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Japan Tourism Agency

## **Report of Survey**

Public and Private Initiatives in Each Country and Region  
to Revive International Tourism Exchange from the COVID-19 Crisis

Japan Tourism Agency

(2021)



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## Executive summary

The tourism industry has been seriously damaged by the restricted cross-border movement of people due to the COVID-19 crisis. To overcome the crisis and revive the industry, it is vital to improve increase the resiliency of the tourism industry by close coordination between countries and public-private partnerships. To do that, Japan Tourism Agency (JTA) conducted a research on “Public and Private Initiatives in Each Country and Region to Revive International Tourism Exchange.

This report summarizes the results of studies conducted by three methods: questionnaire survey, worldwide open recruitment of solutions and desk research. This report is divided into four parts; “Chapter 1. Introduction”, “Chapter 2. Review of the response to the COVID-19 to date”, “Chapter 3. Efforts to revive tourism exchange from the COVID-19 crisis” and “Chapter 4. Conclusion.” For each of these perspectives, JTA focus on public measures and private services. The following is an outline of chapter 2 and 3 except an introduction and a conclusion.

### Chapter 2. Review of the response to COVID-19 to date

#### Section 1. Public sector’s measures that have been effective in each country or region in responding to the COVID-19 crisis

This section focuses on various measures in response to the COVID-19 crisis in the tourism industry that have been conducted by the public sector in each country. As the situation of infection in each country is not on the same level and there are differences in various conditions, such as population, geographic conditions, custom, and legal systems among nations, it should be noted that efficacy of measures depends on the conditions that differ from country to country. In this report, in order to organize the various efforts, the measures are divided into six categories. It also describes distinctive ones.

Categories of public measures:

1. Measures for management of travelers and their behavioral regulations
2. Measures for supports for tourism-related businesses
3. Measures for stimulating demand for domestic travel
4. Measures for revival of international tourism exchange
5. Measures related to hosting the MICE events
6. Other measures

#### Section 2. Private Sector’s Effective Solutions in Responding to the COVID-19 crisis

This section focuses on the private sector’s effective solutions in responding to the COVID-19 crisis. It organizes those solutions by the customer journey such as Before-travel, During-travel, and After-travel. Even before the COVID-19, there had been many innovative solutions with digital technologies or robotics. In the “With COVID-19 era”, these solutions especially support to keep social distancing or reduce person-to-person contact. In addition, they ensure traveling with a safe mind and are expected to realize safety and secure travel experience.

## **Chapter 3. Efforts to revive tourism exchange from the COVID-19 crisis**

### **Section 1. Tourism strategies in each country and region**

This section consists of two main points. One is the status of strategies for reviving tourism exchanges from the COVID-19 crisis. The other is the practice and promotion method of Tourism Crisis Management to increase the resiliency with the COVID-19 crisis. The practice of Tourism Crisis Management is essential to enhance the resiliency of the tourism industry. The survey results imply that, in the process of recovery from the COVID-19 crisis, it is important to focus on the following points.

- Learn from the case studies of each countries' practices and improve the quality of public measures to deal with the COVID-19
- Leveraging the experience through the COVID-19 crisis to countermeasures against risks of other infectious diseases
- Leveraging the experiences through the COVID-19 crisis to countermeasures against risks OTHER THAN infectious diseases such as natural disasters

In addition to that, in order to continually commit to practice Tourism Crisis Management, it is a key figure that the government secures stable financial resources.

### **Section 2. Solutions to embody the “continued growth” in a world that has experienced the COVID-19 crisis**

In this section, the focus is on solutions in private sector that contribute to “continued growth” in the tourism industry. As Chapter 2. – Section 2, those solutions are organized by the customer journey; Before-travel, During-travel, and After-travel. According to the research results, the following technologies are particularly common in this industry; AI, Information platform, communication Assistance, cognitive technology, robotics and AR/VR. The solutions described in this chapters are also categorized into three parts in terms of the benefits these solutions offer.

- Seamless and secure travel
- Contributing Sustainable tourism
- Offering an attractive experience and enhance traveler's engagement

# 1. Introduction

In recent years, The Tourism industry has been considered a growth industry; accounting for about 10% of the world's GDP and creating one out of ten people's jobs worldwide. Therefore, it is enormous that the impact of "the evaporation of travelers" due to the COVID-19 pandemic. Now it is realized once again that the role of this industry plays in society, the magnitude of its responsibility and its vulnerability to various disasters.

In October 2019, the G20 Tourism Ministers Meeting under Japan's chairmanship adopted the "Actions for Strengthening the Resiliency of Tourism" as Annex 2 of the Ministerial Declaration on Tourism. The declaration aims to increase the tourism industry's resiliency by sharing the experience and knowledge gained from dealing with various threats in different countries. Now is the time to put it into practice and work together to overcome the COVID-19 crisis. The cooperation should not be limited to the public sector. There is the world's common understanding that public-private partnerships are driving the growth of the tourism industry. It is also essential for the realization of the continuation of industry's growth after the pandemic is contained.

For this purpose, Japan Tourism Agency (JTA) has decided to conduct a survey and draw up a report of effective public measures and private solutions such as advanced products and services. Furthermore, JTA is planning to hold a Tourism Ministers Meeting in Tokyo in 2021 with the same aim. This report will be utilized to enhance the discussions at the meeting. JTA would appreciate it if these activities could be any help to contribute to the practice by each country and organization.

In order to draw up this report, JTA conducted the following activities:

1. Conducting desk research in Japan.
2. Holding an open recruitment of solutions that contribute to the realization of new tourism exchange and MICE.
3. Conducting a questionnaire survey to target countries and international organizations that are expected to be invited to the Tourism Ministers Meeting in Tokyo in 2021.

JTA would like to express our deepest gratitude to all the entities that cooperated.

**Countries and international organizations that are responded to the survey**

Brazil
Brunei Darussalam
Canada
Fiji
France
Germany
Indonesia
Italy
Lao People's Democratic Republic
Malaysia
Myanmar
Palau
Saudi Arabia
Singapore
Switzerland
Thailand
Turkey
United Kingdom of Great Britain and Northern Ireland
Viet Nam
Organization for Economic Co-operation and Development (OECD)
World Tourism Organization (UNWTO)

## 2. Review of the response to COVID-19 to date

### 2.1. Public sector's measures that have been effective in each country or region in responding to the COVID-19 crisis

This chapter focuses on various measures in response to the COVID-19 crisis in the tourism industry that have been conducted by the public sector in each country. As the situation of infection in each country is not on the same level, and there are differences in the legal systems and customs among nations, it should be noted that efficacy of measures depends on various conditions that differ from country to country.

The collected measures are organized as follows:

1. Management of travelers and their behavioral regulations
2. Supports for Tourism-related Businesses
3. Stimulating Demand for Domestic Travel
4. Revival of International Tourism Exchange
5. Measures related to hosting the MICE events
6. Other Measures

#### 2.1.1. Management of travelers and their behavioral regulations

The first are measures related to the management of travelers and the regulation of their behavior.

As the spread of COVID-19 went on, countries began to implement travel restrictions after January 2020. During worst of the state in April 2020, travel itself was restricted in 96% of global destinations<sup>1</sup>. Since then, the situation has been improving. But most of countries still restrict depending on the infection situation by repeat easing and tightening. The travel restrictions are thought to be a natural and pertinent measure to contain COVID-19 in the country without allowing it to enter or leave the country. The restriction conditions are different among countries, but there are basic patterns in restrictive measures, namely, (1) the requirement of proof of negative COVID-19 test and (2) self-isolation based on the characteristics of COVID-19. Moreover, some countries try to change the approach for restriction to be faster, more agile and fine-grained.

- ✧ According to the standard travel guidelines for intra-regional travel agreed upon in October 2020, the **European Union** is to coordinate travel restrictions through "Re-open EU"<sup>2</sup>, a web platform to support a safe restart of travel and tourism throughout Europe. Information on infection status, specific measures, border closures, curfews, and other relating measures is weekly collected from each member state to the European Centre for Disease Prevention and Control (ECDC), allowing ECDC to keep tracking the latest situation. Based on a quantitative composite index consisting of the cumulative 14-day the COVID-

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<sup>1</sup> COVID-19 Related Travel Restrictions , UNWTO, 2020, <https://www.unwto.org/covid-19-travel-restrictions> (accessed 1-3-2021)

<sup>2</sup> Re-open EU, European Union, 2020, <https://reopen.europa.eu/en> (accessed 24-1-2021)



19 case notification rate and the test positivity rate, each region of Member state's risk level is evaluated on a three-level scale (green, orange, and red). If any restrictions are to be imposed on entrants from other orange and red regions, an implementation rule such restriction will be at the discretion of each member state.

Some countries have started to ease travel restrictions concerned with tourist for the purpose of sightseeing since the summer of 2020 and try to differentiate themselves by proactive approaches. According to the **UNWTO**, destinations whose economy are highly dependent on tourism are the most likely to ease travel restrictions.<sup>3</sup> Of the 87 destinations that have eased travel restrictions as of the end of July 2020, 20 are Small Island Developing States (SIDS) where main source of income come from tourism industry. It should be noted, some SIDS have been taking proactive initiatives that take advantage of their flexibility in spite of limited infrastructures.

- ✧ **Maldives** reopened its borders to tourists of all nationalities on July 15 in 2020, and no travel restrictions have been enforced since then. Voluntary quarantine on arrival is not compulsory, however, submitting a negative PCR test certificate within 96 hours of departure to the Maldives is required. A health declaration form must also be submitted as well at least 24 hours before departure via the country's immigration online system named "IMUGA"<sup>4</sup>. "Maldives Border Miles"<sup>5</sup> is the world's first nationwide loyalty program centered on tourism promotion launched for holiday travelers. It takes advantage of the new touchpoint that all travelers need to access the system.
  
- ✧ **Fiji's** tourism industry accounts for about 40% of the country's GDP. It is particularly dependent on tourists from Australia and New Zealand. Therefore, Fiji is seeking to establish a travel bubble, called as "Bula Babble", with both countries as soon as possible. In parallel, Fiji has launched "Blue Lanes"<sup>6</sup> initiative to welcome foreign maritime tourists visiting by sea on yachts or pleasure boats. If a traveler has already obtained a negative certificate prior to departure and travels directly from the port of departure to Fiji, the voyage itself can be counted as part of the 14 days of self-isolation. If the duration of the voyage is less than 14 days, it can be compensated by self-isolation for the missing days. The RT-PCR test is conducted again upon arrival, and if the test remains negative, the traveler is allowed to enter the country. Since the first arrival of travelers using this system in July 2020, 90 vessels already arrived by the end of October 2020<sup>7</sup>.

Regarding the management of travelers after entry into the country, behavior-related regulations (e.g., wearing masks, limiting the number of people allowed to enter facilities, etc.) are established in most cases. In some of those cases, the regulations, mandatory and penalties are imposed to deter behaviors that may lead to the spread of infection (e.g., France, Germany, and Singapore). In addition, there is a growing trend to require travelers to use a contact tracing app in order to quickly respond to the outbreak (e.g., Australia, China, France,

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<sup>3</sup> TOURISM RESTARTS: 40% OF DESTINATIONS HAVE NOW EASED TRAVEL RESTRICTIONS, UNWTO, 2020, <https://www.unwto.org/news/tourism-restarts-40-per-cent-of-destinations-have-now-eased-travel-restrictions> (accessed 24-1-2021)

<sup>4</sup> Immigration services at your fingertips, Maldives Immigration, 2020, <https://imuga.immigration.gov.mv/> (accessed 24-1-2021)

<sup>5</sup> Maldives Border Miles Tiers, Maldives Border Miles, 2020, <https://bordermiles.mv/> (accessed 24-1-2021)

<sup>6</sup> Sail Fiji's "blue lanes", Tourism Fiji, 2020, <https://www.fiji.travel/en/articles/sail-fijis-blue-lanes> (accessed 24-1-2021)

<sup>7</sup> Blue Lane initiative receives positive response, Fijian Broadcasting Corporation Limited., 2020, <https://www.fbcnews.com.fj/business/blue-lane-initiative-receives-positive-response/> (accessed 24-1-2021)

India, Israel, Republic of Korea, and Singapore). But some issues have been raised especially about privacy protection, depending on whether the application is linked to a personal ID or whether GPS location information is obtained. Therefore, it is important to consider the balance between necessity by public health and recognition of privacy.

### **2.1.2. Supports for Tourism-related Businesses**

The second is supporting measures for tourism-related businesses.

It is the fact that the tourism industry is devastated by the measure to fundamentally restrict movement, which is a common issue in all countries. Various support measures are taken, mainly through fiscal and monetary policies. The measures themselves are divided into direct support and indirect support. The latter stands for measures that stimulate travel demand, which will be discussed in the next section. Although the focal areas to be supported and the scale of the measures vary from country to country, certain common measures can be roughly summarized as follows:

- **Reduction, exemption, or deferral of tax payments imposed on businesses**

- ✧ In **United Kingdom**, the rate of VAT reduced from July 2020 with the aim of support the hospitality industry. The initial plan was for a six-month period. As of March 2021, it has already been extended to the end of September 2021. In addition, support system has been established to allow company to defer paying VAT or pay instalments.

