitor International

Inflight Experience

The Most Important Aspects of Inflight Experience

COMFORTABILITY Leisure 40% Business 36%		**FACILITIES ONBOARD** Leisure 12% Business 17%	
INTERNET ACCESS Leisure 13% Business 26%		**FLIGHT ATTENDANT SERVICE** Leisure 13% Business 2%	
INFLIGHT MEALS Leisure 13% Business 12%		**INFLIGHT ENTERTAINMENT SYSTEM** Leisure 9% Business 7%	

Source: Euromonitor International

Comfortability is the most critical aspect, everything else is secondary

Most travellers rank comfortability as the most important aspect of the overall inflight experience. Comfortability can be affected by a number of things ranging from small seats and personal space to uncontrollable temperatures and overly bright reading lights, which can hamper the entire inflight experience, especially on long-haul flights. In addition to this, some frequent travellers expressed that hygiene on flights is also becoming a concern affecting their comfortability. On the other hand, travellers have expressed that mediocre facilities and inflight systems can be replaced with personal smart devices.

I wonder how often some airlines wash or replace the cloths on the seats.

Millennial, Hong Kong

At the end of the day if you don't manage to sleep on a long-haul flight, it feels like it lasts forever.

Millennial, Hong Kong

The Most Tiresome Factors During a Flight

Getting bored	Over one third of travellers found flights to be boring, despite having a good entertainment system available. The expectation of "fun" has extended beyond the standard inflight entertainment system and requires further stimulating activities such as virtual and augmented reality headsets for more dimensions of interaction or e-books for avid readers.
Too cold or too warm in the cabin	Linked to the fact that comfortability is ranked as the most important factor of a traveller's inflight experience, inadequate temperature while onboard (either extreme) affects the overall level of comfort throughout the flight.
Poor quality meals	Though in general, this is expected by travellers, the average quality of inflight meals is seen as poor, and of limited variety. More personalised and healthier options would add to the meal quality as well as to the traveller's overall experience.

26%
of travellers claim it is usually too cold for them in the cabin

Source: Euromonitor International

Being connected is ideal, but not a must for everyone

While travellers, in general, place a lower importance on having internet access onboard compared to other services, 79% of the travellers would like to have internet access on flights. For leisure travellers, internet access enables them to use their smartphones and devices mainly to "kill time" during the flight, while for business travellers, internet access is considerably more important due to the need to work during a flight.

86% of business travellers expressed their desire for Internet access onboard compared with 77% of leisure travellers

Mainland Chinese travellers view flights as a service

Overall, Mainland Chinese travellers enjoy most aspects of their inflight experience. In general, Mainland Chinese travellers highly value the services provided during the flight. 82% of Mainland Chinese travellers see that air attendants make their flights more enjoyable, which is almost twice as high as the percentage of Hong Kong travellers who would agree with such statement. 67% of Mainland Chinese travellers also agree that their inflight meal quality is high, which is also higher than the percentage of Hong Kong travellers. In addition, 73% of Mainland Chinese travellers never get bored on flights as they enjoy the inflight entertainment systems. All these factors show that Mainland Chinese travellers view the entire flight experience as a service and seek to get the most out of it.

Looking forward: Higher level of personalisation and customisation for inflight experiences

The existing inflight experience offers little personalisation in the eyes of travellers. Everything within the aircraft is standardised, such as meals, entertainment system and content, seating plans and arrangements. Looking ahead, consumers are expecting to have a much more personalised inflight experience, in terms of music, movies, meals, seat preference, etc.

An option to fulfil this growing demand, is the creation of an online profile with an airline to record personal information. By utilising Big Data and Artificial Intelligence technology, airlines can personalise movies, meal preferences, and even personal interests to assist in the allocation of seats with people sharing common interests.
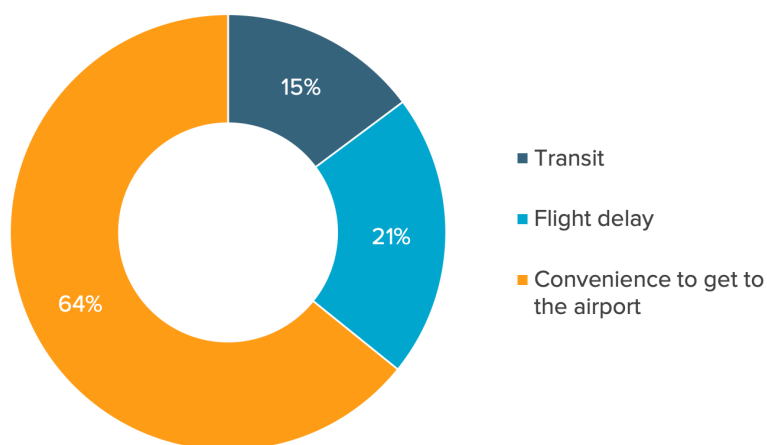

Source: Cathay Pacific Airways

Airport Hotel

Reasons for Staying at an Airport Hotel

- 15% Transit
- 21% Flight delay
- 64% Convenience to get to the airport

Note: n = 81, respondents who stayed in a Hong Kong airport hotel in the past 6 months
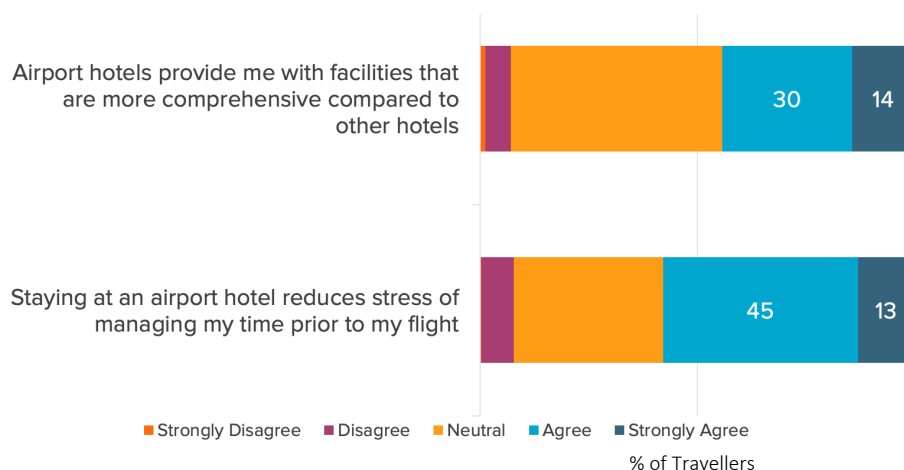*Source: Euromonitor International*

The younger the generations, the more inclined they are to stay at Hong Kong airport hotels

The younger generations, especially Generation Z and millennials, have shown stronger inclination to staying at airport hotels in Hong Kong. 35% of young travellers have stayed at the airport's hotels. Of the travellers that have stayed at the airport hotels, 64% indicated that the decision was made due to the convenience derived from arriving at the airport. For the younger generation that priorities value over timing, being able to book the cheapest value air ticket would require flying in the middle of the night. Staying at an airport hotel is a good solution to avoid the potential risk of missing their flights.

Value of airport hotel is seen in the convenience to travellers

For Mainland Chinese travellers, the convenience of airport hotels is highly valued. 77% of Mainland Chinese travellers believe that airport hotels will greatly reduce the stress of reaching the airport on time. This is almost twice as high as the percentage of Hong Kong travellers. Business travellers also have the same view with 71% expressing the same values.

Expectations of an Airport Hotel

Airport hotels provide me with facilities that are more comprehensive compared to other hotels — 30, 14

Staying at an airport hotel reduces stress of managing my time prior to my flight — 45, 13

■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree

% of Travellers

Source: Euromonitor International

Looking forward: Airport hotel to offer more flight-related services in the future

To further enhance the traveller's experience, there has been a high demand from travellers for airport hotels to assist in the simplification of pre-boarding processes such as check-in, security and immigration control. 65% of travellers believe these added-value services will add to the convenience of travel, especially Mainland Chinese travellers as 87% agree with this statement. As Mainland Chinese travellers typically shop heavily in Hong Kong, they carry large amounts of additional luggage. Having more added-value services to assist them in simplifying their travel process is highly valued in their eyes.

