



**INDUSTRY REPORT** 

Providing High-Touch Through High-Tech: Resilience In Hospitality Through Human, Technology & System Convergence



The Covid-19 pandemic has taken a severe toll on the global hotel industry. In Canada alone, the accommodation and food services industry (the hospitality industry in a broad sense) accounts for 1.3 million jobs in the national economy, and contributed \$44.6 billion to Canadian GDP in 2019. In Canada, as in all countries around the world, travel restrictions have led to staggeringly low occupancy levels, sometimes in the single digit percentage.

However, the pandemic is also accelerating our journey in an Industry 4.0 era that weaves artificial intelligence and digital technologies into the everyday lives of individuals, businesses and society. Can this advancement of technology provide a silver lining opportunity for one of the oldest industries – an industry positioned as a high-touch, customer-centric one, providing home and food away from home? Can technology also assist in connecting hotels, local businesses and global markets?

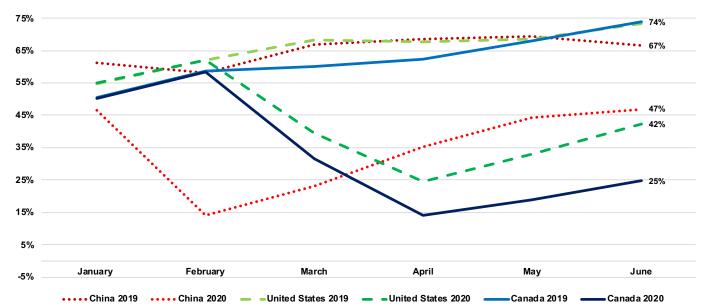
Uncertain times have been catalysts for the reimagination of traditional hotel operations. This pandemic will be no different. With volatile occupancy levels and average daily rates, hotel owners are adopting new technologies to mitigate risk and bring more certainty to hospitality. Key technological improvements help mitigate some operational challenges that arise due to the uncertainty surrounding the pandemic: a possible second wave, a possible vaccine with an uncertain timeline.

Utilising technology within a hotel has for long been viewed by customer and hotelier alike contrary to traditional hotel operations. Pre-pandemic, customer care through constant contact was the essence of the hotel business. Using technology within operations was perceived to be an expensive proposition.

This transformation is not unique to the hotel business. Several key industries including retail, banking, and logistics have deployed technology within their daily operations to cope with restrictions on travel and trade. Industry 4.0 digitization is enabling finer-grained links between human behavior (be it the customer, staff or management) and the ever more dynamic and interconnected real-world contexts created in real time by delivery systems, supply chains and markets.

The hospitality industry is not lagging behind. During Covid-19, technology can help make guests feel safer and more comfortable, playing a key role in hoteliers' management of risk and recovery. This special market report highlights how technology can be used within daily hotel operations, while also understanding its impact on productivity and consumer beliefs.





Estimated Occupancy Trends, China, United States, Canada: January to June - 2019 & 2020

Source: STR and Horwath HTL Compilation

# Thinking Beyond a Period of Uncertain Times

The hotel industry is one the largest affected industries by the first wave of this pandemic; yet the hotel industry is adopting new best practices to become more resilient to possibilities of a second wave. This is visible when observing trends within the Chinese hotel industry. At first, as early as in January and February of 2020, Chinese hotels experienced steep occupancy rate declines, down to 14% (as compared to 58% in February 2019). Since then, the Chinese hotel industry has regained strength, ending the month of June at a 47% occupancy rate; even as concerns of a possible second wave persist.

The United States and Canada implemented travel restrictions only by mid-March; yet occupancy rate declines preceded policy interventions. In the United States, occupancy levels decreased from a high of 62% in February 2020, to a low of 25% in April, gaining strength in May and June to end at 42%. Similarly, in Canada, where travel restrictions are more stringent than in the US, occupancy levels decreased from a high of 58% in February, to a low of 14% in April, gaining to 25% in June 2020. This compared to occupancy levels being approximately 74% in June 2019.

The chart above highlights the evolution of hotel occupancy levels in China, United States and Canada for the months of January to June, for 2019 and 2020.