- **Special measures for business debts**

- ✧ In **Switzerland**, a decision by the cabinet (Federal Council) was made to implement a temporary legal standstill for the travel industry until the end of December 2020. Accordingly, travel agencies could not be prosecuted for refunds after a trip cancellation until 31 December 2020.

- **Reduction, exemption, or deferral of tax payments imposed on individuals**

- ✧ The reduction of VAT rates has been implemented in many countries as a remedial economic measure. In some cases, goods to be deducted include tourism-related consumption, which promotes domestic consumption in the sector.
- ✧ In **Turkey**, the tax rate on domestic airline tickets has been temporarily reduced from the standard 18% to 1%, and the rate on hospitality services has been reduced to 8%. In addition, the start of collection of the accommodation tax, which was supposed be introduced in April 2020, has been postponed.
- ✧ **Malaysia** has also provided personal income tax relief of up to MYR1,000 on domestic travel expenses that are incurred until December 31, 2021.

- **Reduction, exemption, or deferral of payment of utility bills (water, electricity etc.) and insurance premiums, etc.**
  - ✧ As tourism is a major industry in **Fiji**, discounts on water and electricity rates were applied to all citizens, not just tourism-related businesses or those who engaged in the tourism industry.
  
- **Reduction, exemption, deferral of payment, or refund of security deposits, license fees, etc. required for the operation of travel agencies**
  - ✧ **China** has temporarily returned 80% of the travel service quality deposit that travel agencies pay to the government as a security deposit when they open its business. Since similar measures were taken during the SARS crisis in 2003 and their effectiveness was well confirmed, so that the same measures have been promptly implemented against the COVID-19 crisis.
  
- **Support through expansion of labor policy**
  - ✧ Various measures relating to working environment have been implemented mainly compensation for temporary absence from work to maintain employment and provision of training opportunities to improve skills of employees in each country.
  - ✧ In **Austria**, the federal government and the Chamber of Commerce and Industry (WKO) collaborated to promote the safe hospitality initiative called "Sichere Gastfreundschaft" for tourism-related businesses.<sup>8</sup> Although participation in this initiative is voluntary, one of the criteria for participation is the regular COVID-19 testing of employees who have contact with visitors. The goal of the initiative is to stimulate the economy by providing a safe environment for visitors. As part of the safe hospitality test offer, the federal government covers the full cost of testing to meet the participation criteria, providing a wide range of testing opportunities for tourism industry workers.<sup>9</sup> This support began in July 2020 for employees of accommodation facilities and has been gradually expanded to include employees of youth hostels and campgrounds as of September, and ski instructors, guides, travel agents, etc. as of November. Also, it is notable that in **Singapore**<sup>10</sup> and **United Arab Emirates**<sup>11</sup> the vaccination is prioritized for those who are employed in aviation and relating industries, though the first jobs are mostly given to the elderly and health professionals globally. Those airlines have already started operating "vaccine flights" with only vaccinated crew members on board from Mid-February 2021.

<sup>8</sup> Initiative "Sichere Gastfreundschaft", WKO, 2021, <https://www.wko.at/branchen/tourismus-freizeitwirtschaft/sichere-Gastfreundschaft-Formular.html#eingabe> (accessed 24-1-2021)

<sup>9</sup> Testangebot "Sichere Gastfreundschaft", Sichere Gastfreundschaft, <https://www.sichere-gastfreundschaft.at/testangebot/> (accessed 24-1-2021)

<sup>10</sup> 37,000 front-line workers in aviation, maritime sectors expected to get Covid-19 vaccine within 2 months, THE STRAITS TIMES, 2021, <https://www.straitstimes.com/singapore/37000-front-line-workers-in-aviation-maritime-sectors-expected-to-get-covid-19-vaccine> (accessed 1-3-2021)

<sup>11</sup> Coronavirus: Emirates Group rolls out COVID-19 vaccination program for employees, ARABIYA NETWORK, 2021 <https://english.alarabiya.net/coronavirus/2021/01/18/Coronavirus-Coronavirus-Emirates-Group-rolls-out-COVID-19-vaccination-program-for-employees> (accessed 1-3-2021)

- **Public financial support for tourism-related industries**

- ✧ In **Saudi Arabia**, on April 3th, the government developed a package with a total amount of SAR9bn as additional subsidies to private-sector salaries in companies most affected financially by COVID-19. This includes the tourism sector (corporations as well as SMEs). This package also paid a minimum amount of salaries to support self-employed individuals who are not employed by any company and registered with the Transport General Authority in the activities of passenger transport and were stopped due to the precautionary measures of the COVID-19<sup>12</sup>. The government prioritized the welfare of the citizen, resident and visitor alike as well as rescuing the private sector with a comprehensive stimulus plan.

### **2.1.3. Stimulating Demand for Domestic Travel**

The third is measures to stimulate domestic travel demand.

There are quite a few countries to use public funds to do that. We can roughly divide these packages into (1) promotional campaigns and (2) discounts or benefits. Some countries take measures combined these characteristics. Especially, the specific methods used for the latter measure are differ between countries. Although vaccinations have already started in above a hundred countries in end of February 2021 according to a totalization by Nikkei Inc. and the Financial Times (UK)<sup>13</sup>, the tourism industry's future is still uncertain in terms of reviving tourism exchanges. While paying attention to the infection situation, it goes without saying that the first step is to stimulate demand for domestic travel, so that the domestic tourism industry can keep their heads above water. The following is some examples of specific measures to stimulate domestic travel demand implemented in the COVID-19 crisis.

#### **A) "Promotional campaigns"**

There were promotion campaigns with catchy phrases to encourage residents to travel within the country, as well as campaigns with some discounts offered. For example, the **France** introduced a campaign named "Cet été, je visite la France (This summer, I'm visiting France)" from June to September 2020. Also, similar campaigns could be seen in **Viet Nam** "Vietnamese people travel in Vietnam" and "Vietnam - Safe and Attractive Destination" effective from May to December 2020, **Malaysia** "Cuti-Cuti Malaysia (Malaysian Holidays)", **India** "Dekho Apna Desh (Look our Country)" and **Indonesia** "diindonesiaAja (Just Stay In Indonesia)".

The unique campaign to be noted was the "own backyard" concept in **Canada**. Several celebrities promoted the campaign, including comedian Rick Mercer, who conveyed the

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<sup>12</sup> Saudi Government is taking a number of additional measures to mitigate the effects of COVID-19 on economic activities and the private sector, Ministry of Finance, 2020 [https://www.mof.gov.sa/en/MediaCenter/news/Pages/News\\_15042020\\_1.aspx](https://www.mof.gov.sa/en/MediaCenter/news/Pages/News_15042020_1.aspx) (accessed 02-04-2021)

<sup>13</sup> Charting coronavirus vaccinations around the world, Nikkei Asia, 2021 <https://vdata.nikkei.com/newsgraphics/coronavirus-vaccine-status/> (accessed 9-3-2021)

message to the public.<sup>14</sup> Although the main objective of the campaign was to help the struggling tourism industry, the campaign consequently gave people with an opportunity to take a fresh look back at their own land. This experience has led to developing secondary significance, such as fostering civic pride. In Alberta, the content of indigenous tourism fits in with the trend in the COVID-19 crisis and is contributing to understanding indigenous people in their country by making many people pay attention to "venture into their own backyard".<sup>15</sup>

Canadian campaign ambassador Mr. Rick Mercer said:

*Millions of people from all over the world flock to Canada every year because we are nice too. In fact, according to a leading expert that would be me, we are the nicest place on earth. We are good looking. I know that we are super diverse, filled with amazing people doing incredible things. The food is great, and so are the adventures. Tourism industry is so important. It is responsible for 10% of the jobs in this country. If we just spend half of what we were going to spend out of Canada. In Canada we can save that industry and maybe your favorite restaurant too. So, the time has come for us to explore our own backyard, and lucky us, it is a hell of an amazing yard.*

## B) "Discounts or Benefits"

- ✧ In **Macau, China**, the "Macau Ready Go! Local Tour" campaign<sup>16</sup> was offered to the residents, including non-permanent residents. A total of 15 courses were made and divided into 2 categories. In the first category, "Community Based Tour" was themed in 6 courses and remaining 9 courses were themed "Leisure Tour" category. They were sequentially offered from June 22 to the end of September in 2020. In order to promote participation, the program was designed one time subsidy with MOP280 provided for each participation in each category up to a maximum of two times.
- ✧ In **Singapore**, a tourism credit scheme known as "SingapoRediscovered Vouchers"<sup>17</sup> totaling SGD320 million was introduced in December 2020. Each Singaporean citizen aged 18 and above was given SGD100 worth of vouchers digitally through SingPass, which is a national digital identification platform. Use of the vouchers is limited to hotel accommodations, attraction tickets, and tours approved by the Singapore Tourism Board. The vouchers can be used on five authorized booking platforms such as Travel Technology Pte Ltd, Trip.com Travel Singapore Pte Ltd, Traveloka Services Pte Ltd, GlobalTix Pte Ltd and Changi Travel Services Pte Ltd. For those who are less familiar

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<sup>14</sup> Rick Mercer's rant on travel in Canada | Explore Canada, YouTube, 2020, <https://www.youtube.com/watch?v=vjnKm3GGnzg> (accessed 24-1-2021)

<sup>15</sup> Indigenous tourism in Alberta sees opportunity in wellness, survivalist sectors, CBC/Radio-Canada, 2020, <https://www.cbc.ca/news/canada/calgary/alberta-indigenous-tourism-opportunity-during-covid-pandemic-1.5831677> (accessed 24-1-2021)

<sup>16</sup> "Macao Ready Go! Local Tours" is open for applications from tomorrow for progressive resumption of tourism activities, MACAO GOVERNMENT TOURISM OFFICE, 2020, [https://industry.macaotourism.gov.mo/en/pressroom/index.php?page\\_id=172&id=3228](https://industry.macaotourism.gov.mo/en/pressroom/index.php?page_id=172&id=3228) (accessed 24-1-2021) ;

"Macao Ready Go! Local Tours" attracted close to 140,000 participants Over 85% interviewees satisfied with tour arrangements, MACAO GOVERNMENT TOURISM OFFICE, 2020, [https://industry.macaotourism.gov.mo/en/pressroom/index.php?page\\_id=172&sp=2&id=3258](https://industry.macaotourism.gov.mo/en/pressroom/index.php?page_id=172&sp=2&id=3258) (accessed 24-1-2021)

<sup>17</sup> \$320 million in credits have been set aside to encourage Singaporeans to rediscover our city and support our local tourism businesses. The vouchers can be used for attractions, hotel stays and tours., Government of Singapore, 2021, <https://www.stb.gov.sg/content/stb/en/trade-events-and-resources/SingapoRediscovered-Vouchers.html.html> (accessed 24-1-2021)

with online services and need direct assistance, face-to-face counters were set up at 53 local community centers in various parts of the country to help them.

- ✧ In **Thailand** has been running the Rao Teaw Duay Kan (We Travel Together) campaign since July 2020.<sup>18</sup> The campaign's beneficiaries are Thai ID cardholders, and the transactions can be processed through an application Pao Tang. The application features electronic payment system is provided by a state-owned commercial bank, Krung Thai Bank (KTB). The campaign includes 40 percent discount on accommodation and airfare, which are subsidized by the government, and furthermore participants receive electronic coupons that can be used for local dining and attractions. The electronic coupons are given per room per night and can be accumulated to be used until 11:59 p.m. on the day of check-out. To equalize demand between days of the week, the amount of coupons given is THB900 on weekdays from Monday to Thursday, and THB600 on weekends from Friday to Sunday. When using the electronic vouchers, customers are required to pay their own 60% of the total amount and the remaining 40% can be compensated from the balance of the electronic coupon.
  
- ✧ In **Italy**, the BONUS VACANZE (Holiday Bonus) campaign is underway, offering electronic coupons for stays at hotels, campsites, tourist villages, and farmhouses.<sup>19</sup> Households with an index of household economic conditions calculated from household income and assets (ISEE : indicatore di situazione economica equivalente) of up to EUR40,000 are eligible to apply for the program. A one-time bonus of up to EUR500 is receivable, depending on the number of household members. The applying period was between July and the end of December 2020, but the term of validity was extended to the end of June 2021. The "IO" application, released to the public in April 2020 to accelerate the country's digital transformation in the public sector, has been used to deliver the electronic coupon. By logging in with a digital ID (SPID: Sistema Pubblico dell'Identita' Digitale) or a CIE 3.0 electronic ID card, users can complete the entire process from application to usage through online.<sup>20</sup> Users can use the electronic coupon for a single stay, at a single accommodation and up to 80% of the total cost of the stay is covered. The remaining 20% can be deducted upon a submission of tax declaration with proof of the stay. If the cost of the stay is less than the amount of the electronic coupon, the amount of deduction will be reduced in proportion to the total amount paid. Besides, the system is not designed to allow the government to reimburse or pay the accommodation facility the expenses paid by the electronic coupons later, but rather to qualify for tax deductions linked to the tax system.