I'd like to start my vacation from the minute I leave my home. Perhaps there can be a service that picks up my luggage from my home directly and takes me directly to the airport.

Millennial, Hong Kong

Market Supply from Solution Providers

In-depth corporate insights and travellers' market demand on travel technology solicitation and enhancement are clearly addressed. However, who are giving impetus to all involved parties on creating a comprehensive blueprint of "travel in the future"? Startups in Science Park will be the best choice among all solution providers to answer the below questions and more.

What are the pain points of the travel industry in Hong Kong? What solutions have startups provided for solving these pain points? Any current travelling solutions can be further explored to the next level? How can startups and corporates enhance customer experience in the travel industry?

CHAIN Technology Development

CHAIN Technology Development Company Limited specialises in developing the Digital Twin for Architecture, Engineering, Construction and Operation industry. Its flagship product, Hybrid Reality Platform (HRP), helps manage the real-time data of any objects in the precise and photo-realistic 3D models. More than a "Black Box", not only users can manage the past and present information, they can even predict and simulate the future situation of their locations. CHAIN's solution has made Digital Twin possible in modelling and information aspect, by leveraging its expertise in BIM, Reality Modelling, Internet of Things, Artificial Intelligence and Big Data Management. The solution has also facilitated seamless 3D asset management, construction progress monitoring, safety training and predictive behaviour which in turn saves the time and budget of construction projects. Its applications have been further developed to facilitate the planning and operation of the Smart City.

Source: CHAIN Technology Development Co. Ltd

Q	What do you think about travel technology development and utilisation in coming five to ten years?
A	Biometric authentication and Internet of Things integration for unmanned management will provide convenience and insights to service providers and clients. With this technological advancement, the handling of privacy will be crucial while implementing the technology.

For biometric authentication, travellers can expect to pass through the immigration gates seamlessly by using the e-machine that recognises personal biometric traits. One could also anticipate that these data may be used for creating smoother and more personalised travel experience. For example, the biometric authentication can be applied for checking-in/out and user authentication in hotels, restaurants and activities booking.

For Internet of Things integration, the blend of smarter devices and sensors can give more instantaneous operational insights to the service providers and thus, advanced solutions to incidents which will result to a better customer experience. For example, greeting robots in the airport and tourist spots, machine monitoring sensors such as those monitoring the baggage claims and smart home applications in a hotel room, etc.

Q What are the pain points of the travel industry in Hong Kong?

A From a startup's perspective, the travel industry is quite reluctant to adopt new technologies. Some clients have reflected that existing industry concerns have hindered their end-use applications. There are concerns about the integration of new technologies and legacy systems. Many believe that new systems lead to headaches and burdens in both operational and managerial aspects. The steep learning curve of adopting new technologies is another concern as well. The industry has reflected that they feel uncomfortable with the new monitoring methods due to the result of the new technologies, which was not a concern when they could closely monitor their staff traditionally.

Q What solutions have you provided for solving those pain points?

A In fact, the above concerns are reasonable and common in all industries adopting new technologies. As a technology-based innovator, we have an absolute mission to tackle the hurdles faced by the industry. Our integrated solution, Digital Twin, is an ideal and advanced technological solution for the travel industry, particularly for service providers such as Airport, Airport Hotel, Retail, Food and Beverage.

Digital Twin is generally defined as "a dynamic virtual representation of a physical object or system across its lifecycle, which uses real-time data to enable understanding, learning and reasoning". People may think that the application of Digital Twin is generally more appropriate for the manufacturing industry. However, its application can be further expanded to benefit many industries, including the travel industry, as supported by our clientele.

With our Digital Twin platform, accurate and photo-realistic 3D models of the venues and objects are the foundation in which the real-time and dynamic information from many Internet of Things devices are seamlessly linked with. It means that, with one unified platform, operational staff can monitor their venues and objects in a real-time basis and easily understandable 3D visual environment. The Big Data engine will help diagnose the massive data from many different Internet of Things devices and thus, the users do not need to keep track of multiple systems and sensors individually to get a holistic view of the operations.

Our Digital Twin platform operates in the cloud environment, allowing management to monitor the operational status of their venues and products anytime and anywhere. Whenever the Internet of Things sensors have detected any abnormalities, our platform will automatically alert the users for preventive measures.

Q Any current solutions in the travel industry can be explored to the next level?

A VR technology brought by VR goggles or other head-mounted devices. In today's world, the technology mainly focuses on visualisation. In fact, more interactions or even decision making processes shall be added to the experience. Besides, the use of the head-mounted device

shall be developed to immersive experience without any wearable device to enhance the overall experience. The efficiency, quality and level of reality for the 3D scene models shall be enhanced as well.

Q **Regarding the items below, how can startups and corporates further enhance the customer experience in the travel industry?**

Online Booking | Luggage | Airport | Retail, Food & Beverage | Premium Service | Inflight Experience | Airport Hotel

A **Airport | Retail, Food & Beverage | Airport Hotel**
As a startup in Science Park, our competitive edge is the creation and management of the Digital Twin, which can enhance customer experience and operational efficiency for Airport, Airport Hotel and Retail, Food & Beverage.

Simulation & Predictive Analysis for New Infrastructure & Facilities
With the Digital Twin platform, accurate and photo-realistic 3D models of new infrastructure and facilities are built digitally before actual construction. The management and stakeholders of the venues can collaborate and discuss among each other about the design feasibility such as the efficiency for relieving the crowd in a limited space and simulate the passengers/visitors' experience beforehand. In the past, prior to the innovation of this technology, management could not visualise the future facilities and the potential problems. Now, adjustments can be made during design and thus, saving time and budget for rework.

Unmanned Asset Management
With Internet of Things device and sensors, real-time information about energy consumption, temperature, Wi-Fi signal, machine status, CCTV systems, Smart Pole and Autonomous Vehicles are collected. However, how to efficiently manage all these data has posed a challenge to organisations. Now, with our Digital Twin platform, all data are integrated and analysed in a unified system. This facilitates efficient unmanned asset management of the facilities and venues.

Enhanced Customer Experience by VR/AR Technology
With the 3D models and real-time information combined with our VR/AR device, such as the 4D Immersive CAVE (a 1-on-1 human-scaled, room-sized projection device without using head-mounted device/goggles), more immersive and interactive customer experience can be achieved. Users can simulate as if they are navigating in the new facilities and attractions or even using new products.

Q **What is the megatrend of travel technology enhancement & application in the upcoming future?**

A It would definitely be the applications of Internet of Things, Digital Twin as well as Artificial Intelligence for a more integrated, efficient management and personalised customer experience.

City Image Technology

City Image Technology Limited is an HKSTP Incubation graduate which has a vision of pioneering the innovation of glasses-free and personal 3D photo technology. One of its patented products, FunImage, won Silver Award in the Best Innovation & Research Category of Hong Kong ICT Awards. This application is integrated into new product 3D PhotoBooth and applied to Science Park Smart Living project. It is now adopted by Chimelong, Guangzhou.

Source: City Image Technology Limited

Q What do you think about travel technology development and utilisation in coming five to ten years?

A More information will help travellers enhance their travel experience in the future. In the upcoming five to ten years, we will use the information to customise personal services for each traveller. Travelling will become easier than ever before.

Q What are the pain points of the travel industry in Hong Kong?

A Technology is used to serve people and enhance the user experience. Hong Kong, as one of the famous travel destinations, should provide travellers with more memorable user experience. A traveller always wants to get some souvenirs back home. However, today's souvenir market cannot provide interesting and personalised ones.

Q What solutions have you provided for solving those pain points?