It is evident the hotel industry is facing the need to manage both declines in demand and increases in uncertainty. In each of the previous crises – September-11, SARS, the 2008-09 Financial Crisis -- hotels adopted an approach combining i) targeted marketing and communication, ii) reimagination of customer experience, and iii) rethinking of efficient hotel operations. Customers' tastes change, with a greater demand for security, convenience, and comfort – and hoteliers respond.

The question remains, can technology assist hotels as travel opens up when the Covid-19 pandemic is contained? Today's hospitality industry is being transformed into a technology-based one, supported by artificial intelligence (AI), Cloud Computing, and various mobile applications. Aspects of traditional hotel operations have continued to use technology-enabled hardware and software.

Technology enables hotel operations to become adequately contactless, thereby ensuring social-distancing between guests and staff. The following section highlights how technology can be effectively deployed, to assist hotel operators during such times.





Source: citizenM

# **Designing a Hotel Suited for Pandemics**

Consider retail, another industry where operations are consumer centric. Businesses are exploring the 'frictionless store', a notion that will potentially disrupt the industry (Selena Zhu et al, 2019-2020). The frictionless store caters to the high-tech lifestyles of consumers, looking for flexibility, convenience and security. Amazon with Amazon-Go, Walmart with Innovative Retail Lab and Alibaba with Hema, have turned their operations 'frictionless'.

Similarly, can the hospitality industry, one that was traditionally high-touch in nature, turn into a hi-tech one, where contactless or 'frictionless' service is encouraged. So, what does a contactless-hotel look like?

# Designing 'Socially-Distanced' Spaces – From High-Touch to High-Tech

In new age "lifestyle" hotels such as citizenM, where guests sleep, work, play and meet like-minded people in a highly social and high-touch environment.

The citizenM hotel brand designed spaces that were communal, allowing for greater connectivity between people. Smaller room sizes, with larger and more integrated lobbies where guests can work, get a drink, and connect with like-minded travellers were some key highlights of citizenM hotels. In the times of a pandemic, where mass gatherings are restricted and a minimum distance of 6 feet is required between guests, the integrated and highly connected environments might need to be reimagined.

When designed for the first time, citizenM hotels developed the technique of "reverse-thinking", where targeted guest needs and motivations were placed at



Source: Yotel Lobby, Singapore

the centre of the design process, and where spaces were designed to meet their needs. A similar technique maybe utilized within the pandemic-proof hotel, where designing spaces takes into account enhanced safety, security and sanitization measures – catering to today's guest needs.

Spaces larger in nature, with more distance and less people are the future. Seamless and integrated barriers within the design could enhance the distance between various guests. Contactless service, enabled through technology can be utilized throughout the hotel.

### Reception Areas in a High-Tech World

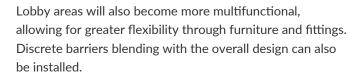
Structurally, the lobby area will continue to look welcoming. The traditional reception desk is replaced by a much smaller counter. Going "frictionless", several self-check-in free standing kiosks, placed 6-feet apart, are placed within the lobby area.

Similar to the airport self-check-in kiosks, the hotel kiosks function with a unique verification ID, followed by a government issued ID card as validation. Several companies, such as Hilton, Linq Hotels, Yotel and Premier Inn have implemented this technology, and it is bound to expand. These kiosks are linked to loyalty programs, using facial recognition technology.

For independent hotel owners, cost-effective technology providers such as Fuel, Hello Guest and others allow application driven self-check inns and outs for guests, with or without the need of a physical kiosk. These kiosks would be able to assign a clean room to guests, process payments using credit or debit card reader, and pay for any additional amenities or services required during the guests' stay.







# **Checking into your Room**

The technology of utilizing your phone to open a hotel room has been available since the last decade, but it took a Covid-19 pandemic to make this trend go mainstream. The technology has steadily grown over the years, with more than a million hotel rooms worldwide utilizing this technology as of 2019.

Several hotel brands such as Hilton, Marriott, Disney Resorts and MGM Resorts have also deployed this technology within various properties in their portfolio, while also linking it to their loyalty programs. It is estimated Hilton has deployed this technology in over 4,000 properties worldwide, as of 2019.

# In-Room

In-room facilities and amenities are unlikely to change dramatically. Prevailing in-room technology such as personalised welcome screens, smart lighting, smart TVs to access various streaming services, will continue. The aspect that could change is using technology to enhance guest experience. Examples include using app-based technology to provide guided mediation, lighting that assists in syncing Circadian rhythms, and using virtual assistants to close curtains.