These examples given above can be said emergency measures taken to compensate for "the evaporation" of overseas travelers due to the travel restrictions imposed in response to the COVID-19 crisis. Having said that "realization of sustainable tourism" had strongly

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<sup>18</sup> "โรงแรมที่พัก สามารถทำการเลื่อนวันเข้าพัก ของประชาชนผู้ใช้สิทธิโครงการฯ ได้ตั้งแต่วันที่ 5 กุมภาพันธ์ 2564 เป็นต้นไป ผ่านช่องทางแอปพลิเคชันถุงเงินของโรงแรมที่พัก", Tourism Authority of Thailand, 2020, <https://www.xn--12c1bik6bbd8ab6hd1b5jc6jta.com/> (accessed 24-1-2021)

<sup>19</sup> Bonus vacanze, Agenzia delle Entrate, 2020, <https://www.agenziaentrate.gov.it/portale/web/guest/bonus-vacanze1> (accessed 24-1-2021)

<sup>20</sup> Come richiedere e utilizzare il Bonus, io.italia.it , <https://io.italia.it/bonus-vacanze/> (accessed 24-1-2021)



been recognized as a major issue in the tourism industry in recent years. There had been a movement observed that makes a domestic tourism market more resilient by leveling out the balance between domestic and foreign demand and the dependency on specific countries and regional markets even before the crisis. For example, **Hungary** established permanent benefit system in 2011. It aims at response to Global Financial Crisis, also contribute to help equalize the unbalanced market as a result. Moreover, they utilize it for stimulating demand for domestic travel by adjustment related tax rates amid the COVID-19 crisis. Most recently, immediately before emergence of the COVID-19 crisis, **Croatia** established the similar system referring to Hungarian it.

- ✧ **Croatia** established the Croatian Tourist Card (Hrvatska turistička kartica) system in December 2019.<sup>21</sup> This public project is aimed to tackle the declining rate of domestic tourism consumption by Croatian people. In this scheme, employers can provide up to HRK 2,500 per year as tax-free income for payments of catering, tourism, and other services consumed that are taken place in domestic vacations of employees. **Hungary's** "SZÉP card" program, which was modeled after Croatia's system, has also been trying to stimulate domestic demand by expanding tax incentives for the amount of payment in light of the COVID-19 crisis's negative impact on tourism-related industries.<sup>22</sup>

### C) Combination of "promotional campaigns" and "discounts or benefits"

- ✧ In **Republic of Korea**, for example, the "2020 Special Travel Week" was held from July 1 to 19 in 2020, under the slogan of "Safe Travel, Cherish Life". In addition to promoting the "100 safest non-contact tourist attractions for summer", transportation and tourism related facilities offered various discounts and privileges. Another feature of the promotion is to emphasize the need for tourists and businesses to comply with quarantine regulations, thus preventing the spread of infection, and creating a new culture where daily travel and quarantine coexist.<sup>23</sup> A tourism voucher was given to those who posted on social media that had a "safe travel experience" in line with the new lifestyle in the COVID-19 crisis.
- ✧ In **Japan**, remain implement a "Go To Travel Campaign" to encourage consumer spending by offering travel discounts and issuing coupons available while on a journey from July 2020. It stipulates the observance of "new travel etiquette" as a condition to comply for using the campaign, from the viewpoint of preventing the spread of infection. In addition, it promotes a new tourism style such as dispersive tourism: traveling on weekdays, early morning and late-night sightseeing, visiting hidden spots other than famous spots, and so on.

The COVID-19 crisis brought about an opportunity for all destinations to reconsider their strategies for attracting visitors and their market strategies. The experience of each countries

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<sup>21</sup> Hrvatska turistička kartica, Ministarstvo turizma i sporta, 2020, <https://www.hrvatskaturisticakartica.hr/> (accessed 24-1-2021)

<sup>22</sup> MIÉRT JÓ A SZÉP-KÁRTYA, ÉS MIRE HASZNÁLHATÓ?, Széchenyi Pihenőkártya, <http://www.szepkartyam.hu/> (accessed 24-1-2021)

<sup>23</sup> Special travel week to promote safe domestic tourism, Ministry of Culture, Sports and Tourism and Korean Culture and Information Service, 2020, <https://www.korea.net/NewsFocus/Travel/view?articleId=187237> (accessed 24-1-2021)

paying renewed attention to domestic demand in response to the COVID-19 crisis is connected to increase the resiliency of the industry. In the future, some countries may be developed these examples into new permanent systems.

#### **2.1.4. Revival of International Tourism Exchange**

The fourth is measures to regain international tourism exchange.

Currently, the fact is that overseas travel for leisure purposes is almost limited to only cases where a travel bubble (or equivalent framework) allows mutual travel without self-isolation. The widely adopted rules on self-isolation entry and exit points remain a major barrier. In addition, the possibility of sudden rule changes is a risk from the standpoint of travelers. While it remains a top priority for countries to work together to bring COVID-19 under control, as mentioned earlier, there is a movement to seek measures of easing travel restriction partially, with consideration for public health safety. For example, in some countries where the infection situation relatively settles down, there are some cases that travel bubbles have already been embodied or shortening the self-isolation period has been partially realized. For example, travel bubbles have already been happening in some countries like **Qatar** and **Maldives** where the infection rate is relatively lower.

- ✧ In **Qatar**, the government and Qatar Airways, its national flag carrier, have collaborated to create and sell the “Safe Travel Bubble Holiday Package” for residents in the country for a limited period starting December 2020.<sup>24</sup> The packages cover airfare, accommodation, meals, and local transfers (between Male international airport and the resort where you are staying) to stay in **Maldives**. This government campaign has been made to achieve the revival of overseas travel for leisure purposes by providing the government's support and stable supply of accessible and attractive travel packages to the market. In order to make the travel bubble happen between the two countries a reality, a "bubble flight" is operated between Doha and Male for the users under the plan. In addition to it, a local accommodation will be exclusively reserved for them. Passengers are required to present a negative PCR test result conducted within 72 hours of departure from Qatar. Another negative test result at Hamad International Airport on the day of departure is required for boarding. Even if the passengers' test result is positive and need to cancel their trip, the cancellation fee will be waived. On top of that, if the rapid PCR test at Hamad International Airport is negative after returning to Qatar, the participant will be exempted from a mandated self-isolation.
  
- ✧ **Singapore** launched the Air Travel Pass (ATP) scheme in September 2020, which is separately implemented from the normal visa system. It has resumed accepting short-term stays, including those for business and official purposes, from some countries and regions where there is a low rate of local community transmission as proven by local health authorities' capability to quickly contain the infection. ATP applicants are required to comply with the following requirements: travelers applying for the ATP must (i) have been

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<sup>24</sup> For the final time, our 'Quarantine Free' Holidays to the Maldives have been extended, now valid until 20 Feb. Book any package and receive a free upgrade to All-Inclusive. Minimum stay now three nights. , QATAR AIRWAYS, <https://www.qatarairwaysholidays.com/qa-en/offers/travel-bubble-holidays/> (accessed 24-1-2021)



in his/her declared point of departure for the last 14 consecutive days before departing for Singapore; (ii) travel to Singapore on a direct flight without transit; (iii) undergo a COVID-19 PCR test at the airport upon arrival in Singapore; (iv) purchase travel insurance covering at least SGD30,000 for COVID-19 related medical and hospitalization expenses, (v) download and activate a contact tracing application, "TraceTogether"<sup>25</sup>, (vi) retain the TraceTogether<sup>26</sup> app with the data on his/her mobile device for 14 consecutive days after leaving Singapore; and (vii) adhere to the prevailing public health measures while in Singapore. Self-isolation in non-residential accommodations (i.e. hotels) with an en suite toilet in the room is mandatory until the on-arrival PCR test results are negative (in principle, notified within 48 hours). After that, a special provision allows the entrants to lead normal local activities.

- ✧ In **Singapore** also, a business consortium led by global investment company Temasek has launched a pilot purpose-built accommodation facility at the Singapore EXPO & MAX Atria, Singapore's largest MICE venue located within a five-minute drive from Changi Airport. Named 'Connect@Changi', the initial phase of the project opened in February 2021 with 150 premium guest rooms and 40 meeting rooms that can facilitate safe meetings of between four to 22 attendees between business travelers from across the globe. This will expand to around 660 guest rooms and 170 meeting rooms when the initial phase of the project is completed in May. When fully completed later this year, the facility will have the potential capacity to host some 1,300 travelers and guests at any one time. Connect@Changi was developed to support safe business exchanges between international travelers and Singapore residents, as one of the measures to help progressively open Singapore's borders and facilitate business activities while protecting the local community. In order to shorten the facility construction period, the consortium employed innovative construction methods such as mounting prefabricated steel containers on concrete blocks. Water pipes and electricity lines were installed under the prefab blocks, then fitted into the container rooms both to minimize construction time as well as to avoid unnecessary excavation of the location. To reduce the risk of transmission between travelers and Singapore residents, meeting rooms are specially outfitted with air-tight glass panels, with completely separate entrances, exits and ventilation systems. To ensure the health and safety of guests, all travelers are required to go through a rigorous COVID-19 testing regime conducted on-site, throughout the duration of their stay.

### **2.1.5. Measures related to hosting the MICE events**

The fifth is measures about an event of Meeting, Incentive tour, Convention / Conference and Exhibition (MICE).

Various effects of MICE events have been received the attention in recent years. However, holding these events is challenging because of the fundamental feature of getting together in one place amid the COVID-19 crisis. During COVID emerging period, some solutions were not

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<sup>25</sup> Help speed up contact tracing with TraceTogether, Government of Singapore, 2020 <https://www.gov.sg/article/help-speed-up-contact-tracing-with-tracetogogether> (accessed 24-1-2021)

<sup>26</sup> Travelers are required to take private transportation, taxi or private hire car from the airport to the declared place of accommodation without any pit-stops along the way.

sufficient, so that event organizers had no choice but to postpone or cancel events. To survive the difficult circumstance, event organizers and those who work in the industry struggled and tried to find the “new normal style” averting three Cs (Closed spaces, Crowded places and Close-contact settings) that fits the changes of people’s behavior due to the pandemic. Nowadays, new type of MICE events are gradually coming up globally. The new paradigm that is witnessed by the world is shift of an event format from physical to online by setting a virtual space as a new destination, emphasis on application of digital technologies was seen before though. This shift could happen amid struggle to cope with the pandemic and people have been accepting full-online / hybrid (combination of physical and online) events not as a temporal but a permanent format and possible alternative event style.

In this situation, government are putting a big importance on making a regulation to stop the spread of the virus first at the level that people feel constraints in leading their daily life. That may substantively disrupt having an event itself, however, there are cases where conditional event hosting is possible by making specific new rules such as restricting the number of participants and its space and event scale. The details and numerical benchmarks set in a regulation vary according to situation. On the other hand, the direction of support for the MICE industry is the same as the public supports mentioned above because MICE is one sector of the tourism-related industry. For example, there are packages that support the purchase of equipment and facility to match new behavior of visitors. The quality and quantity of further support options, as well as the timing and pace of introduction of supportive measures, will be influenced by the size of the social position of MICE events in each country or city. Not few countries judge that not yet reached the stage of providing such as active support, based on the overall situation of the spread of infection.

### **2.1.6. Other Measures**

Last public measure to be discussed is change of people’s sense of value.

Our society amid the COVID-19 crisis is experiencing gradual change of a sense of value, which may widely be acknowledged. From micro point of view, a global market researcher, Euro Monitor explained that a result of consumer survey of 2021 conducted by the company has depicted an obvious structural change in people’s mindset amid the crisis. The report also has notices that a company who is not able to strengthen development of a product featured with non-contact concept shall be kicked out from a market because consumers nowadays have Safety Obsessed mind derived from a fear of infection with COVID.<sup>27</sup>

After this section, some examples of development and promotion of new solutions by private companies to respond the current change or an anticipated change are picked up. With these solutions, some particular situations and business fields illustrate how the new way of life has already emerged. Surely, a public sector is not exceptional. They need to sincerely face its change of people’s sense of value, and future policies are required to correctly reflect that change. **United Kingdom** is one of examples where the government conducted a quantitative

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<sup>27</sup> Top 10 Global Consumer Trends in 2021, EUROMONITOR, 2020 <https://blog.euromonitor.com/top-10-global-consumer-trends-in-2021/> (accessed 1-3-2021)

survey to track the residents' mind in traveling through "COVID-19 Consumer Sentiment Tracker"<sup>28</sup>.