A City Image provides FunImage, a personal 3D photo generation system. With this system, customers can get their own personal 3D photo within one minute. In last October, Facebook just rolled out the 3D photo system. Combining with City Image's FunImage system, a physical copy of the personal 3D photo can be produced. This system can now support *iPhone* and *HuaWei* 3D photo input. Most users can use their own smart photos to produce personalised souvenirs.

Q Any current solutions in the travel industry can be explored to the next level?

A Interactive information display platform can provide mixed experiences for customers. City Image enhances user experience with an informational platform. Users can also get their own Hong Kong travel 3D photos from such platform. This is a multi-purpose display platform for the travel industry.

Q Regarding the items below, how can startups and corporates further enhance the customer experience in the travel industry?

Online Booking | Luggage | Airport | Retail, Food & Beverage | Premium Service | Inflight Experience | Airport Hotel

A **Airport**
There should be more interactive terminals to provide information or personal 3D photos.

Airport Hotel
Interactive information platform can also be used in hotels to enhance customer experience.

Luggage
Having robots to transport luggage is a plus.

**Q** What is the megatrend of travel technology enhancement & application in the upcoming future?

A Image and speech processing technology will become more common in the future. Combining with AI technology, we are going to extract more precise information from image and speech so as to customise the service to the end user.

Source: Euromonitor International

DataInsights

DataInsights is a provider of Big Data Analytics and Artificial Intelligence solutions to empower enterprises' business transformation and competitive edge in the digital economy. Its products and services help forward-thinking enterprises solve critical problems and pain points for business optimisation.
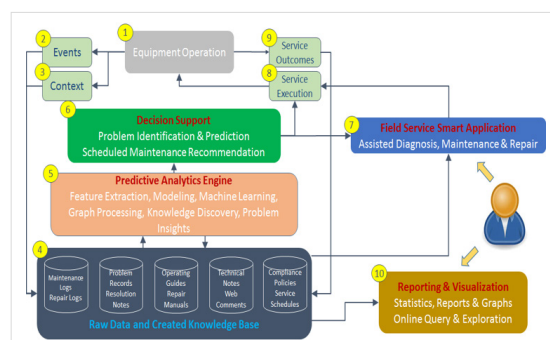
Source: DataInsights

Q   **What do you think about travel technology development and utilisation in coming five to ten years?**

A   The "Fourth Industrial Revolution" is reshaping many industries comprehensively, and technology enhancement will also affect the travel industry. By embedding the Internet of Things, Big Data and Artificial Intelligence, Robotics and many other emerging technology breakthroughs, together with collaborations among travel agencies, flight companies and airport management parties, accommodation, retail and beverage providers, technology and service vendors, passengers and customers, one can expect an advanced ecosystem will be developed in the industry in the coming five to ten years. The travel industry will enjoy a virtuous cycle driven by reduced costs and optimised efficiency resulting from machine automation and prediction, as well as a more seamless, highly personalised and ergonomic travellers' experience which will eventually boost sales.

Q   **What are the pain points of the travel industry in Hong Kong?**

A   Airport is the most important gateway to every big city it serves, and critical in creating a good first impression to visitors. In view of rising competition between countries and cities, the HKIA is striving to transform into a "Smart Airport", leveraging the most state-of-the-art technologies to improve traveller experience, operation efficiency and reliability.

One of the most crucial components for such transformation is data. The HKIA, like many other aviation hubs around the world, has always maintained a data-rich environment, with complex infrastructures and enormous systems operating 24-7, continuously generating a huge amount of data every second. Even at this moment, how to make good use of these data remains a pain point in saving cost and improving efficiency for the HKIA.

Q   **What solutions have you provided for solving those pain points?**

A   Thanks to technology advancement such as Internet of Things, Big Data and Artificial Intelligence, data can be mined, analysed and utilised easier than before, unlocking potentials

for an airport to greatly improve its efficiency, and travellers can benefit from smoother operations of infrastructure such as baggage handling system, which DataInsights is working with the HKIA to equip the system with advanced "Predictive Maintenance" concept.

DataInsights can leverage structured and unstructured data generated by system logs and records, as well as Internet of Things sensors to continually acquire physical data, such as vibration status of components, the temperature of operating motors, acoustic features of mechanical parts and 20 more data variations. Combined with the machine learning model, as well as leveraging "ontology" to conduct semantic analysis on system logs and text records, models can be built to predict machine outage and flag anomaly of components. This can drastically drive down the cost of maintenance, ensuring more precise diagnosis of the problem, and making outages controllable.

DataInsights is also co-operating with Airport Authority Hong Kong to develop a Big Data analysis platform to impact on the HKIA ground operations by adverse weather, which helps forecast the operational capability and optimise resource allocation in airport.

Q Any current solutions in the travel industry can be explored to the next level?

A A lot of travel agencies and airline companies are promoting their chatbots or travel-bots for better customer-machine interactions and traveller experience. However, many of them are not sophisticated and need years to train. By continue inputting huge amount of conversational data, feeding other travel-related data sources from providers or web-crawling, as well as improving the algorithm for semantic reasoning and Big Data optimisation analysis, a bot can be brought up to a very user-friendly "AI assistant", which acts as a travel planner and guide for travellers.

Q Regarding the items below, how can startups and corporates further enhance the customer experience in the travel industry?

Online Booking | Luggage | Airport | Retail, Food & Beverage | Premium Service | Inflight Experience | Airport Hotel

A Online Booking | Inflight Experience | Premium Service
Equipping the current online flight booking system with AR/VR technology developed by startups or corporates, which can show travellers the cabins and ancillary services in advance in order to improve traveller experience and increase sales.

Q What is the megatrend of travel technology enhancement & application in the upcoming future?

A AR/VR/MR, Big Data and Artificial Intelligence, Robots and Internet of Things technologies should take lead to travel technology enhancement in upcoming future, and they will be complementary with each other to work out new applications.

Lambda Sense

Lambda Sense Limited is an IT startup focusing on product and service development for enhancing daily lives based on Machine Learning technology. It believes that "Machine Learning Technology is the essence of building trustworthy services." Its vision of Machine Learning is to connect family and community. To achieve it, learning human activity is the first step; and its first achievement is related to the learning of people's gait pattern. The company is working closely with the SI partners from respective vertical markets, and deploy the solutions to potential customers.
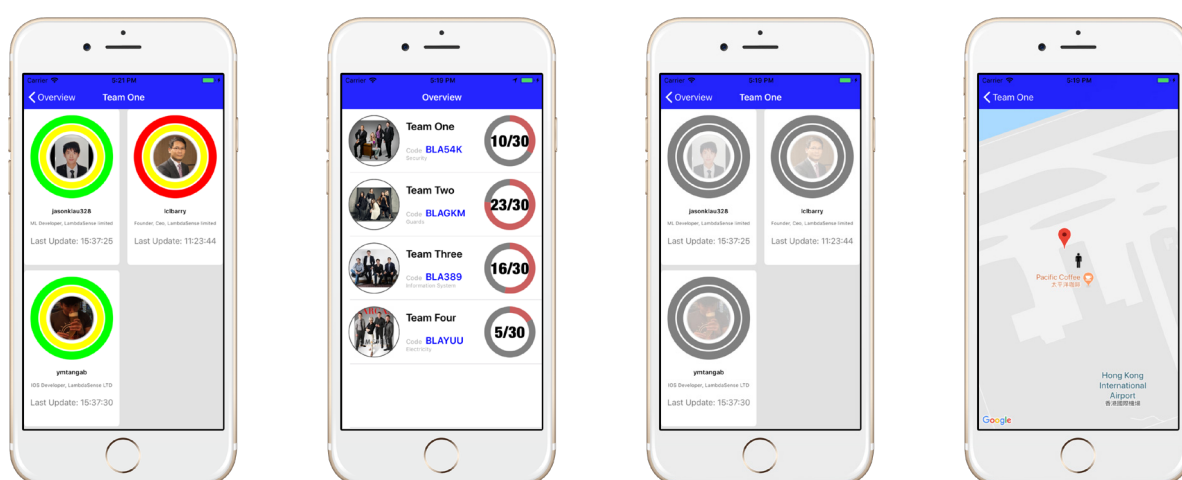
Source: Lambda Sense Limited

Q	What do you think about travel technology development and utilisation in coming five to ten years?
A	Personalised travelling is the future trend. Hence, travel technology should enable a more personalised travelling experience.