#### **Restaurant and Bars**

Emerging from a lockdown, restaurants and bars are gradually opening with limited capacity and enough space between tables enabling safe distancing. In a post-pandemic world, terraces and outdoor seating is expected to gain in popularity, even in colder temperatures by using outdoor heating facilities. Technology can ensure "frictionless" processes, thereby increasing safety. Examples include:

- Low touch technologies:
- App based technologies have become mainstream in F&B operations - easing pre-ordering for pick-ups, claiming a place in line for seating and limiting times within dining rooms. These are widely used in airport restaurants, and gaining popularity within restaurants and bars worldwide.
- On-line menus available to download using a QR code, on guests' personal smart phones. Several restaurant establishments including the Kyo Restaurant at Hotel Place d'Armes in Montreal have used this technology to limit contact on surfaces. The QR code options are also available in Asia to process payments using the smart phone.
- Rise of virtual restaurants: With the advancement
  of app-based delivery portals such as Uber Eats and
  DoorDash, restaurants are starting to let go of the
  traditional dining rooms with no physical store front,
  with only a kitchen to deliver food orders thereby
  enabling a complete "frictionless-restaurant". This could
  reduce operating costs by a third, mainly driven by
  reduced rental space.



# Sales and Marketing

- Communication: Technology maintains the connection with the brand and hotel establishments when face-to-face interactions are discouraged. What used to be a technique to speak to a segment millennials -- became the primary way of engaging with a customer base. Using Twitter, YouTube, Facebook, Instagram, and Google My Business, hoteliers send the message hotel policies are appropriate, hotel establishments care about their loyal guests; and online reviews help reluctant customers regain confidence in travel. Maintaining the dialogue encourages customers to travel back to the hotel once restrictions are lifted. Developing an online customer relationship that preserves value is a core part of the hotelier's pandemic toolkit.
- Reservations and Booking Channels: Individual leisure travel is likely to be the first segment to pick up in hotel reservations. These leisure individual travellers are currently using online booking engines, online hotel reservation platforms, hotel mobile apps, and are driven in part by loyalty programs. Bookings within several markets in Asia Pacific are already witnessing this trend, with very few reservations being made through older reservation platforms that include GDS systems, travel agents, wholesale or MICE and Central Reservations Systems (CRS). Though this trend has been emerging significantly in the last 5 years, the lack of traditional booking systems during the pandemic has accelerated customers embracing online hotel bookings faster.

### **Reimagining Traditional Operations**

• Housekeeping: In times such as these, cleanliness has become of utmost importance for any guest and hotel establishment alike, and the new-age germ zapping robots are becoming a celebrity within the business. Developed by a company called Xenex and typically used in hospitals, the robot is already being utilized in Texas, at the Westin Houston Medical Centre Hotel. The machine emits intense germicidal light that kills pathogens, after being wheeled in by housekeeping staff. These robots do not replace housekeeping staff entirely, as the core cleaning would yet need to be carried out, thereby saving hospitality jobs. Though an expensive proposition, it allows guests to feel more secure in the hotel environment.

- Customer Service: Whether it be for delivery of room service or getting coffee and towels, robots can be utilized to perform simple service tasks previously reserved for staff interactions. Reducing staff interactions in hotels may become beneficial rather than detrimental, and innovative hotel companies have realized robots can help in client-facing roles, performing simple tasks. The millennial brand, Yotel, has successfully deployed robots. The robots do not necessarily reduce staff count, but allow hotel staff to focus on the delivery of essential tasks. Such robots also work well in the economy and midscale hotels where they lead to additional cost savings.
- Property Management and Administration: Property Management Software or PMS has been available for several decades. But imagine the PMS on the cloud, where with one click in a remote location, a GM can still have access to all the real-time property level data. Several companies, such as Cloudbeds, exist in providing cloud computing for the hotel industry. Cloud computing, usually app based, also assists in enhancing guest experience (enables staff to work more efficiently by being more mobile), lower operational costs (reduced on-site hardware and software requirements), and remote working for hotel staff (staff have access to the app via an internet connection).
- Inventory Management: Utilizing a mobile device to monitor inventory, thereby forgoing the traditional pen and paper. Employees can directly submit their inventory purchase orders, including the frequency at which they occur. These devices can also analyse the inventory required by an establishment, by utilizing recipes and the frequency of sales for each menu item on a weekly or monthly basis.
- Staff Scheduling: Utilizing scheduling software for managing weekly schedules using historical staffing patterns, losing the traditional paper in the back-ofhouse. The software or app allows restaurants to monitor sales, staffing budgets, and controlling staff pay for overtime.