- ✧ In the **United Kingdom**, the authority in tourism (VisitBritain) conducted regular surveys to 1,500 adults aged 16 and over to understand their intentions to traveling. The first phase was 13 consecutive weeks from May to August 2020, and the second phase is every other week from September to early February 2021. The study focused on understanding major interests to overnight travel in the UK and abroad, with a particular focus on the current barriers and concerns surrounding travel and how they can be developed.

Resilient capacity of public policies has been challenged with COVID pandemic and needs to be strengthened, while governments are concerned about big risk of collapse of sustainable society. One of ongoing trends to possibly make our society stronger is a concept of "Green Recovery". This concept implies the direction of recovery, aiming for economic recovery from the COVID pandemic while considering the environment. The **OECD**<sup>29</sup> believes that the current situation can be utilized to improve global environmental problems and revitalize economic activities by taking advantage of this once-in-a-lifetime opportunity. The **OECD** regards the concept as an excellent option (Win-win option) that contributes to improving the quality of life of people. As a concept similar to "Green Recovery", there could be "Green New Deal" whose theory has been developed mainly in Europe and the United States before the COVID pandemic. The difference from the "Green New Deal" is that "Green Recovery" regards damages from the COVID-19 crisis as a lesson to be respected and tries to convey global environmental issues such as biodiversity loss, climate change, air pollution, water pollution, and waste management<sup>30</sup>. In short, "Green Recovery" focuses on awareness of problems are associated with the emergence and spread of the virus.

The hardships caused by the pandemic has considerable influence on awareness and behavior in environment. It is thought that these effects also promote the fostering of social receptivity to "green recovery". And it is noted that change of people's mind and increase awareness "Responsible Tourism" each tourist.

Previous sections explained some preventive measures forcing constraints on people's behavior for the sake of stopping the pandemic. Consequently, those actions have been deteriorating global tourism industry, so that governments have struggled to ease its impact as minimum as possible with taking various measures. One of the industries which is having a most difficult time among all players is airlines. Looking at the number of air transport passengers worldwide (total of domestic and international flights)<sup>31</sup>, the number of passengers reached a record high of 4.5 billion in 2019, but dropped sharply to 1.8 billion in 2020 which is the same level in 2003. Therefore, in many countries public support is provided to airline companies. For example, a **France's** financial support for the AFKL Group (Air France – KLM

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<sup>28</sup> COVID-19 Consumer Sentiment Tracker, VisitBritain/VisitEngland, 2021 <https://www.visitbritain.org/covid-19-consumer-sentiment-tracker> (accessed 1-3-2021)

<sup>29</sup> More can be done to ensure a green recovery from COVID-19 crisis, OECD, 2020 <https://www.oecd.org/newsroom/more-can-be-done-to-ensure-a-green-recovery-from-covid-19-crisis.htm> (accessed 1-3-2021)

<sup>30</sup> Making the green recovery work for jobs, income and growth, OECD, 2020 <http://www.oecd.org/coronavirus/policy-responses/making-the-green-recovery-work-for-jobs-income-and-growth-a505f3e7/> (accessed 1-3-2021)

<sup>31</sup> 2020 passenger totals drop 60 percent as COVID-19 assault on international mobility continues, ICAO, 2021 <https://www.icao.int/Newsroom/Pages/2020-passenger-totals-drop-60-percent-as-COVID19-assault-on-international-mobility-continues.aspx> (accessed 1-3-2021)

Group) denoted a strong element of “green recovery”. In other words, the support was asking whether the business model of the passenger transportation industry, which uses aircrafts is truly sustainable from a middle-long term perspective. Therefore, the French government is requesting a framework for early implementation of necessary structural reforms in order to keep the passenger transportation industry alive.

✧ In **France**, the government provided financial assistance to the Air France-KLM Group in April 2020 for approximately 7 billion euros. The **EU** announced that it would aim to achieve carbon neutral by substantially eliminating greenhouse gas emissions in the EU region by 2050. Therefore, the government is not unconditional in lending to the group, and there was a message that the group should become more competitive by fulfillment of the set conditions. The definitive goal was to make the group "the most environmentally friendly airline on the planet."<sup>32</sup> The detail of the set conditions are following:<sup>33</sup>.

- From the 2005 level, carbon dioxide emissions per kilometer per passenger should be halved by 2030.
- Flights within the Metropolitan France (the territory of the French Republic in Europe) should be reduced by 2024.
- 2% of the fuel used in aircraft should be sourced from alternative sustainable sources by 2025.
- In the next few years, medium and long-range aircrafts will have to be upgraded to have less environmental impact.

Through the experience of the COVID-19 crisis, it can be said that the structure of a value to traveling and style based on conventional value are rapidly changing at certain speed. In other words, the process of recovering tourism exchanges from the crisis can be regarded as an opportunity to realize various changes in tourism industry. In that sense, development potential is recognized, so it is important to maximize the opportunities through self-help efforts of related business entities and public policies.

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<sup>32</sup> @BrunoLeMaire, Twitter, 2020 <https://twitter.com/BrunoLeMaire/status/1253756394420961289> (accessed 1-3-2021)

<sup>33</sup> Air France must cut emissions, domestic flights for aid: minister, REUTERS, 2020 <https://www.reuters.com/article/us-health-coronavirus-france-economy-idUSKBN22B2EL> (accessed 1-3-2021)

## **2.2. Private Sector's Effective Solutions in Responding to the COVID-19 crisis**

In the wake of the COVID-19 crisis, private companies have been working to develop solutions to realize tourism even under travel restriction, and to prevent the spread of infection in transportation and accommodation facilities after easing travel restriction.

This chapter focuses on useful solutions amid the COVID-19 crisis offered by private companies. Although the situation of COVID-19 infections is not on the same level in all countries, the issue of “travel restraints or restrictions (particularly international travel) in response to the COVID-19 infection was common all over the world. In this chapter, some solutions adopted in the world are picked up as an effective avenue to solve the issues. The solutions are categorized according to the customer journey, i.e., “Before-travel”, “During-travel”, and “After-travel”. It should be mentioned that the products or solutions described in the report do not constitute an endorsement of them, by either the author of this report or contributors to the survey.

### **2.2.1. Before-Travel**

The solutions that are believed to be effective for before-travel in the COVID-19 crisis are based on two main trends: “flexibility offered by travel package suppliers” and “connecting travelers with local communities and resources thorough an online tour ‘before travel’”.

#### **1) Flexibility Offered by Travel Package Suppliers**

In the COVID crisis, travel restrictions have been imposed to many countries around the world. While there is no risk of infection in the context of before-travel, there is a risk of financial loss on travelers due to changes in the itinerary or cancellation of a trip itself. During the COVID-19 crisis, in particular, it is important for travelers to be able to cancel their travel without hesitation in the event of the spread of infection in a particular area or if they are suspected of being infected. It encourages people to stop traveling when he or she is not feeling well, thus preventing the spread of the infection to a destination and to other travelers. In order for travelers to feel comfortable with the travel, flexible services are offered by the travel package suppliers. There is a high need for flexibility in various types of reservations, so that the suppliers are trying to stimulate the demand of travel by efforts to meet this need. Another risk is the lack of real-time information and support in the event of unforeseen circumstances.

**Table1: Notable Solutions**

No.	Solution	Company	Country	Outline
1	No-charge of a flight change fee	United Airlines etc.	The United States etc.	The change fee has been eliminated when an itinerary is changed and another flight is booked, due to the COVID-19 crisis.
2	Financial Product	Hopper	Canada	Financial protection products that includes "guaranteed refundable bookings, date change capabilities and flight delay protection" <sup>34</sup> .
3	COVID-19 travel insurance	Skyscanner & Cover Genius	The United States	"Medical, trip cancellation and airline insolvency coverage, including protection against travel disruption and sickness caused by COVID-19" <sup>35</sup> .
4	Sitata	Sitata	Canada	A mobile-based platform offering disruption management service for travelers.
5	Airhelp	Airhelp	The United States	Legal service on behalf of passengers for flight compensation.
6	RubiQ	RubiQ	Israel	AI-based virtual assistant enabling airline passengers to self-manage in case of flight disruption, such as arranging alternative flight and booking accommodations, and providing transportation in the event of flight cancellations.
7	Refly	Refly	Mexico	An online marketplace for reselling flight tickets. <sup>36</sup>

First of all, transportation companies, especially in the airline industry, are taking measures to make cancellation and rebooking fees free. In the United States, a significant policy shift has been observed, while many domestic airlines are following United Airlines' management decision not to collect cancellation fees for domestic flights "permanently". Lufthansa Airlines<sup>37</sup>, as an example in Europe, and All Nippon Airways<sup>38</sup>, as an example in Asia, are offering full refunds in case of cancellation until winter or spring of 2021.

◇ **[Example] No-charge of a flight change fee (United Airlines, The United States)**

Scott Kirby, CEO of United Airlines, announced to the public in August 2020 that United Airlines would not charge a flight change fee forever as for domestic flights and some international flights with the neighboring countries.<sup>39</sup> The following week, other airlines in the US such as American Airlines, Delta Air Lines followed its policy.<sup>40</sup>

The lodging industry has also relaxed its cancellation policy, even at least temporarily, and offers of accommodation plans with no cancellation fees can be found on many metasearch engines. Some metasearch businesses have taken a step further by involving insurance companies and selling their own travel insurance plans that cover some of the risks associated with COVID-19, in order to create a sense of security and to encourage users to make reservations within their services.

<sup>34</sup> Skyscanner launches COVID-19 travel insurance, 2020, [https://www.phocuswire.com/skyscanner-launches-covid19-travel-insurance?utm\\_source=eNL&utm\\_medium=email&utm\\_campaign=Daily&oly\\_enc\\_id=7798E1381467C7B](https://www.phocuswire.com/skyscanner-launches-covid19-travel-insurance?utm_source=eNL&utm_medium=email&utm_campaign=Daily&oly_enc_id=7798E1381467C7B) (accessed 25-12-2020)

<sup>35</sup> Skyscanner launches COVID-19 travel insurance, PhocusWire, 2020, [https://www.phocuswire.com/skyscanner-launches-covid19-travel-insurance?utm\\_source=eNL&utm\\_medium=email&utm\\_campaign=Daily&oly\\_enc\\_id=7798E1381467C7B](https://www.phocuswire.com/skyscanner-launches-covid19-travel-insurance?utm_source=eNL&utm_medium=email&utm_campaign=Daily&oly_enc_id=7798E1381467C7B) (accessed 25-12-2020)

<sup>36</sup> Online Travel Startups in Mexico, Tracxn, <https://tracxn.com/explore/Online-Travel-Startups-in-Mexico> (accessed 25-12-2020)

<sup>37</sup> Lufthansa, Extended rebooking options, <https://www.lufthansa.com/jp/en/extended-rebooking-options> (accessed 18-01-2021)

<sup>38</sup> 新型コロナウイルス感染拡大に伴う国際航空券の特別対応について、全日本空輸, <https://www.ana.co.jp/ja/jp/topics/notice200123/> (accessed 18-01-2021)

<sup>39</sup> No more change fees, United Airlines, Inc., <https://www.united.com/uai/en/us/fly/travel/change-fee.html> (accessed 1-3-2021)

<sup>40</sup> Travel updates, American Airlines, <https://www.aa.com/i18n/travel-info/coronavirus-updates.jsp> (accessed 21-1-2021) ; Delta eliminates change fees, building on commitment to flexibility for customers, Delta Air Lines, Inc., <https://news.delta.com/delta-eliminates-change-fees-building-commitment-flexibility-customers> (accessed 21-1-2021)



✧ **[Example] Travel insurance products (Skyscanner, The United States)**

Skyscanner offers a package of travel insurance products that cover “medical, trip cancellation and airline insolvency coverage, including protection against travel disruption and sickness caused by COVID-19<sup>41</sup>”.

It partnered with Cover Genius, an InsurTech company, to introduce a COVID-19 travel insurance package<sup>42</sup>. This travel insurance package “includes a combination of medical, trip cancellation, and airline insolvency cover, including protection against travel disruption and sickness caused by COVID-19<sup>43</sup>”.

As Skyscanner mentioned in their report “New World of Travel”, about 40 % of travelers consider flexible booking options as an important factor in choosing their flights<sup>44</sup>.

In addition, services and applications that are made to attempt to seamlessly connect the entire customer journey from the reservation stage in before-travel, have existed even before the COVID disaster, but after the COVID-19 crisis, such functions supporting the handling of various risks related to travel will be hoped to be more common. Travelers will use such tools to plan their journeys, and then they will go travel under such protections.

✧ **[Example] Disruption Management Service for travelers (Sitata, Canada)**

Sitata developed “a mobile-based platform where travelers are able to obtain pre-trip health and safety advice, real-time monitoring of travel disruptions, and automated safety check-ins with real-time assistance<sup>45</sup>”.