Q	What are the pain points of the travel industry in Hong Kong?
A	When scheduled travel involves several service providers, the planning and booking experience is not convenient, which means that traveller need to spend more time to coordinate. For instance, the connected train schedule is not user-friendly.
	Once the trip is booked, rescheduling and making alternations is a difficult task. To do so, travellers have to spend a huge amount of time to deal with it, e.g. call for checking the possibility and options of rescheduling.
	There is no historical track, prediction or intelligent suggestion for helping travellers forecast or plan for future trips.

Q   **What solutions have you provided for solving those pain points?**

A   Our solution is a Machine Learning based Continuous Authentication and Identification technology (CaNi). It is a fundamental technology which provides an authentication service down to the personal level, rather than group level, or hardware/software level.

In respect with personal level authentication, we enable a more personalised experience for travellers. Let's take check-in at the airline counter as an example. Once the premium member reaches the counter, he or she does not need to say anything, but the staff will call his or her name; and handover all prepared materials like a boarding pass, buggy and lounge voucher in advance. This is what we called premium experience of a personalised travel.

Q   **Regarding the items below, how can startups and corporates further enhance the customer experience in the travel industry?**

Online Booking | Luggage | Airport | Retail, Food & Beverage | Premium Service | Inflight Experience | Airport Hotel

A   **Retail, Food & Beverage | Premium Service | Airport Hotel**
The retail shops can establish a membership service together with different tiers of membership – Diamond, Gold, Green, etc. With CaNi, the Diamond members will be identified when they come to retail shops. For example, after shopping, the Diamond member goes to the customer service for payment. But, there is a long queue; the cashier will tell the Diamond member that "Mr. Diamond, you are our premium customer. Let me do you a favour to process the payment first."

Q   **What is the megatrend of travel technology enhancement & application in the upcoming future?**

A   Application of Machine Learning based technology will be used for optimising and personalising traveller experience in the future.

Source: Euromonitor International

Majordomo Network Group

Majordomo Network Group Limited provides Augmented Reality (AR) & Virtual Reality (VR) technology. It has a cooperative relationship with Sinoini Innovation Hitech Company Limited. Currently, the team provides intelligent image processing and Artificial Intelligence technologies including face recognition, iris identification machine and unmanned store application.

Source: Majordomo Network Group Limited

Q **What do you think about travel technology development and utilisation in coming five to ten years?**

A The future travel experience is becoming smarter and more convenient. We can imagine that taking a plane in the future can be as convenient as taking a bus. Travellers only need to use their faces and iris identification to board a plane.

Different robots will serve travellers in the future. If they have luggage, robots will help them transport. If travellers are hungry, robots can help them deliver food. Diverse unmanned retail stores will be offered for travellers to buy. They do not have to worry about a language barrier anymore.

Airport staff will still exist in the future. They will be able to provide more personalised services. They will have a variety of wearable smart gears to provide travellers with a more secure travel experience.

Q **What are the pain points of the travel industry in Hong Kong?**

A Talent: The commercial aviation market is experiencing exponential growth, and the shortage of talent shortage is becoming increasingly prominent.

Risk: Airport staff are not effectively trained to deal with all possible risks, such as emergency handling, terrorist attacks, etc.

Service experience: The demand for digitalisation in the technology era is becoming inevitable, and the popularity of smart devices requires constant application of new technologies to enhance the customer experience.

Q **What solutions have you provided for solving those pain points?**

A Augmented Reality (AR) & Virtual Reality (VR) technology solution:
AVR technology provides fast-tracking knowledge transfer. Smart Workers using AR can perform effectively and access contextual knowledge on the spot where and when it is needed.

Face recognition & Iris identification solution:
To compress the time of the travellers' boarding process, giving them more time to experience airport facilities, and increase their enjoyment in travel.

Q   **Any current solutions in the travel industry can be explored to the next level?**

A   The online ticketing store will combine more elements of Artificial Intelligence to allow travellers to buy suitable tickets.

AR technology will explore deeply into the entire airport and aircraft management.

Travellers' face and iris will be the proof of consumption. The entire travel experience does not require cash or credit cards. Travellers will only need to show their faces and iris to complete the transaction.

Q   **Regarding the items below, how can startups and corporates further enhance the customer experience in the travel industry?**

Online Booking | Luggage | Airport | Retail, Food & Beverage | Premium Service | Inflight Experience | Airport Hotel

A   **Retail**
Unmanned retail stores should be increased to provide travellers with more convenient service.

Airport hotel
It is recommended for airport hotels to offer a no-card hotel experience. The robots will provide travellers with 24-7 personal services. A safe hotel environment should be offered with facial and iris recognition.

Inflight Experience
It will be cool if travellers can play games and watch movies in VR. This does not affect others, but also users can enjoy personal spaces.

Q   **What is the megatrend of travel technology enhancement & application in the upcoming future?**

A   We think that the main thing is how to make people work smarter. Wearable devices and robots will soon get large-scale applications.

My Tea Solutions

My Tea Solutions Limited was founded in 2017 specialising in the design of Smart City Solution and IoT Technology. With sufficient R&D capacity, it allows the firm to execute technology idea from initial concept to implementation. Together with its professional management team, the team actively invests on intellectual property and technology patents. Based on its specialists in product design, electronics & mechanical engineering, budgeting and manufacturing engineering, it continuously brings them competitive advantages in the market. In 2018, the team invented a robotic beverage vending machine that is going to change the traditional F&B business model with automated production by focusing on automation and IoT, and pushing the development of Hong Kong automated F&B industry.

Source: My Tea Solutions Limited

Q What do you think about travel technology development and utilisation in coming five to ten years?

A Since the speed of technology adoption is quickening these years, it's expected that more technologies will be involved in the travel sector, such as travel assistant, route planning, social travel, etc. In addition, the 5G telecommunication network is ready to launch in 2019, a wider bandwidth will be available for higher speed data communication. It allows more possibilities related to travel technology. An instant example is that Google Map is still in static mode today because of the limitation of bandwidth. When a wider bandwidth is available, it possibly offers instant video navigation with 5G network. Furthermore, self-driving and autopilot services can also be achieved via a high-speed connection. It's inescapable that people will be more reliant on technology; the labour force is expected to be less important in the future.

Q What are the pain points of the travel industry in Hong Kong?

A The HKIA may not adopt sufficient new retail technology if comparing with other major airports across the world. The coverage of vending machine is actually very high in Japan and Singapore, including Haneda International Airport (HND),

Narita International Airport (NRT), Kansai International Airport (KIX) and Changi Airport (SIN). Travellers enjoy the new and easy shopping experience by using various vending machines. For example, those vending machines not only offer coffee and soft drinks, but also noodles, curry rice, french fries, popcorn, and different snacks, as well as stationeries, SIM cards, and countless funny souvenirs.

Q **What solutions have you provided for solving those pain points?**

A We provide a new retail solution called "My-Tea" for offering freshly made bubble tea to customers 24-hour a day. It's actually one of most important elements of Smart City technology. "My-Tea" is ready to enter the cashier-less era by utilising Internet of Things hardware combining digital payment and robotic technology. Our goal is to integrate robotic technology into traditional retail businesses. Now, we are at stage two for building the second generation of machine and expect to develop exceptional functions in Q2 2019. Our ultimate goal is to place "My-Tea" machines in large shopping malls, airports, car parks, schools and other public areas to share a new shopping experience with the public.