# Long Term Benefits of High-Tech

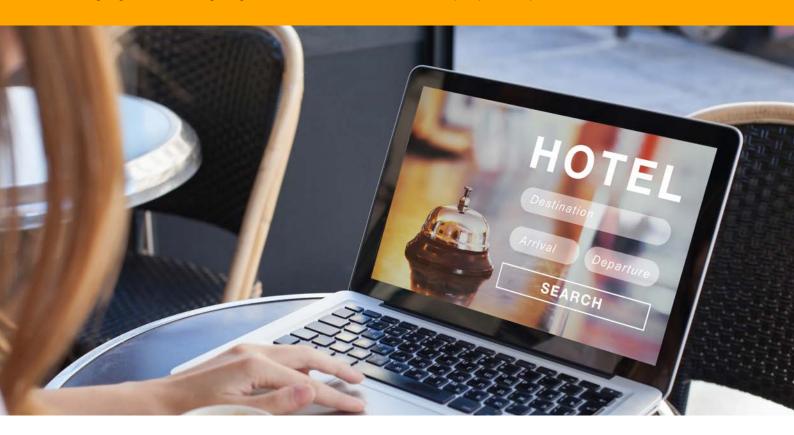
Hotel owners and developers may be hesitant to deploy technology if Covid-19 is only a temporary phenomenon. After all, the upfront set-up costs are not trivial. Owners and developers are also skeptical, given how much and how frequent technology can change. Given the advancement of technology in recent years, these set-up costs have significantly reduced. Embracing technology has long term benefits beyond Covid-19, such as:

- Higher Communal Outreach: A hotel has always been a place where people would connect, but its no longer a place for only guests and staff to connect. Mobile app technology also allows locals to interact with the hotel and their staff. AccorLocal, the app developed by Accor Hotels, does exactly that. The app allows local residents to be connected to merchants rendering their services at the hotel, allows concierges to assist with any enquiries and provide services, make restaurant reservations (usually within the hotel), book yoga and other fitness classes, pick up breakfast on their way to work, pick up and drop off dry cleaning (without a time limit as hotels operate 24/7), amongst others. Spending money on such services allows locals to gain loyalty points on the respective loyalty programs, thereby enjoying perks while on holiday.
- Environmentally Sustainable: Convenient technology is saving the environment. The use of technology allows for a largely paper and plastic-free work environment. When technology is utilized in inventory management, staff scheduling, check-ins and check-outs, menus etc. several tonnes of paper and plastic are saved. According to the New York Times, Hilton estimates approximately 40 tons of plastic were saved by over 7 million Digital Key downloads.

- Enhanced Guest Retention: Guests now have access to hotel properties and hotel brands, at any given point and at their convenience. This allows for the hotel properties to directly communicate with the guests, prior to, during and after their stay. Increased information sharing allows guests to expect a certain level of service and engagement with staff, while also allowing hotels to plan a guests' stay in advance.
- Increase Employee Engagement: Easier staffing schedules, allocating duties to staff, tracking performance goals and achievements, and using Al and technology to allow employees to have access to several online training modules, allow staff to be engaged at work. The easy access to schedules also means staff have more control on their work-life, knowing how hard this can be with traditional operations.

  Additionally, when technology is used to replace more mundane tasks such as check-ins and check-outs, staff can focus more on guest needs, while also personalizing their stay and overall experience.
- Reduced Overall Cost: Replacing some functions with technology leads to additional cost savings as well. For instance, the digital key technology is far less expensive than the older RFID plastic key-card technology for door locks. The newer technology is also highly energy efficient, thereby reducing utility costs – one of the largest line items in a profit and loss statement within a hotel. Hotel developers and owners are typically charged with an upfront cost at the beginning of switching to newer technology, where benefits and cost savings are higher in the long run.