Its latest computer algorithm-based service focuses on keeping travelers “safe and healthy before, during and after each and every trip<sup>46</sup>”. Therefore, services in the next-generation will benefit health and safety for both travelers and travel businesses.<sup>47</sup>

## 2) Connecting travelers with Local Communities and Resources “before travel”

As a second trend, the symbolic solution for tourism exchange in the COVID-19 crisis is that tourists will get to learn regions and the touristic experience of a destination through an online tour. Those solutions fall into two categories:

1. A tool that has been operated or developed based on available solutions since before the COVID-19 crisis
2. A tool that has newly appeared during the pandemic

They are ways to stimulate travel that cannot be realized currently due to restrictions on travel. Furthermore, they are also a measure to stimulate tourists to physically visit the place

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<sup>41</sup> Skyscanner launches COVID-19 travel insurance, PhocusWire, 2020, [https://www.phocuswire.com/skyscanner-launches-covid19-travel-insurance?utm\\_source=eNL&utm\\_medium=email&utm\\_campaign=Daily&oly\\_enc\\_id=7798E1381467C7B](https://www.phocuswire.com/skyscanner-launches-covid19-travel-insurance?utm_source=eNL&utm_medium=email&utm_campaign=Daily&oly_enc_id=7798E1381467C7B) (accessed 25-12-2020)

<sup>42</sup> Skyscanner to launch first of its kind travel insurance, Skyscanner, 2020 <https://www.skyscanner.net/company-news/skyscanner-travel-insurance> (accessed 25-12-2020)

<sup>43</sup> Skyscanner to launch first of its kind travel insurance, Skyscanner, 2020 <https://www.skyscanner.net/company-news/skyscanner-travel-insurance> (accessed 25-12-2020)

<sup>44</sup> New World of Travel, Skyscanner, 2020, <https://www.skyscanner.net/news/new-world-of-travel> (accessed 25-12-2020)

<sup>45</sup> What Will Happen to The Travel Industry After Coronavirus (And 6 Startups That Can Help), PLUG ANDPLAY, <https://www.plugandplaytechcenter.com/resources/impact-covid-19-travel-hospitality-industry-and-6-startups-can-help/> (accessed 24-12-2020)

<sup>46</sup> Follow Our Story, Sitata, <https://www.sitata.com/en/our-story> (accessed 25-12-2020)

<sup>47</sup> Follow Our Story, Sitata, <https://www.sitata.com/en/our-story> (accessed 25-12-2020)

once the travel restrictions have been lifted. In the COVID-19 situation, travelers as well as regions and resources are able to use them for different purposes in an evolving way.

First of all, travelers often use such a tool when selecting a next destination. Online tours can function as a source of information which makes it easier for travelers to gather more real and fresh information about a local area. Some tour package suppliers are utilizing the online tours they created instead of a real tour in response to COVID crisis, as a brochure for their real packaged plans.

On the other hand, countries and regions are always looking for ways to be chosen as a next travel destination, and online tours can be effective for the purpose. Even before the COVID-19 crisis, there have been efforts by countries and regions to increase their competitiveness by connecting with travelers individually and more deeply through CRM (Customer Relationship Management), in order to encourage them to come the place again. As matter of fact, the use of online tours in this context will foster engagement between travelers and the region / resource even from “before-travel”, and the process of actually visiting the region/resource afterwards will become more common. By participating in online tours, travelers can learn the history and culture of the destination in advance and make their future trips more enriching and enjoyable.

**Table2: Notable Solutions**

No.	Solution	Company	Country	Outline
1	Airbnb online-experience	Airbnb Global Services Limited.	Ireland	An online platform, enabling experience of the history and culture of a region without having to visit, and helping local tourism workers maintain their income. <sup>48</sup>
2	LAN Tours	MyRealTrip	Republic of Korea	A non-face-to-face travel product, by which tour guides communicate with customers in real-time via a direct online video connection. <sup>49</sup>
3	Google Art & Culture	Google	The United States	People can visit and walk around museums and sightseeing spots from their home by using Google Art & Culture. It offers even 360 degree of view of inside museums. <sup>50</sup>
4	Amazon Explore	Amazon	The United States	An online platform for virtual tours and activities in destinations products that is estimated to take around 30 to 60 minutes. Product is supplied by a range of partners including well-known tour and activity brand. <sup>51</sup>
5	Online Experience Tour	H.I.S	Japan	An online travel platform, including over 2000 products from city exploration with tour guide to activities in destinations, bought by over 30,000 people. This service is also considered as pre-trip marketing tool motivating future travel. <sup>52</sup>

◇ **[Example] Airbnb online-experience (Airbnb Global Services Limited., Ireland)<sup>53</sup>**

Airbnb online-experience involves programs designed by locals that can't be found in traditional touring way. In April 2020, it launched an online-experience service that helps entrepreneurs in hospitality business maintain their income by offering experience programs to people who want to know these area. Online travelers can experience the

<sup>48</sup> Airbnb Global Services Limited. (based on information collected through open recruitment)

<sup>49</sup> Top 10 Korean Travel Companies to Watch - Best of 2020, SEOUL, 2020, <https://seoulz.com/top-10-korean-travel-companies-to-watch-best-of-2020/> (accessed 25-12-2020)

<sup>50</sup> Google Art & Culture, Google, <https://artsandculture.google.com/project/street-view>, (accessed 25-12-2020)

<sup>51</sup> Amazon launches virtual tours and activities for destinations, Phocuswire, 2020, <https://www.phocuswire.com/Amazon-launches-virtual-experiences-marketplace> (accessed 25-12-2020)

<sup>52</sup> オンライン体験旅行, H.I.S., 2020, [https://www.his-j.com/oe/theme/about\\_onlineexperience/index.html](https://www.his-j.com/oe/theme/about_onlineexperience/index.html) (accessed 25-12-2020)

<sup>53</sup> Airbnb Global Services Limited. (based on information collected through open recruitment)



history, culture, personal passions and unique hobbies of a region without visiting. Airbnb online experience also allows local residents to become tourism leaders as hospitality entrepreneurs and to share their unique attractions worldwide even in the COVID-19 crisis, thereby creating an ongoing connection with fans around the world and increasing the incentive to visit the place in the future.

### **2.2.2. During-travel**

This chapter focuses on "During-travel", subdividing it into three scenes (1) transportation, (2) accommodation, and (3) other facilities (sightseeing facilities, restaurants and commercial facilities, etc.). The common problem that can be seen in all situations is the avoidance of the "three Cs (Closed spaces without ventilation, Crowded places, Close contact)", which is becoming the core of tourism exchanges that should be in line with the "new normal". Solutions that contribute to the realization of this goal are discussed in the following section.

During the COVID-19 crisis, the "three Cs" must be avoided, countermeasures against highly contagious diseases are a prerequisite. Also, actors involved in the tourism industry must create a new valuable way of traveling that can be achieved while maintaining physical distance. On the other hand, travelers are also expected to act autonomously with an awareness as a responsible traveler, which is to practice so-called "responsible tourism".

#### **1) Transportation**

Due to the voluntary restraint and restriction of travel caused by the COVID-19 crisis, many airline companies have been forced to reduce flights or suspend operations. Each company is working on various countermeasures against infectious diseases in their operations. Nonetheless, a large number of flights continue to be operational for maintaining essential transportation infrastructure, and airports are used to "showcase" advanced solutions in transportation. This is attributable to the trend toward smart airports, a highly compatible concept with infectious disease countermeasures, using "contactless" and "automation" technologies. These solutions adopted even before the COVID-19 crisis have rapidly been developing new sense of not only safety but also a sense of security on the customers. It would be possible that some appropriate solutions are rolled out to other transportation modes such as rail and bus.

In other modes of transportation, similar smart transportation initiatives such as CASE and MaaS have been seen before the COVID-19 crisis. As in the airline industry, these responses to the COVID-19 crisis is expected to accelerate.

**Table3: Notable Solutions**

No.	Solution	Company	Country	Outline
1	DUBZ	DUBZ	United Arab Emirates	Provide home check-in service, and enhancing contactless procedures, airport fast-track, baggage disinfection with long-lasting protection, and home COVID-19 testing etc. <sup>54</sup>
2	App in the air	App in the air	Russian Federation	Share passengers with up-to-date information for their flight; "real-time status, airport tips and in-airport navigation maps, flight profile" <sup>55</sup> etc.
3	Contactless airport experience	Kempegowda International Airport, Bengaluru	India	"Parking-to-boarding" contactless services at the airports; online check-in, thermal scan, self-service kiosk for collecting the baggage tag, and automated self-bag-drop etc. <sup>56</sup>
4	End-to-end touchless airport	Avinor	Norway	Enable passengers to check-in for a flight remotely and to receive a boarding pass barcode on their mobile phone, which also acts as a coupon to print their bag tag. <sup>57</sup>
5	Touchless technology	Elenium Automation	Australia	Touchless solutions; face recognition, contactless IC card recognition, contactless operation etc. <sup>58</sup>
6	Seamless Flow	Vision-Box	Portugal	Live multimodal biometric capture (face, fingerprint, and iris) in combination with the authentication of travel documents, making a reliable match in order for seamless security control. <sup>59</sup>
7	BAGTAG	BAGTAG	Germany	Electronic bag tags reduce time and touch-points needed for check-in significantly, enabling seamless and safe procedures and operational cost reduction at airports. <sup>60</sup>
8	JAL Covid-19 Cover	Japan Airlines	Japan	JAL teamed up with Allianz Travel to provide complimentary cover for medical, testing and quarantine costs if their customers test positive for COVID-19 during their travel. In addition, it has set up a 24-hour support line if they suspect they have been infected with the coronavirus that causes COVID-19 <sup>61</sup> .
9	Promoting a mind of safety	IATA and airline companies	—	In addition to each airline companies' promotion of their measures to avoid COVID-19 on their homepages, including ventilation systems or cleaning measures <sup>62</sup> , IATA published the result of analysis that only 44 cases confirmed associated with a flight and shows "Inflight COVID-19 transmission is extremely rare". <sup>63</sup>
10	IATA Travel Pass	IATA	Canada	A mobile app that IATA announced to key design elements in Dec. 2020 "to help travelers easily and securely manage their travel in line with any government requirements for COVID-19 testing or vaccine information". <sup>64</sup>

<sup>54</sup> Latest news, DUBZ, <https://dubz.com/promotions> (accessed 23-12-2020)

<sup>55</sup> 26 Russian Travel Startups To Watch In 2020, TRAVEL MASSIVE, 2020, <https://travelmassive.com/lists/20342/top-russian-travel-startups-20202> (accessed 23-12-2020)

<sup>56</sup> Bengaluru Airport introduces "parking-to-boarding" contactless airport experience, Future Travel Experience, 2020, <https://www.futuretravelexperience.com/2020/05/bangalore-airport-introduces-parking-to-boarding-contactless-airport-experience/> (accessed 23-12-2020)

<sup>57</sup> Avinor rolls out touch-free airport experience in partnership with Amadeus, Breaking Travel News, 2020, <https://www.breakingtravelnews.com/news/article/avinor-rolls-out-touch-free-airport-experience-in-partnership-with-amadeus/> (accessed 23-12-2020)

<sup>58</sup> About Elenium, Elenium, <https://www.elenium.com/about/about-elenium/> (accessed 23-12-2020)

<sup>59</sup> Seamless Flow, Vision-Box®, <https://www.vision-box.com/solutions/travel-and-border-control/airports-and-airlines> (accessed 23-12-2020)

<sup>60</sup> Enabling safe and efficient check-in, with any Electronic Bag Tag, DS TAGS Group., <https://bagtag.com/> (accessed 23-12-2020)

<sup>61</sup> All customers on JAL international flights are eligible for JAL Covid-19 Cover which provides complimentary support in case of COVID-19 infection, JAPAN AIRLINES, <https://www.jal.co.jp/ar/en/info/travelalerts/flysafe/jalcoronacover/> (accessed 16-03-2021)

<sup>62</sup> as example; #WeCare – so you can fly with no worries, Lufthansa, <https://www.lufthansa.com/xx/en/protection-measures> (accessed 25-12-2020)

<sup>63</sup> Extremely low risk of viral transmission inflight, IATA, 2020, <https://airlines.iata.org/analysis/extremely-low-risk-of-viral-transmission-inflight> (accessed 25-12-2020)

<sup>64</sup> IATA Unveils Key Design Elements of IATA Travel Pass, IATA, 2020, <https://www.iata.org/en/pressroom/pr/2020-12-16-01/> (accessed 25-12-2020)

11	Sightseeing flight using an airplane in suspension	All Nippon Airways Co., Ltd.,	Japan	In the COVID-19 crisis, airline companies are forced to reduce in flights. To deal with this situation, it provides new sightseeing flight products using an airplane in suspension <sup>65</sup> .
12	COREMaaS	IoMob	Spain	MaaS solution enabling intermodal travel while respecting social distancing.
13	Lime	Lime	The United States	Shared electronic scooter company helps people to keep social distancing on their way. <sup>66</sup>
14	Reframing rideshare service during the pandemic	Cool	Malta	In the COVID-19 pandemic, it provide private ride and daily use prodcuy delivery service, converted from its on-demand rideshare service. <sup>67</sup>

◇ **[Example] Contactless Activities at airports (Elenium, Australia<sup>68</sup> / Avinor, Norway<sup>69</sup> / Kempegowda International Airport, India<sup>70</sup>)**

Elenium Automation takes “a multi-faceted approach to touchless technology, which includes voice recognition, touchless control and contactless ID scanning”<sup>71</sup>. Kempegowda International Airport in Bangalore, India has also been working on a series of “parking-to-boarding” contactless airport experiences to minimize physical contacts at the airport. This system includes online check-in, thermal scan, self-service kiosk for collecting the baggage tag, and automated self-bag-drop etc. In early May, the airport put together a video of the series of measures taken, and worked on creating a sense of security for travelers through their official website and Twitter.<sup>72</sup> A similar effort is underway at Norwegian airports, using the country’s Avinor. Thanks to this innovative technology, “a passenger checks-in for a flight remotely and they receive a boarding pass with barcode sent to their mobile phone, which also acts as a coupon to print the passenger’s bag tag”<sup>73</sup>.