Q **Any current solutions in the travel industry can be explored to the next level?**

A Although travellers can purchase air ticket online and complete online check-in via the internet. However, travellers still have to queue up for luggage check-in. It is suggested that the HKIA should seek solutions that can fully utilise the benefits of online check-in, and simplify the luggage check-in progress by using technology. Robotic counters will be a potential solution. Robots can quickly measure the size and weight of luggage as well as X-Ray scanning in order to circumvent safety issues. Robotic counters can also lower the management cost and increase the travel capacity which can directly enhance the airport competitiveness.

Q **Regarding the items below, how can startups and corporates further enhance the customer experience in the travel industry?**

Online Booking | Luggage | Airport | Retail, Food & Beverage | Premium Service | Inflight Experience | Airport Hotel

A **Luggage**
Since luggage check-in is the bottleneck in the whole departure experience. Robotic counters can be an ideal solution to solve the problem of long queuing time. At the same time, robotic technology is more accurate in scanning prohibited objects. Together with the RFID technology and logistic database linking with the internet, an instant luggage status can be available online; it is possible to lower the risk of losing luggage. Comparing with the airline's traditional counter, robotic counters are more traveller-friendly, accurate, and efficient. Overall, they bring better travel experience.

Retail, Food & Beverage

Airport is the area with busy traffic within 24 hours, but many shops in the airport are only available in the daytime. Travellers are not able to purchase necessary food and beverage, especially when they are travelling in the middle of the night. Vending machines would be the best solution for many airports. Referring to the situation in Japan and Singapore, they have comprehensive coverage that offers different products via vending machines.

Premium Service

Based on the Smart Retails Solutions in Food & Beverage, it can be integrated with delivery robots, mainly providing services to high-end customers such as First Class or Business Class travellers. The solution can be launched in the First-Class lounge that allows users to order food and beverage using the mobile application, and then the delivery robot can pick up the items and send to the travellers. The whole purchasing procedure will not involve any labour force; it makes food & beverage services available anytime that is not limited by working hours. It's one of the value-added services for high-end customers in the future.

Q What is the megatrend of travel technology enhancement & application in the upcoming future?

A Since the airport has one of the highest people traffic in the city, its image directly indicates the productivity and efficiency of the city. Therefore, Robotics and Big Data will be the core travel technology in the future. By using robotic technology in different areas such as check-in counter, food & beverage, facility management as well as customer services, it can consistently offer excellent services to each traveller at the airport. Together with the data collection and scientific analysis, consumer behaviour and travel pattern can be easily simulated. This information can assist the airport to offer relevant solutions to satisfy customer expectations.

Source: My Tea Solutions Limited

RV Automation Technology

RV Automation Technology Company Limited provides comprehensive smart warehouse management services, including implementation of industrial automation techniques and leverage Internet of Things technology to broader business clients. The company specialises in assisting their customers to design and implement robotic solutions in logistics and manufacturing sectors, which include: Smart Warehouse Solutions, V-Smart Storage, Service Robots and Industrial Automation. The company has a team of experienced technical personnel covering Mainland China, Hong Kong, and Taiwan providing comprehensive technical and after-sales service.

Source: RV Automation Technology Company Limited

Q	What do you think about travel technology development and utilisation in coming five to ten years?
A	Most areas in the travel industry (except online booking, which we have seen a great deal of improvement) have been relatively "traditional" over the past 20 years. There is definitely a growing demand for travel technologies in areas like retail, food and beverage in the coming five to ten years.
Q	What are the pain points of the travel industry in Hong Kong?
A	Major transportation hubs (especially airports) are stressful places. Travellers are usually in a hurry and people who work at those transportation hubs (the "ground crew") face increasing demand for even better and timely services such as assisting senior citizens and disabled travellers, more efficient retail experience, as well as streamlining check-in processes. Without an additional level of automation technologies in place, this is a huge challenge for the hardworking ground crew to provide good and timely services to meet travellers' needs.

Q What solutions have you provided for solving those pain points?

A We are currently working with major transportation hubs on the appropriate Internet of Things robotic solutions for tackling multiple pain points we mentioned above.

Q Any current solutions in the travel industry can be explored to the next level?

A We see a lot of potentials for technological improvements in the travel industry.

Q Regarding the items below, how can startups and corporates further enhance the customer experience in the travel industry?

Online Booking | Luggage | Airport | Retail, Food & Beverage | Premium Service | Inflight Experience | Airport Hotel

A **Online booking**
There has been quite a bit of noise in this area because of misleading and inaccurate information (e.g. some online booking businesses got into trouble with false advertising). Maybe corporates could work with tech startups to come up with measures to handle such inefficiencies in this area.

Luggage
Transportation hub operators can work with tech startups on luggage handling with the aim to (i) reduce human injuries, (ii) enhance efficiency, and (iii) reduce complaints in terms of mishandling luggage.

Retail, Food & Beverage
Retail operators can consider working with technology startups on making travellers' purchase experience even more efficient. For example, introducing Robotics solutions for both inventory and warehouse management.

Q What is the megatrend of travel technology enhancement & application in the upcoming future?

A 5G and Internet of Things will significantly improve travel technology and its application in the upcoming future. Artificial Intelligence will also play a crucial role in enabling quite a big portion of travel technologies.

Scooter Technology

Scooter Technology Limited was founded in 2017. Under an Urban Intermodal Passenger Transport System proposal, it aims at the mass adoption of portable electric kick scooters (e-scooters) and making urban transport faster, easier, cheaper and greener.

Source: Scooter Technology Limited

Q **What do you think about travel technology development and utilisation in coming five to ten years?**

A There will be a revolution in travel technology, especially in transportation. Travel within cities will be much faster by an urban Intermodal Passenger Transport System (as in my paper) represented by point-to-point mass transits and portable electric kick scooters (e-scooters). In fact, shared e-scooters have been spreading widely across the U.S. and Europe to provide mobility several times faster than walking.

Q **What are the pain points of the travel industry in Hong Kong?**

A Travellers often face limited sightseeing time and long tiring walks such as outdoor attractions and indoor at the airport. The "first and last miles" are obvious problems that harm their experience and reduce the sites they can visit.

Q **What solutions have you provided for solving those pain points?**

A We provide ultra-portable e-scooters that travellers can bring along for short distance travel and connection. They can visit more places during their limited stay and explore further effortlessly up close when sightseeing in tourist spots. We are also proposing shared e-scooter system as a fast people transport solution in the airport and elsewhere without occupying much parking space.

Q **Any current solutions in the travel industry can be explored to the next level?**

A Walking, travellator, shuttle only for the premium members and even cycling is not efficient enough.

Q **Regarding the items below, how can startups and corporates further enhance the customer experience in the travel industry?**

Online Booking | Luggage | Airport | Retail, Food & Beverage | Premium Service | Inflight Experience | Airport Hotel

A **Online Booking**
Provide better filters and Artificial Intelligence to show only what travellers need.

Airport
Provide e-scooters and autonomous personal vehicles for fast and effortless mobility at the airport.

Luggage
Rather than slowly pushing or dragging luggage, provide a personal electric vehicle to move the luggage and the customer.

Q **What is the megatrend of travel technology enhancement & application in the upcoming future?**

A Transportation will become increasingly fast in the future. Vehicles for travel in the future can reach top speeds that are 5 times higher than what we see today. We will see transportation involve in the following areas:

Indoor: Walking (legs) plus Electric balancing vehicle (e.g. iCarbot, WalkCar)

Interbuilding: Running (legs), Bicycle upgrade to E-scooter

Interregional: Car, Subway upgrade to Battery electric car, Point-to-point guided electric bus rapid transit

Intercity: High-Speed Rail, Maglev upgrade to Hyperloop

Interstate: Subsonic aircraft upgrade to Supersonic aircraft (ramjet)

Intercontinental: Intercontinental flight upgrade to reusable rocket transport network or scramjet

Interplanetary: Chemical rocket upgrade to "Universal" engine rocket or VASIMR

Skyhorse Innovation

Established in 2017, Skyhorse Innovation Limited aims to provide support to startups that are in the electronic, information and communication technology category. The company is relatively new at this juncture but the management has visions for the future. It has set its sights on not just the local Hong Kong market but also the other global markets, providing the Power bank on the go concept worldwide.