# **Looking Ahead**

Resilience is the capacity for complex systems to survive by adapting, evolving and growing their operations in the face of turbulent change. In the hospitality industry, the resilience lies in being human-centered, risk intelligent, flexible and agile for real-time and long-term market outcomes -ensuring financial viability.

This report illustrates the acceleration and deepening of the convergence of human-touch and technology through Industry 4.0 digitalization. This enables the hotel business to provide a home away from home, while allowing for sustained growth. Technology assists in providing safer accommodations and dining options. For the hospitality industry, it's generating systemic change as guest preferences and priorities evolve. Technology facilitates financial sustainability even as operating conditions remain drastically altered; and as we witness reductions in capacity for revenue generating spaces (i.e. Lobbies, F&B outlets and event spaces).

Technology is not about technicality – it's about being more creative when we use our spaces, our precious human capital; it's about maintaining the high-touch nature that defines our hospitality business.



#### **Authors**



Ambika Gandhi, MRICS
Director
Horwath HTL Canada
agandhi@horwathhtl.com

A Cornell Hotel School post-graduate, Ambika has over 13 years of hospitality development, operations and consulting experience with significant experience in conducting market studies in real estate sectors, including hotels, tourism, retail, residential and commercial projects. Ambika has completed projects, spanning over USD 12 billion in asset value, in numerous locations including Singapore, Malaysia, Vietnam, Indonesia, UAE, Qatar, Morocco, Maldives, Micronesia, Mauritius and Canada. Ambika is also a member of the Royal Institute of Chartered Surveyors (MRICS).



**Dr. Laurette Dubé**Professor

McGill University / Desautels
laurette.dube@mcgill.ca

Professor Dubé holds the James McGill Chair of consumer and lifestyle psychology and marketing at the Desautels Faculty of Management of McGill University. Dr. Dubé's lifetime research interest bears on the study of affects, behavioral economics, and neurobehavioral processes underlying consumption, lifestyle, and health behavior. Her translational research examines how such knowledge can inspire more effective behavioral change and ecosystem transformation. Dr. Dubé is also the founding chair and scientific director of the McGill Centre for the Convergence of Health and Economics (MCCHE), a unique initiative to push the boundaries of disciplinary and complexity sciences to help individuals, communities, businesses, social enterprises, and governments to tackle, the most pressing societal and economic problems facing the world that lies at the nexus between agriculture, health and wealth production, consumption and distribution.

#### Horwath HTL

At Horwath HTL, our focus is one hundred percent on hotel, tourism and leisure consulting. Our services cover every aspect of hotel real estate, tourism and leisure development.

Our clients choose us because we have earned a reputation for impartial advice that will often mean the difference between failure and success. Each project we help is different, so we need all of the experience we have gained over our 100-year history.

We are a global Brand with 47 offices, who have successfully carried out over 30,000 assignments for private and public clients. We are part of Crowe Global, a top 10 accounting and financial services network. We are the number one choice for companies and financial institutions looking to invest and develop in the industry.

We are Horwath HTL, the global leader in hotel, tourism and leisure consulting

#### Our Expertise:

- Hotel Planning & Development
- Tourism & Leisure
- Hotel Asset Management
- Hotel Valuation
- Health & Wellness
- Strategic Advice
- Expert Witness & Litigation

#### Horwath HTL Canada

485 McGill Street, Suite #1020 Montréal, Québec H2Y 2H4 Phone: +1 514 284 7720

439 University Avenue, 5th Floor, Toronto, Ontario M5G 2N8 Phone: +1 514 284 7720





AFRICA EUROPE LATIN AMERICA

Ivory CoastAndorraArgentinaRwandaAustriaBrazil

South Africa Croatia Dominican Republic

Cyprus Mexico

**NORTH AMERICA** 

ASIA PACIFIC France

Australia Germany MIDDLE EAST
China Greece UAE & Oman

Hong Kong Hungary India Ireland

Indonesia Italy Atlanta Japan Netherlands Denver Malaysia Norway Los Angeles New Zealand Poland Miami Singapore Portugal Montreal Thailand New York Serbia

Spain Norfolk
Switzerland Orlando
Turkey Toronto

**United Kingdom**