In addition, cases where Mobility as a Service (hereinafter referred as MaaS) is used in context of reducing contact opportunities have been identified.

◇ **[Example] MaaS Enabling Intermodal Travel while Observing Social Distance (COREMaaS, IoMob, Spain)<sup>74</sup>**

<sup>65</sup> なぜ JAL の遊覧飛行は 767 が多いのか 特集・新型コロナが生んだ新ビジネス, Aviation Wire, 2020, <https://www.aviationwire.jp/archives/218411> (accessed 16-03-2021)

<sup>66</sup> Lime Reaches 200 Million Rides in Record Time, Lime, 2020, [http://v1.li.me/second-street/200\\_million\\_rides](http://v1.li.me/second-street/200_million_rides) (accessed 21-01-2021)

<sup>67</sup> How an entire country reframed their rideshare service for essential deliveries during the coronavirus pandemic, Via, 2020, <https://ridewithvia.com/resources/articles/how-an-entire-country-reframed-their-rideshare-service-for-essential-deliveries-during-the-coronavirus-pandemic/> (accessed 21-01-2021)

<sup>68</sup> About Elenium, Elenium, <https://www.elenium.com/about/about-elenium/> (accessed 21-01-2021)

<sup>69</sup> Avinor rolls out touch-free airport experience in partnership with Amadeus, Breaking Travel News, 2020, <https://www.breakingtravelnews.com/news/article/avinor-rolls-out-touch-free-airport-experience-in-partnership-with-amadeus/> (accessed 21-01-2021)

<sup>70</sup> Bengaluru Airport introduces “parking-to-boarding” contactless airport experience, Future Travel Experience, 2020, <https://www.futuretravelexperience.com/2020/05/bangalore-airport-introduces-parking-to-boarding-contactless-airport-experience/> (accessed 21-01-2021)

<sup>71</sup> 12 tech solutions for a post-COVID-19 airport experience, Future Travel Experience, 2020, <https://www.futuretravelexperience.com/2020/05/12-tech-solutions-for-a-post-covid-19-airport-experience/> (accessed 21-01-2021)

<sup>72</sup> BLR Airport, Twitter, <https://twitter.com/BLRAirport/status/1264472239916773376?s=20> (accessed 21-01-2021)

<sup>73</sup> Avinor rolls out touch-free airport experience in partnership with Amadeus, Breaking Travel News, 2020, <https://www.breakingtravelnews.com/news/article/avinor-rolls-out-touch-free-airport-experience-in-partnership-with-amadeus/> (accessed 21-01-2021)

<sup>74</sup> COREMaaS. Introducing Virtual Seat & Mobility Passport., Iomob Technologies OÜ, <https://www.iomob.net/coremaas/> (accessed 21-01-2021)

COREMaaS is a solution designed to enable intermodal travel while respecting the social distance required to mitigate the COVID-19 contagion. The service “allows users to filter search results of public transit, rail, taxis, bikes, etc, that are adhering to social distancing and sanitization policies”<sup>75</sup>. According its website, more than 20 global and regional organizations have committed to supporting the deployment of the solution.<sup>76</sup>

## 2) Accommodation

There are three main trends in solutions for accommodations.

The first is to ensure that the premises are hygienic. In particular, major hotel chains have formulated their own guidelines to incorporate more stringent standards than guidelines of local government or industry associations. Their effort to make sanitized accommodating environment to stimulate demand may create a sense of security and appeal that appropriate measures are being taken based on the strict guidelines.

The second is to maintain social distance between customers and employees to reduce their contact opportunities. There is a wide variety of ways to avoid the three Cs in a premise from analog solutions such as partitions, markings and signs to technology-based ones such as a system to detect congestion and automatically notify it.

The third is to diversify the use of solutions. There are various products to provide new experiences using guest rooms or banquet rooms. Efforts have been made to find a way to be flexible and provide a socially needed role in addition to tourism.

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<sup>75</sup> Exclusive: 9 travel tech startups helping to solve COVID-19 challenges for airlines and airports, FUTURE TRAVEL EXPERIENCE, 2020, <https://www.futuretravelexperience.com/2020/07/9-travel-tech-startups-helping-to-solve-covid-19-challenges-for-airlines-and-airports/> (accessed 25-12-2020)

<sup>76</sup> COVID-19 , Iomob Technologies OÜ, <https://www.iomob.net/covid-19/> (accessed 21-01-2021)

**Table4: Notable Solutions**

No.	Solution	Company	Country	Outline
1	VeChain	InterContinental Hotel in Shanghai & VeChain	China	Using blockchain technology, information on the cleaning history (time, person in charge, cleaning method, etc.) of each hotel room or part of it is recorded and can be checked by guests by reading the QR code. <sup>77</sup>
2	Nuvola Checklists Nuvola Checkpoints	Nuvola	The United States	Nuvola Checklists: A digital tool that helps hotels manage their regular safety checks and cleaning procedures. It can track the cleaning solutions that should be used for specific areas and the frequency of cleaning. <sup>78</sup> Nuvola Checkpoints: A QR code solution that help hotel managers to track and schedule when high-touch surfaces and locations were cleaned and who cleaned them <sup>79</sup> .
3	Guestline	Guestline	United Kingdom	A digital guest registration system, enabling guests to complete their details prior to arrival, and no check-in registration is necessary. <sup>80</sup>
4	Cleanness policies of each hotel group	Marriott International / Hilton Hotel & resorts / InterContinental Hotel Group	—	To provide a stay at hotels with a safety mind, each large hotel group make their own cleanness protocol or policy on their own website; such as Marriott's COMMITMENT TO CLEAN <sup>81</sup> , Hilton's Hilton Clean Stay <sup>82</sup> , and IHG's IHG Clean Promise <sup>83</sup> .
5	Prince Smart Inn	The Prince Hotels, Inc.	Japan	Prince Smart Inn, the hotel chain group's new brand adapts to New Normal and provides guests with safe and seamless stay by installing ICT technologies or AI, including digital check-in app or multi-function robots. <sup>84</sup>
6	Connect with Confidence	Marriott International	The United States	The chain installed new meeting and event protocols to hotels around the world. They held the first hybrid meeting adapted to this protocol to The Ritz-Carlton, Tysons Corner in November 2020. <sup>85</sup>
7	Promote Workation in corporate with hotel and local government	SHIRAHAMA KEY TERRACE HOTEL SEAMORE	Japan	To promote "Workation" stay Hotel SEAMORE located in resort areas in Japan, established "Business Lounge" equipped with computers, printers, Wi-Fi, and Cottages for long-term stays. <sup>86</sup>
8	HOTEL SHELTER	L&G Global Business	Japan	A matching service between people who are unable to stay at home and relatively small hotels. <sup>87</sup>

◇ **[Example] Blockchain System Allowing Guests to Track the Cleaning History and the Process (VeChain, Intercontinental Hotel Shanghai, China)<sup>88</sup>**

<sup>77</sup> Shanghai hotel uses blockchain to safeguard customer health during Covid-19, Decrypt, 2020, <https://decrypt.co/35460/shanghai-hotel-uses-blockchain-to-safeguard-customer-health-during-covid-19> (accessed 25-12-2020)

<sup>78</sup> Touchless tech: How hotels are preparing for a post-COVID guest experience, PhocusWire, 2020, <https://www.phocuswire.com/contactless-technology-solutions-hotels-covid-19> (accessed 25-12-2020)

<sup>79</sup> Touchless tech: How hotels are preparing for a post-COVID guest experience, PhocusWire, 2020, <https://www.phocuswire.com/contactless-technology-solutions-hotels-covid-19> (accessed 25-12-2020),

<sup>80</sup> Touchless tech: How hotels are preparing for a post-COVID guest experience, PhocusWire, 2020, <https://www.phocuswire.com/contactless-technology-solutions-hotels-covid-19> (accessed 25-12-2020),

<sup>81</sup> COMMITMENT TO CLEAN, Marriott International, <https://clean.marriott.com/> (accessed 25-12-2020)

<sup>82</sup> Hilton Clean Stay, Hilton Hotel & resorts, <https://www.hilton.com/en/corporate/cleanstay/?cid=OH,WW,COVIDhub,MULTIPR,Dropdown,AboutUs,SingleLink,i80835> (accessed 25-12-2020)

<sup>83</sup> IHG Clean Promise, InterContinental Hotel Group, <https://www.ihg.com/content/us/en/customer-care/clean-promise> (accessed 25-12-2020)

<sup>84</sup> 次世代型ホテルブランド「プリンス スマート イン」1号店となる「プリンス スマート イン 恵比寿」が2020年10月8日(木)開業, 株式会社プリンスホテル, 2020, <https://prtimes.jp/main/html/rd/p/000000806.000024668.html> (accessed 25-12-2020)

<sup>85</sup> MARRIOTT INTERNATIONAL HOSTS FIRST CONNECT WITH CONFIDENCE HYBRID EVENT FOR INDUSTRY CUSTOMERS, Marriott International, 2020, <https://marriottbonvoyevents.com/tips-and-trends/article/276> (accessed 25-12-2020)

<sup>86</sup> Seamore's Attraction, SHIRAHAMA KEY TERRACE HOTEL SEAMORE, 2020, <https://www.keyterrace.co.jp/en/#facility> (accessed 25-12-2020)

<sup>87</sup> HOTEL SHELTER, <https://www.hotel-shelter.net/> (accessed 25-12-2020)

<sup>88</sup> Shanghai hotel uses blockchain to safeguard customer health during Covid-19, CHINA TRAVEL NEWS, <https://www.chinatravelnews.com/article/139147> (accessed 25-12-2020)

The Intercontinental Shanghai uses a blockchain technology called VeChain to record information on the cleaning history (time, cleaning staff, cleaning method, etc.) of each room and part of the hotel, which can be checked by guests through a QR code. The hotel has also introduced robots for room service delivery to reduce the chances of contact between guests and staff.<sup>89</sup>

◇ **[Example] Digital Guest Registration System (Guestline, United Kingdom)<sup>90</sup>**

Guestline provides a digital guest registration system to make a contact-free experience. Their advanced communication and payment tools enable guests to be reassured to pay in advance and to make registration prior to their arrival. In order to ensure guest rooms are safe, online foods order and remote communications are available during stay. After check-out, the automated post-stay communications capture the feedback and promote more direct bookings.

◇ **[Example] Matching Service Between People who are Unable to Stay at Home and Hotels (HOTEL SHELTER, L&G Global Business, Japan)<sup>91</sup>**

It provides a matching service between people who are unable to stay at home and relatively small hotels with low occupancy rates. The target users are mainly medical professionals, essential workers, business persons forced to commute by public transportation, family members living with the elderly and people with domestic problems. By using this service, people can avoid spreading the infection to their families if they become infected<sup>92</sup>.

### 3) Other Facilities (sightseeing facilities, restaurants, commercial facilities, etc.)

Aside from transportation and accommodation, this section explains kinds of response is required in facilities such as tourist facilities, restaurants, and commercial facilities from three perspectives. These facilities are at high risk of infection due to opportunities for contact with many people.

The first trend is using technology to avoid the "three Cs" (Closed spaces without ventilation, Crowded places, Close contact). Image recognition technology, IoT, and information platforms are used as tool to avoid the high risk of infection caused by crowding. Thanks to it, people can know information about congestion to keep social distancing. The specific solutions are shown in Table 5, where facilities have established entry restrictions to avoid crowding. Before the COVID-19 crisis, necessity of digital technology in individual tourist facilities had not been recognized due to management intentions. However, introduction of advanced reservation systems to limit visitors' numbers has led to digital transformation development in tourist facilities.