Source: Skyhorse Innovation Limited

Q **What do you think about travel technology development and utilisation in coming five to ten years?**

A Travel technology will continue to evolve and be more sophisticated as well as user-friendly for travellers. Since everyone will be on-the-go with phones being the most important gadget for the human race, technology like the power bank rental will be made accessible to travellers.

Q **What are the pain points of the travel industry in Hong Kong?**

A The industry is lacking in convenient charging facilities for travellers. For instance, if the travellers need to charge their phones at a fixed charging point, they will not be able to walk around the airport. Therefore, it is both losses of sales opportunities for the retail outlets as well as the airport itself.

Q What solutions have you provided for solving those pain points?

A With this in mind, "Powersgo" has developed in a smart power bank rental machine. The beauty of this solution is through the app, travellers are able to locate the whereabouts of the machine for rental and return after the usage. There is no need for any human contact throughout the whole process of locating the machine, renting the power bank and returning it to the nearest rental machine. The company aims to provide customers with continuous usage of their phones without worrying about exhausting their phone batteries.

Q Any current solutions in the travel industry can be explored to the next level?

A The charging port station in the airport has gradually changed from a fixed designated area to departure lounge. It was then improved to the rental of power banks via the airport concierge but with limited units for rental. Therefore, the next step that can be explored here is to provide power bank rental machines in the airport for travellers to rent at any time they need it.

Q Regarding the items below, how can startups and corporates further enhance the customer experience in the travel industry?

Online Booking | Luggage | Airport | Retail, Food & Beverage | Premium Service | Inflight Experience | Airport Hotel

A **Airport | Retail, Food & Beverage | Premium Service**
Availability of the power bank rental machines at the airport will let travellers access it with ease. The app provided by the company will provide customers with easy access to the rental machine. Besides that, the app will also be able to provide customers privileges at the retail and F&B outlets to enjoy around the airport. We intend to cooperate with the retail and F&B outlets by giving out discounts vouchers if the customers reach a certain rental usage. Besides that, the company also intends to collaborate with the airlines' privilege card to provide special benefits to their premium card members. Frequent users can also exchange their points with the usage of a day power bank at no rental charge.

Q What is the megatrend of travel technology enhancement & application in the upcoming future?

A As society moves towards the usage of smartphones, the company foresees the usage of the airport app. As travellers download the app, and once they step into the airport, the app will be able to access the travellers' information, from their personal particulars to their spending patterns and eating preferences. The company can then tap on this app platform to track the phone battery level, suggesting users the nearest machines for power bank rental.

WOOFAA

WOOFAA Company Limited provides clean-air solutions to health-conscious people and organisations' living environment, removing odour and allergies. The company develops and distributes ambient air quality monitoring and control products. The solutions embrace applications for household, educational, communal and commercial sectors. The team is well-versed in latest air purification, smart building, and Internet of Things technologies, giving customers an effective and energy efficient solution to any of their odour and air quality problem.

Source: WOOFAA Company Limited

Q What do you think about travel technology development and utilisation in coming five to ten years?

A User-centricity will be the main focus. While it is hard to customise individual user-experience in respect to high user turnover rate, a great improvement on process efficiency is expected from the advancement of technology.

Q What are the pain points of the travel industry in Hong Kong?

A The key difference between the travel and retail industry is the higher security scrutiny in the travel sector. Current biometric tech has been reliable enough for large-scale commercialisation. But extraction of biodata often bumps heads with the local privacy policy. It becomes an agenda for legislators and culture change advocates more than a tech issue.

Q   **What solutions have you provided for solving those pain points?**

A   Second-hand smoke problem is still prevailing in the travel industry. WOOFAA is developing algal photosynthetic based air purifying appliance capable of reducing cigarettes smoke, including tar and hundreds of different harmful chemical in it. This appliance can be deployed in busy public toilets removing bad smell too.

Q   **Any current solutions in the travel industry can be explored to the next level?**

A   Our technology has been proven in form of custom-made vertical green walls. Methods to sizing it down to one-third of a washing machine are being developed. Functional prototype shall be available in mid-2019.

Q   **Regarding the items below, how can startups and corporates further enhance the customer experience in the travel industry?**

Online Booking | Luggage | Airport | Retail, Food & Beverage | Premium Service | Inflight Experience | Airport Hotel

A   **Airport**
Smart toilet includes not only the Internet of Things but also indoor air quality.

Retail, Food & Beverage
We enable the tradition of enjoying wine and cigar at the same time and place, with fewer hazards on second-hand smoke.

Premium Service
For non-smokers, our algal appliance works as an oxygen generator, reducing the prominent greenhouse gas carbon dioxide.

Q   **What is the megatrend of travel technology enhancement & application in the upcoming future?**

A   More personalised traveller-experience technologies to be adopted, like a single pass to check-in for the entire journey.

Highly efficient data, equipment, and money flows are invisible and enjoyed by travellers.

Megatrends in the Travel Industry

We have identified 20 megatrends[3] that are now shaping global consumer markets, critically affecting how the world will live, shop, work and play in the long term. These megatrends represent a fundamental shift in preferences and behaviour that come to define consumer markets over a sustained period of time.

Our megatrend framework helps make sense of the shifts in consumer behaviour and attitudes that are impacting all economies and industries. In today's global environment where change is accelerated by technology, megatrend analysis is critical. Understanding the trends with the strongest influence on the world of tomorrow enables companies and even countries to drive sustainable growth and remain relevant in the face of stiffening competition and disruptive new ideas.

As an international hub for trade and finance, Hong Kong is no stranger to the new global trends or foreign tourists arriving on its shores. We will take a closer look at the four most relevant megatrends affecting the booming global travel sector, particularly their impact on Hong Kong's travel scene. These megatrends include: Experience More, Connected Consumers, Premiumisation and Shopping Reinvented.

These trends share common drivers, of which technology is the most powerful engine of change.[4] The current era of the Fourth Industrial Revolution is underpinned by emerging technologies such as Artificial Intelligence (AI), Augmented Reality (AR)/Virtual Reality (VR), Blockchain and the Internet of Things (IoT). With their potential to generate new consumer use cases, these transformative technologies are capable of shaping megatrends and even disrupting whole consumer categories.

Experience More

The Experience More megatrend refers to the rejection of materialistic values, in pursuit of happiness and status through accumulation of life experiences.[5] This translates into a wealth of opportunities in the travel sector, where shopping takes a relative back seat and authentic experiences that evoke an emotional connection come to the fore. Top travel destinations provide a multi-sensory experience that engages travellers' five senses of sight, sound, taste, smell and touch.

Hong Kong possesses abundant resources to offer such an experience. Travellers can feast their eyes on the dazzling nightscape of Victoria Harbour, fill their suitcases when visiting buzzing shopping malls in Causeway Bay, get in touch with their spiritual side in the Wong Tai Sin district, work up a sweat hiking on one of Hong Kong's 250 islands, or simply digging into local fare at one of the quintessential *cha chan teng*

(tea restaurant) dotted around the city. Indeed, there is perhaps nothing more authentic than earning the glare of the grumpy *cha chan teng* server for occupying one's seat for too long in this fast-paced city.

The experience travel economy is propelled by the rise of mobile technology and youthful tech-savvy travellers. The shift to mobile translates into opportunities to engage tourists at multiple touch points — from pre-departure, to in-country, and post-departure. The youthful travellers' profile also means that they seek out personalised experiences that reflect their tastes and lifestyles, with less hesitancy to try local products and services not readily available at home.

Recognising this, the Hong Kong Tourism Board (HKTB) has made a deliberate shift from its iconic campaign of *mai dong xi* (shopping) *chi dong xi* (eating), two activities Hong Kong is traditionally associated with. Instead, the HKTB is encouraging tourists to look beyond the cosmopolitan city's gleaming surface to uncover hidden gems, understand local culture and history, and venture out into its underrated outdoors. To do so, it has tried to spread tourist traffic to lesser-known neighbourhoods through its promotion of the "Old Town Central" and "Sham Shui Po" campaigns. Most recently, it has also asked locals to go behind their camera lenses as part of the "Reframing Hong Kong" campaign mid-2018. By using photographs shot by locals for international marketing campaigns, the HKTB hopes to encourage tourists to experience and see Hong Kong literally through the lens of a local.

In this context, going forward, there is set to be an increase in platforms tying-up with local tour organisations and retailers to offer travellers a taste of local life through experience tours. KKday, which offers discounted deals and local tour packages, and Airbnb, which has started offering food and photography trips, are leading the charge in moving into this new business space.

Connected Consumers

The expansion of internet availability and increasing affordability of mobile connectivity have both given rise to the Connected Consumer, and rewired their lives.[6] The typical Connected Consumer is tech-savvy, who uses a variety of devices and interfaces to connect to the internet to interact with digital content, access essential and entertainment services and share experiences. The ubiquity of smartphones also means that mobile is the most common mode of interaction with the internet. Connected Consumers are also willing to try new products if it means simplifying their lives, or helping them keep ahead of rapidly changing trends.

Indeed, through the expansion of online channels, the Connected Consumers have benefited in terms of convenience, simplicity, and knowledge during their travels. The existence of online booking platforms such as Expedia, Booking.com and Agoda helps the "Connected Traveller" book accommodation and flights quickly, while meta-search engines such as Skyscanner and Trivago help the budget-conscious to scour the internet for the best deals. Additionally, not only does the "Connected Traveller" like to Experience More, they also like to share their experiences through popular social platforms such as WeChat, Instagram and Facebook. In fact, these social platforms are also popular avenues for research on "off-the-beaten-path" locations and where to find the most authentic local experience.

More are set to join the ranks of the Connected Consumer. As of 2017, 45% of the global population uses the internet. We project that 76% will have access by 2030.[7] As more of them venture abroad in search of enriching experiences, Hong Kong and Hong Kong-based companies would be advised to adopt digital strategies to reach out and capture the hearts, minds and wallets of these "Connected Travellers".

There are already efforts undertaken in the right direction. As part of its efforts to promote the Sham Shui Po neighbourhood, the HKTB has created QR codes on signages in the area. Tourists who are interested can scan these codes and be guided to different venues in the neighbourhood through audio and video guides that are narrated by locals, with navigation aided by Google Maps. More recently, Explorest — an app-based curation of beautiful photo locations, has added Hong Kong as a location. The

Explorest team had collaborated with 15 Hong Kong-based professional photographers to help others discover and capture Hong Kong's most "Instagram-worthy" sights. Visual apps such as these arouse interest, and provide itinerary ideas for the "Connected Traveller".

At the same time however, new trends quickly arriving on Hong Kong's shores do not mean it is as quick to embrace them. For example, compared to mobile neighbour Mainland China, Hong Kong has been slow to embrace mobile payment. Common reasons cited for not adopting new mobile payment systems were the ubiquity of the existing Octopus card, lack of familiarity with new systems, and concerns about data privacy. Going forward however, it may be difficult to resist the mobile payment tide given the dominance in tourist arrivals from Mainland China, for whom the use of third party payment apps such as WeChat Pay and Alipay are second nature. In fact, the tide has already come ashore with WeChat Pay HK partnering with local transport service provider MTR Corporation in promoting the city's mobile payment services in public transport.

Apart from mobile payments taking root, other disruptive technologies such as Big Data and Blockchain are expected to be increasingly employed in the travel scene. Hotel brands will also adopt a more personalised approach in service provision by offering tailored services to establish brand loyalty and encourage repeat stays among travellers. .

Premiumisation

The Premiumisation trend is primarily about evoking emotional appeal, which is both highly personal and strongly intertwined with culture.[8] Specifically, a product or service will appeal to the Connected Consumer looking to encounter Experiences by relating to his or her identification of self. Led by the rising middle class, Premiumisation is about expending a premium on invaluable and exquisite experiences, while forgoing materialistic luxury that are expensive but deemed frivolous. It is also about indulging in the simple pleasures of the modern connected life while staying connected to cultures and traditions.

In this generational shift from the "more expensive is always better" to the "this product or service speaks to me and has great value" mentality, companies have to review how they connect with consumers. Successful companies are those that are able to create an emotional resonance with consumers through fine story telling about the origins of their products, as well as display transparency in their corporate responsibility practices.

With its rich cultural heritage and historical status as a trading crossroads where East meets West, Hong Kong stands on firm foundations to capitalise on this megatrend. The gentrification of Lee Tung Avenue in Wan Chai encapsulates this. Traditionally known as Wedding Card Street for its well-known wedding-related businesses, it has since transformed into a 200-metre-long mixed-use high street development that hosts foreign and local restaurants, shops, luxury businesses and residences. Lee Tung Avenue, as the development is now known, is characterised by modernity, yet retaining the historical roots of Wan Chai with its 50s-style buildings.

Quintessential local brands have started looking to cash in on the Premiumisation trend. Kee Wah a renowned bakery offering quality mooncakes, pastries and bridal cakes, opened its flagship store in Lee Tung Avenue in 2017. The flagship store's appeal to locals and travellers alike looking for gifts with a distinct local flavour is apparent. It is designed with modern sensibilities, yet reminiscent of Kee Wah's original store in Kowloon. A model of the exterior and interior layout of the original shop, and black-and-white photographs of Kee Wah's operating history on display in the Lee Tung store illuminates the story of the company's synonymity with the long tradition of Chinese pastries.

The Premiumisation trend is set to continue, as other retailers look to leverage it. Some may follow in the footsteps of the likes of Kowloon Soy, which crafts soy sauce using age-old methods. Kowloon Soy sells premium soy sauce locally and normal soy sauce similar to mass-market products internationally. Foreign travellers discerning of quality will thus only be able to obtain premium soy sauce exclusively available in Hong Kong. Others may follow the direction taken by lifestyle and retail-design brand Goods of Desire (G.O.D). G.O.D's products embody the idea of cultural contradiction, characteristic of living in modern and cosmopolitan Hong Kong that still hangs on to traditional Chinese traditions. Such products make great gifting ideas for Connected Travellers searching for authentic products, while eschewing mass-produced commercial products.

Shopping Reinvented

While Experience More has gained prominence relative to shopping, it does not mean that the traditionally beloved activity has faded out of the travel picture. It simply means that shopping is reinvented to meet Connected Consumers' demand for a seamless, convenient and immersive shopping experience. In the mobile age, this is facilitated greatly by mobile app features such as search, curated goods, personalisation, loyalty and reward systems. Consumers also increasingly place importance on the price to value ratio, which is underpinned by their perception of the quality of the products.

In contrast to previous years where purchases revolved around the transaction itself and consumers derived joy from obtaining the merchandise, shopping today is about the journey. The purpose of shopping is not solely about buying, but also about understanding the story behind a product, enjoying a seamless payment experience, and receiving excellent after-sales service.[9] This elevates the importance of the entire shopping journey — each node is a valuable opportunity for companies to strengthen their brand and build a relationship with the consumer to stimulate repeat purchases.