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<sup>89</sup> Shanghai hotel uses blockchain to safeguard customer health during Covid-19, Decrypt, 2020,

<https://decrypt.co/35460/shanghai-hotel-uses-blockchain-to-safeguard-customer-health-during-covid-19> (accessed 25-12-2020)

<sup>90</sup> A Contact-free Hotel Experience, Guestline, 2020, <https://www.questline.com/contact-free-hotel-experience/> (accessed 22-1-2021)

<sup>91</sup> HOTEL SHELTER, <https://www.hotel-shelter.net/> (accessed 25-12-2020)

<sup>92</sup> このままでは潰れる！ 小規模ホテルが挑む「シェルター事業」とは, ITmedia ビジネスオンライン, <https://www.itmedia.co.jp/business/articles/2005/29/news015.html> (accessed 25-12-2020)

The second trend is to create a “contactless life”. Due to the risk of transmission through surfaces, solutions that reduce chances to touch objects as small as possible are becoming more important. The contactless technology such as biometrics is introduced for this purpose. Some useful examples are shown in Table 6.

The third is to reduce the risk of infection by strengthening disinfection activities and inactivating viruses. Guidelines have been created for various industries, and facilities follow these guidelines to ensure that disinfectants are available at entrance and employees disinfect surfaces with it. In addition to these efforts, Table 7 introduces robots and deep ultraviolet light as a time-saving and efficient solution for employees.

**Table5: Notable Solutions**

No.	Solution	Company	Country	Outline
1	Zensors	Zensors	The United States	Converts existing CCTV cameras into visual sensors without the need for additional hardware and helps automate some of the critical processes related to social distancing. <sup>93</sup>
2	Xovis	Xovis	Switzerland	3D sensors that provides a heat map to visualize locations with high risk of infection in airports, restaurants and commercial facilities. <sup>94</sup>
3	LIDAR sensor and 3D stereoscopic sensors	Acorel	France	Collecting and visualizing the necessary information from the movement of people, to maintain social distance, Based on the congestion situation and its movement, predictions can be obtained from the 3D center. <sup>95</sup>
4	Qlue	Qlue	Indonesia	A platform that centralizes information related to the COVID-19, the governments of Indonesia is using it to monitor citizens' violations. <sup>96</sup>
5	BriefCam	Canon Marketing Japan Inc.	Japan	A system for analyzing images captured by network cameras. The system is capable of using a mask-wearing filter and social distance (time and distance) search, and notifies the user in real-time when someone is not wearing a mask in the venue. <sup>97</sup>
6	VACAN	VACAN	Japan	Real-time seat availability information service, enabling users to make their own safety choices based on the information obtained. <sup>98</sup>

◇ **[Example] Real-Time Seat Availability Information Service (VACAN, Japan)<sup>99</sup>**

VACAN provides real-time information on congestion at various places and facilities, such as tourist facilities, restaurants, hotels and public transportation, aiming to create a situation where tourists can check in advance the safety of their destination and to avoid “three Cs” by making their own safety choices based on the information obtained.

<sup>93</sup> COVID-19 Management with Zensors, ZENSORS, <https://www.zensors.com/covid-19> (accessed 25-12-2020)

<sup>94</sup> We solve people flow, Xovis AG, <https://www.xovis.com/en/home/> (accessed 25-12-2020)

<sup>95</sup> 12 tech solutions for a post-COVID-19 airport experience, FUTURE TRAVEL EXPERIENCE, <https://www.futuretravelexperience.com/2020/05/12-tech-solutions-for-a-post-covid-19-airport-experience/> (accessed 25-12-2020)

<sup>96</sup> 新型コロナ禍で活躍するインドネシアのスタートアップ（インドネシア），JETRO, 2020, <https://www.jetro.go.jp/biznews/2020/06/00222dff8ad82186.html> (accessed 25-12-2020); Solutions, qlue, <https://www.qlue.co.id/business/> (accessed 25-12-2020)

<sup>97</sup> Canon Marketing Japan Inc. (based on information collected through open recruitment)

<sup>98</sup> Vacan, inc. (based on information collected through open recruitment)

<sup>99</sup> Vacan, inc. (based on information collected through open recruitment)



◇ **[Example] Platform that centralizes information related to the COVID-19 (qlue, Indonesia)**<sup>100</sup>

In collaboration with several startups, Qlue developed “Indonesia Bergerak,” a platform that centralizes information related to the COVID-19 in the country. In Indonesia, a government special team is collaborating with other government departments to use this platform to monitor citizens’ violations. In addition, the “QlueApp” application for general users has a function that allows citizens to report the locations of citizens in densely populated areas or those in need of relief supplies, and to share information among citizens through the application. The most common information received from citizens is density of populated areas. The Indonesian government’s special team is using this app to directly save citizens’ lives. To prevent the spread of fake news, an AI technology is used to identify fake news from posted information from the citizen and share the information with the Ministry of Communication and Information Technology, the supervising ministry in Indonesia.

**Table6: Notable Solutions**

No.	Solution	Company	Country	Outline
1	Infection prevention system	NEC	Japan	Infection prevention system combining facial recognition and temperature detection are introduced in tourism and commercial facilities and immigration control systems (NEC, Japan) <sup>101</sup>
2	Self-diagnosis	Republic of Korea(Ministry of interior)	Republic of Korea	An app allowing patients tracking (contact management), epidemiological investigation (Patients monitoring and testing), and symptoms reporting. <sup>102</sup>
3	Trace Together	Government of Singapore	Singapore	A contact tracing mobile application or token, which Bluetooth technology to facilitate community-driven contact tracing through the collection and logging of encounters between users. If there is an infected case, the Ministry of Health is allowed to access the data in the app so that the contact information of your close contacts is quickly identified to ringfence the infection. <sup>103</sup>

◇ **[Example] Infection prevention system combining facial recognition and temperature detection (NEC, Japan)**<sup>104</sup>

NEC combines face recognition technology which is one of their specialties, with technology that analyzes congestion levels from video images and thermal cameras that measure body surface temperatures without contact. In addition, the system detects people with a fever at the time of entry. Specifically, if a body temperature higher than an administrator’s set temperature is detected, an administrator is notified along with the facial information of the subject. The solution was provided to five major airports in Hawaii in July 2020.<sup>105</sup>

<sup>100</sup> 新型コロナ禍で活躍するインドネシアのスタートアップ（インドネシア），JETRO，2020，  
<https://www.jetro.go.jp/biznews/2020/06/00222dff8ad82186.html>；(accessed 25-12-2020) Solutions, qlue,  
<https://www.qlue.co.id/business/> (accessed 25-12-2020)

<sup>101</sup> NEC、顔認証と検温組み合わせ 感染防止システム，日本経済新聞，2020，  
<https://www.nikkei.com/article/DGXMZO61107770T00C20A7000000/> (accessed 25-12-2020)

<sup>102</sup> South Korea is watching quarantined citizens with a smartphone app, MIT Technology Review, 2020,  
<https://www.technologyreview.com/2020/03/06/905459/coronavirus-south-korea-smartphone-app-quarantine/> (accessed 25-12-2020)

<sup>103</sup> How TraceTogether works, A Singapore Government Agency Website, <https://www.tracetgether.gov.sg/> (accessed 25-12-2020)

<sup>104</sup> NEC、顔認証と検温組み合わせ 感染防止システム，日本経済新聞，2020，  
<https://www.nikkei.com/article/DGXMZO61107770T00C20A7000000/> (accessed 25-12-2020)

<sup>105</sup> New thermal temperature screening equipment in use at Hawaii’s airports, Hawaii.gov, 2020,  
<https://hidot.hawaii.gov/blog/2020/08/05/new-thermal-temperature-screening-equipment-in-use-at-hawaiis-airports/> (accessed 25-12-2020)



**Table7: Notable Solutions**

No.	Solution	Company	Country	Outline
1	A self-driving robot	SK Telecom and Omron Electronics Korea	Republic of Korea	5G robot that measures the temperature of visitors without contact and disinfect buildings with 5G, AI etc., in order to enable a systematic and efficient response to the COVID-19. <sup>106</sup>
2	A Deep UV-LED	NIKKISO CO., LTD.	Japan	A Deep UV-LED provided by the major Japanese precision equipment manufacturer is reported to be effective to rapidly inactivate the COVID-19. <sup>107</sup>
3	Care222®	Ushio Inc.	Japan	A new deep ultraviolet light source that does not cause erythema or keratitis in the skin or eyes of humans or animals, and retains the inherent ability of ultraviolet light to sterilize and inactivate viruses. <sup>108</sup>

◇ **[Example] 5G-powered robot equipped with disinfectant and admonishments (SK Telecom and OMRON Electronics Korea, Republic of Korea)<sup>109</sup>**

SK Telecom and OMRON Electronics Korea build a 5G robot that measures visitor's temperature without contact and disinfect buildings using various technologies such as 5G, AI, autonomous driving, and IoT, in order to enable a systematic and efficient response to the COVID-19. The robot uses an artificial intelligence technology to detect a group of people, advise them to scatter, and sound an alarm when their body temperature rises above 37.5 Celsius. People who do not wear masks are advised to wear masks by the robot. According to the company, the robot is equipped with a UV lamp and two disinfectant sprays, it can disinfect "99% of 33 square meters (355 square feet) of surface area in 10 minutes"<sup>110</sup>

◇ **[Example] Deep Ultraviolet LED that inactivate coronaviruses (NIKKISO CO., LTD., and Care222®, Ushio Inc., Japan)**

As one research result presented by University of Miyazaki, NIKKISO CO., LTD., reported the effectiveness of its deep UV-LED installed in "Aeropure," an air purifier, after testing for inactivation of the novel coronavirus (SARS-CoV-2). In the test, the rate of reduction of infectious titer in the collected novel coronavirus was 99.9% or more after 30 and 60 seconds.<sup>111</sup>

Ushio Inc. Care222® developed a similar solution comprising of a new ultraviolet light source that does not harm humans and retains the inherent ability of ultraviolet light to sterilize and inactivate viruses<sup>112</sup>.

<sup>106</sup> SK Telecom and OMRON Electronics Korea build 5G robot, FUTUREIOT, 2020, <https://futureiot.tech/sk-telecom-and-omron-electronics-korea-build-5g-robot/> (accessed 25-12-2020)

<sup>107</sup> 当社の深紫外線 LED を用いた宮崎大学の論文が「Emerging Microbes & Infections」に掲載、日機装株式会社、<https://www.nikkiso.co.jp/news/2020/ledemerging-microbes-infections.html> (accessed 21-01-2021)  
Rapid inactivation of SARS-CoV-2 with deep-UV LED irradiation, Hiroko Inagaki, Akatsuki Saito, Hironobu Sugiyama, Tamaki Okabayashi & Shouichi Fujimoto, 2020, Emerging Microbes & Infections, 9:1, 1744-1747, <https://www.tandfonline.com/doi/full/10.1080/22221751.2020.1796529> (accessed 21-01-2021)

<sup>108</sup> Care222®とは？, Ushio Inc., <https://clean.ushio.com/ja/care222/> (accessed 25-12-2020)

<sup>109</sup> SK Telecom and OMRON Electronics Korea build 5G robot, FUTUREIOT, 2020, <https://futureiot.tech/sk-telecom-and-omron-electronics-korea-build-5g-robot/> (accessed 25-12-2020)

<sup>110</sup> Armed with disinfectant and admonishments, South Korean robot fights coronavirus spread, REUTERS, <https://www.reuters.com/article/us-health-coronavirus-southkorea-robots/armed-with-disinfectant-and-admonishments-south-korean-robot-fights-coronavirus-spread-idUSKBN23816M> (accessed 25-12-2020)

<sup>111</sup> Confirming Effectiveness of Nikkiso's Deep UV-LED against Novel Coronavirus (SARS-CoV-2), NIKKISO, 2020, <https://www.nikkiso.com/news/files/a08d387b6c13ebf2335f6adc06da8e7d.pdf> (accessed 21-01-2021)

<sup>112</sup> Care222®とは？, Ushio Inc., <https://clean.ushio.com/ja/care222/> (accessed 25-12-2020)

### 2.2.3. After-travel

While the spread of COVID-19 is gradually lessening and the restrictions are progressively being eased, it is necessary to address “After-travel” in order to prevent the spread of the infection in case that traveler become infected with COVID-19 having a certain latency period. It is necessary to implement a rapid post-event response in the event of a COVID crisis. Thus solutions that contribute to this are required.

In this regard, infection confirmation applications led by the public sector has continued to play a major role. However, event organizers and businesses are responsible to reduce risks and take a balance between preventing the spread of infection and making an environment for visitors to gather. The followings are example of their efforts.

- ◇ **[Example] Event” Travel Revive2020” (Singapore Tourism Board, Singapore)<sup>113</sup>**  
All participants were given a simple infectious disease test prior to entering the venue. Other infection control measures included dividing the venue into different areas, regulating entry and stay times at the business meeting venue, isolating booths during business meetings, prohibiting paper materials, and installing protective glass. As a noteworthy measure, all participants had to install a mobile app and check-in and out from a certain area via the app, as well as carry a token that is helpful for contact tracing<sup>114</sup>.
  
- ◇ **[Example] Contact Confirmation Service (The TOKYO COVID-19 trace service for stores, Japan)<sup>115</sup>**  
The Tokyo Metropolitan Government has launched “The TOKYO COVID-19 tracing service for stores” in partnership with digital ticketing platform service providers and cashless payment providers.  
When a user who has agreed to use the cashless payment service or digital ticketing service in a store, the visit history is recorded. If the infection is confirmed and the store reports the infection to these technology companies, they notify users of the infection based on the visit history data.