In this context, to capture the attention of Connected Consumers, retailers have turned to "omnichannel" retailing and offering "experiential" shopping processes. The emergence of technologies such as VR and AR allow retailers to push the frontiers of experiential shopping. In Hong Kong, health and beauty retail giant AS Watson seeks to provide consumers with just such an experience. Its concept store in Cheung Kong Centre in Central integrates various technologies, such as RFID-enabled self-checkout for convenience, AR make-up counters for consumers to try out new looks, as well as scan-and-go technology that integrates with the company's MoneyBack loyalty app to produce repeat customers. Meanwhile, sporting giant adidas offers workouts from its Training Academy at its Causeway Bay store. It also introduced a VR fitting room since the end of 2017 where shoppers can test its Climaheat jackets in cold temperatures, replete with visuals and sounds from colder climates.

These reinvented shopping experiences create strong memories in travellers' minds not because they are necessarily associated with Hong Kong and its culture, but because the novel shopping experience attained there will remind them of their travel experience. With increasing investment in the development of VR/AR and the rising recognition of use cases by retailers, shopping in Hong Kong is set to be reinvented further. This can only be positive for the city looking to create emotional resonance with Connected Travellers looking for uplifting experiences.

Conclusion

The four megatrends explored in this section — Experience More, Connected Consumers, Premiumisation, and Shopping Reinvented — will shape Hong Kong's travel landscape for some time to come. Underpinning these trends is the rise of internet and the ubiquity of the mobile phone, which has become a trusty tool of the youthful tech-savvy traveller. While this section has examined each of the four trends individually, they are in fact closely intertwined and companies will realise greater success when employing strategies that thread through all the trends.

In doing so, it will be useful to consider the target audience as the Connected Consumer, who armed with a mobile phone on his or her travels, is interested in experiences that engage the senses. The Connected Consumer is more likely to try new premiumised products and services that resonates with them emotionally. He or she will also be more likely to be engaged by the product or service if the shopping experience is unique and seamless. The satisfied Connected Consumer will then likely share his or her experience on social platforms, helping to create better brand awareness.

It is not easy to ride all megatrends at once, but efforts in this direction will go a long way towards helping companies capture the hearts of visitors, and help Hong Kong to retain the travel destination crown.

Endnotes

1   KPMG China Customer Experience Excellence report, KPMG in China, October 2018, https://home.kpmg/cn/en/home/insights/2018/08/customer-first-building-a-trusted-and-connected-customer-experience.html

2   Euromonitor Travel project 2019ed

3   Introducing Euromonitor International's Megatrend Analysis, Euromonitor International, August 2017

4   Technology as a Megatrend Driver, Euromonitor International, January 2018

5   Experience More, Euromonitor International, September 2017

6   Connected Consumer in Asia Pacific: Mobile Centric Mindset Permeates all Aspects of Life, Euromonitor International, June 2018

7   Connected Consumer, Euromonitor International, September 2017

8   Premiumisation, Euromonitor International, September 2017

9   Connected Consumer, Euromonitor International, August 2017

Market Demand Research Methodology

The "Spotlight - Travel" paper presents an overview of the market demand within the Hong Kong travel sector and the different travel solutions being provided by startups accelerated through Global Acceleration Academy (GAA) under HKSTP.

A comprehensive traveller consumer survey and in-depth consumer demand analysis conducted by Euromonitor International through diverse focus groups to deliver the key findings.

Traveller Consumer Survey

We explored the market demand for online booking; luggage; airport; retail, food and beverage; premium service; inflight experience; and airport hotel through an online survey. The survey collected the results of a total sample size of n=308, consisting of a mix of both Hong Kong and Mainland China residents.

To further understand the difference in demand between business and leisure travellers, the traveller consumer survey was divided into two sets of questions (business and leisure focused) depending on the frequency of business-related travel of the sample size. The total sample size consisted of:

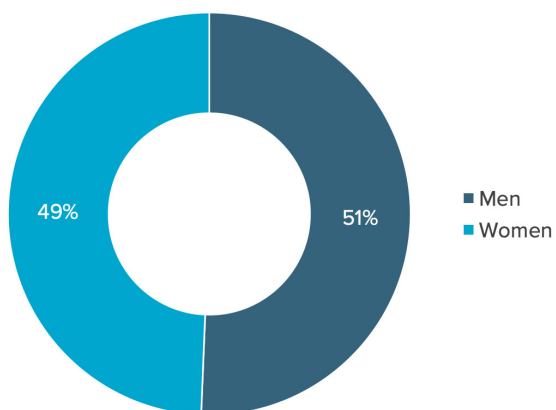- 245 leisure travellers
- 63 business travellers

Survey participants must be aged 18 and above and have travelled at least once through the HKIA within the past six months (between July 2018 to December 2018) prior to the conduction of the survey.
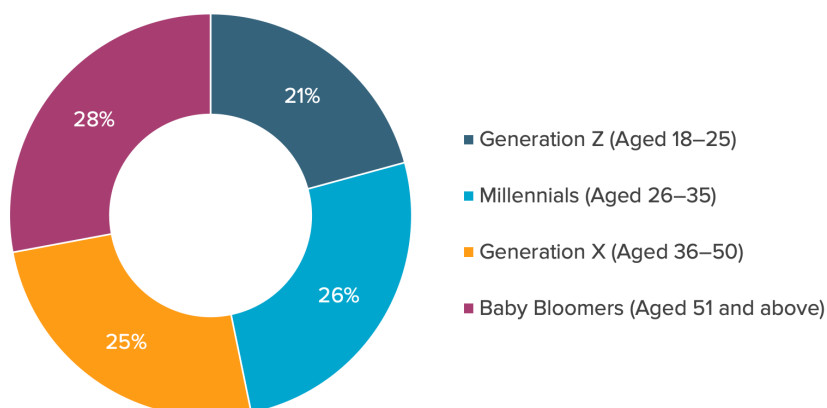

Source: Euromonitor International

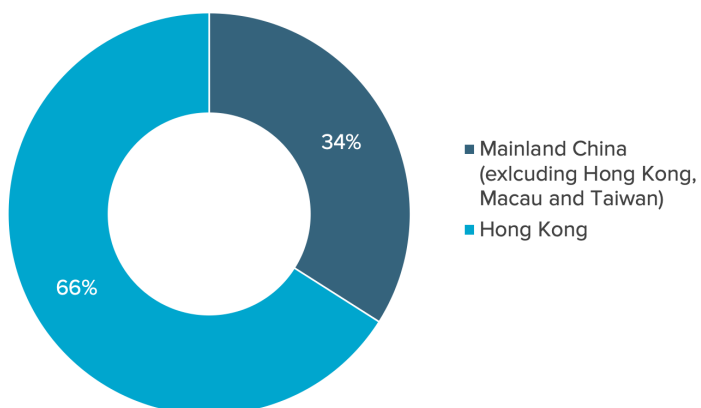The charts below represents the travel survey participants by gender, age group and place of residents.

Survey Participants by Gender

- Men
- Women

49%   51%

Survey Participants by Age Group

21%
26%
25%
28%

- Generation Z (Aged 18–25)
- Millennials (Aged 26–35)
- Generation X (Aged 36–50)
- Baby Bloomers (Aged 51 and above)

Survey Participants by Place of Residence

34%
66%

- Mainland China (exlcuding Hong Kong, Macau and Taiwan)
- Hong Kong

Source: Euromonitor International

Traveller Focus Group

The traveller focus group was designed to do an in-depth analysis on the traveller demand through observing the traveller journey online booking; luggage; airport; retail, food and beverage; premium service; inflight experience; and airport hotel.

Two in-depth traveller focus groups were conducted with Hong Kong and Mainland China residents in December 2018. All participants were independent of Euromonitor International and do not work in any industry related to the marketing and/or advertising. Participants of all traveller focus groups consisted of:

- At least one traveller from the following age groups: 18–25 (Generation Z); 26–35 (Millennials); 36–50 (Generation X); and 51 and above (Baby Bloomers)

- Travellers that have travelled at least once recently (between July 2018 to December 2018) for either business and/or leisure purposes

- Travellers that have scheduled their trips through online and/or offline channels