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<sup>113</sup> Travel Revive 2020, Government of Singapore.

Last Updated 21 October 2020, <https://www.stb.gov.sg/content/stb/en/trade-events-and-resources/STB-organised-events/TravelRevive-2020.html> (accessed 25-12-2020)

<sup>114</sup> TravelRevive Sets a Gold Standard for Conference Management Amidst COVID-19, ICS, <https://www.icsevents.com/travel-revive-mice-meetings-covid19/> (accessed 19-01-2021)

<sup>115</sup> 店舗型東京版新型コロナ見守りサービスに係る新型コロナ・テックパートナー企業の選定について, 東京都戦略政策情報推進本部, 2020, [https://www.senryaku.metro.tokyo.lg.jp/tokyodatahighway/covid-19\\_tec\\_2.html](https://www.senryaku.metro.tokyo.lg.jp/tokyodatahighway/covid-19_tec_2.html) (accessed 25-12-2020)

### 3. Efforts to revive tourism exchange from the COVID-19 crisis

#### 3.1. Tourism strategies in each country and region

##### 3.1.1. Sharing the vision of each country/organization and good practice based on it

In this section, the status of strategies for reviving tourism exchanges from the COVID-19 crisis will be summarized based on the results of a survey conducted by the Japanese government to the governments of the target countries.

<b>Q2-1: Does your country/organization have a national strategy or plan for the tourism sector? If yes, have you reviewed it or do you plan to do so in light of the spread of COVID-19?</b>		
1.	We have developed it, and are currently reviewing it(or planning to do so)	<b>14</b>
2.	We have developed it, but have not considered until its review	2
3.	We never developed it in the first place	0
4.	Other	1
5.	#N/A	4
<b>Q2-2: Has your country or organization developed a national-level strategy, roadmap, or scenario (Not Guideline) specific to the revival of tourism exchange after the COVID-19 pandemic?</b>		
1.	We have developed it	<b>8</b>
2.	We have not developed it yet, but preparations are underway for it	<b>6</b>
3.	We have not developed and not prepared for it	2
4.	Other	2
5.	#N/A	3
<b>Q2-3: Does your country/organization have its own recovery projections for the revival of international tourism exchange?</b>		
1.	Yes	<b>8</b>
2.	No	<b>9</b>
3.	#N/A	4
<b>Q2-4: We would like to know what you are implementing (or considering to implement) in your country or region to revive tourism exchange after the COVID-19 crisis and to promote the realization of "sustainable tourism" from the view point of innovation and the use of digital technology.</b>		
1.	Yes, we are implementing (or considering to implement) some measures	<b>13</b>
2.	Not in particular	4
3.	#N/A	4

### [Q2-1]

Approximately, 70% of the respondents have formulated national-level strategies and plans in the tourism sector. In addition, in response to the expansion of COVID-19, it was found that precise reviewing has been implemented or planned.

### [Q2-2]

Approximately 40% of the respondents answered that they have formulated national-level strategies, roadmaps, and scenarios that specialize in reviving tourism exchanges from the crisis. About 30% of them has not been formulated yet, but it is said that preparations are underway.

- ✧ In **Myanmar**, the Myanmar Tourism Strategic Recovery Roadmap (MTSRR) was developed in collaboration with the **Luxembourg** Development Cooperation (LuxDev). The roadmap is looking ahead to the end of the COVID disaster and setting three goals, namely (1) the short-term goal (to restore trust and revitalize and restart domestic industry), (2) the medium-term goal (to rebuild visitor demand and improve products) and (3) the long-term goal (promoting the development of a more resilient, balanced, responsible and sustainable tourism sector).
  
- ✧ In **Thailand**, countermeasures against COVID-19 have been formulated based on the country's public health strategies. In line with it, BEST (Booking, Environmental, Safety, Technology) <sup>116</sup> strategy for tourism in "New Normal" era was formulated within the phase where business activities and restrictions were relaxed.

### [Q2-3]

The implementation status of the country's own recovery forecast regarding the revival of international tourism exchange was divided. The respondents who answered "No" were mainly in step with the **UNWTO** initiative or were working with private companies such as consulting firms and research companies.

### [Q2-4]

Many respondents answered that they have initiatives that correspond to the questioned items. The tourism industry has grown to account for 10% of the world's GDP. On the other hand, it is also a fact that inherent vulnerability and intolerance in the industry to disasters are revealed through great impact brought by COVID-19. Therefore, there has been widespread recognition that it is necessary to increase the resiliency of the industry along with the directions of Annex 2 ("Actions for Strengthening the Resiliency of Tourism") endorsed at the G20 Hokkaido Tourism Ministers' Meeting. Emergence of innovation and utilization of digital technology is considered to be an effective avenue to make the goals come true.

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<sup>116</sup> TAT unveils three part strategy for "new normal" tourism recovery, Tourism Authority of Thailand, 2020  
<https://www.tatnews.org/2020/06/tat-unveils-three-part-strategy-for-new-normal-tourism-recovery/> (accessed 1-3-2021)

### 3.1.2. Future Tourism Crisis Management based on COVID-19 crisis

In this section, the practice and promotion method of Tourism Crisis Management to increase the resiliency with the COVID disaster as a turning point is organized. The purpose of Tourism Crisis Management in Japanese definition is “to anticipate a crisis that will have a tremendous impact on tourists and industry, and to systematically prepare for disaster mitigation measures in order to minimize total damage. By doing so, improvement of the resiliency of tourist destinations can be realized”<sup>117</sup>. For it, both the public and private sectors are supposed to play the main constituents. Tourism Crisis Management is a comprehensive initiative consisting of four seamless phases: (1) Risk Reduction, (2) Crisis Response (Readiness), (3) Crisis Response, and (4) Recovery from Crisis.

In October 2019, the G20 Tourism Ministers' Meeting was held in **Japan**. The Ministerial Declaration has two Annexes, one of which is ‘Actions for Strengthening the Resiliency of Tourism’. The Annex regards various disasters, including infectious diseases, as significant risks to sustainability in tourism and reiterates the need to improve resiliency to them. To make it happen, it was recognized that it would be effective for each country to share individual knowledge and examples of efforts based on their own experiences about past disasters. In October 2020, the G20 Tourism Ministers' Meeting, chaired by **Saudi Arabia**, issue a communiqué<sup>118</sup> including a message that “We promise to continue to share knowledge, experience and good practices in each phase to improve our ability to respond to uncertain and volatile crises and rebuild our travelers' trust”. The need to make such efforts more concrete was reaffirmed. In addition, the communiqué acknowledged that “the pandemic revealed the challenges and new opportunities for risk management in tourism sector.” As argued in the previous chapter, the practice and promotion of Tourism Crisis Management is a common agenda for each country, which indicated that the countries should take advantage of the pandemic to see an opportunity of the process of reviving tourism exchange.

For example, in **Japan**, JTA draw up a Guidebooks, teaching materials, and materials aiming to contribute to the spread and penetration of Tourism Crisis Management with **UNWTO Regional Support Office for Asia and the Pacific** in 2021. Potential readers of this guidebook are local governments, DMOs, and tourism companies, and the book emphasizes important factors in Tourism Crisis Management, called four Rs that are, namely, (1) Risk Reduction and (2) Crisis Response Preparation (Readiness in other word), (3) Response to the crisis, and (4) Recovery from the crisis. Practices in Japan and overseas to be worth referring are contained for each phase.

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<sup>117</sup> Notice: Webinar on the “Addressing the Critical Need to Tourism Crisis Management (The significance and importance of tourism crisis management and how to respond to crises)” to be held, Japan Tourism Agency, 2021  
[https://www.mlit.go.jp/kankocho/en/page07\\_000020.html](https://www.mlit.go.jp/kankocho/en/page07_000020.html) (accessed 1-3-2021)

<sup>118</sup> G20 Tourism Ministers Meeting Diriyah Communique, Japan Tourism Agency, 2021  
<https://www.mlit.go.jp/kankocho/content/001367317.pdf> (accessed 1-3-2021)

<b>Q3-1:</b> <i>The tourism industry is vulnerable to both natural and human disasters. The protection of tourists and recovery from disasters are issues common to all countries and regions. What is the status of efforts made in your country or region for "Crisis Management in the field of tourism", including measures during ordinary times?</i>		
1.	Efforts have been made since before the COVID-19 crisis	<b>6</b>
2.	Efforts have begun (or will begin) in the aftermath of the COVID-19 crisis	<b>5</b>
3.	Efforts have not been made currently	2
4.	Other	2
5.	#N/A	6
<b>Q3-2:</b> <i>How does your country or organization secure (or plan to secure) financial resources for relevant measures in the tourism sector at the national level, based on the premise of a society susceptible to infectious diseases?</i>		
1.	A "tourism tax" has been introduced, which is also used as a source of funding for combating infectious diseases in the tourism sector	1
2.	A "tourism tax" has been introduced, but has not been used as a source of funding for combating infectious diseases in the tourism sector	1
3.	The cost of combating infectious diseases in the tourism sector is funded from other sources	<b>11</b>
4.	Other	3
5.	#N/A	5

**[Q3-1]**

The status of actions relating to Tourism Crisis Management in each country is summarized here. Approximately half of the respondents answered that they had been working on it since before the COVID-19 crisis, and the other half also answered that the crisis triggered their efforts to be expanding (or "planned"). The challenge for the former group is to take the opportunity of the crisis to deepen its efforts, and for the latter group, it is a challenge not to make the effort temporary upon the end of the pandemic. In order to tackle those problems, it is important that the effectiveness of Tourism Crisis Management is simple and widely recognized. Therefore, the following points should be fully considered when practicing Tourism Crisis Management through all responding and recovering processes from the disaster.

**A) Learn from the case studies of each country's practices and improve the quality of public measures to deal with COVID-19.**

As mentioned earlier, various public measures are being developed all over the world to respond to the disaster. Despite the common risk approach of COVID-19, there are, indeed, differences in specific methods and institutional design between countries and regions. Regarding the individual effectiveness as a public measure, it is necessary to carefully evaluate it in consideration of social conditions and customs, and differences in preconditions such as the infection level at the time of deployment. By learning from them, it is possible to improve the response more efficiently.

**B) Leveraging the experiences through the COVID-19 crisis to countermeasures against risks of other infectious diseases.**

It has repeatedly been pointed out even before the COVID pandemic that repetition of infectious diseases that spread over a wide area may occur in a short period of time due to spontaneous people's activities, logistics and climate change. It can be considered that infectious diseases continue to be a major risk in tourism industry even after the end of the epidemic. Therefore, understanding and preparing for infectious diseases as an explicit risk is indispensable for strategy-making of Tourism Risk Management in the future. Of course, depending on types of emerging viruses, the contents of appropriate countermeasures and measures will change each time. However, first of all, it is expected that the experience of COVID-19 will be surely applied to disaster reduction (Risk Reduction) and readiness (Readiness) planning against risk of other infectious diseases.

For example, **Singapore** points out the significance of that experience in encountering the pandemic of the severe acute respiratory syndrome caused by the SARS coronavirus between 2002 and 2003. Taking this opportunity, the government as a whole recognized the importance of infectious disease control and strengthened its preparedness to mitigate the effects of other pandemics. Specifically, they strengthened its investment in the medical and healthcare sector after SARS crisis.

**C) Leveraging the experiences through the COVID-19 crisis to countermeasures against risks OTHER THAN infectious diseases**

Potential risks in Tourism Crisis Management are many and diverse other than infectious diseases. In recent years, it has been warned that the risk of disasters, especially due to climate change, is increasing worldwide. These global phenomena clearly threaten sustainability in tourism. The effectiveness of the practice of Tourism Crisis Management is high in countries and regions where the economic and social benefits of the tourism sector are large. The focus of awareness of Tourism Crisis Management, which is being paid much attention by the COVID, should not be limited to context of infectious diseases. Opportunities should be created to encourage a developmental reassessment of inherent risks of each country or region and to promote risk reduction and readiness.

For example, in **Indonesia**, which is also at high risk from geological disasters, Tourism Risk Management (MMK: Manajemen Krisis Kepariwisata) has been promoted since Before the COVID disaster. The Tourism Minister's Regulations (Permenpar No.10 / 2019) was announced in October 2019 and the efforts were accelerated. It is the rules for Tourism Crisis Management. In addition, they established SOP (Standard Operating Procedures) intended to implement it. The integrated crisis communication after the COVID outbreak was also practical done according to the SOP. In the country, where the tourism sector's contribution to foreign currency revenue is high, the government has a strong awareness of "minimizing disaster losses through well-prepared disaster mitigation and management."<sup>119</sup>

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<sup>119</sup> Kemenpar Terbitkan Aturan Manajemen Krisis Kepariwisata , Bisnis Network, 2020  
<https://ekonomi.bisnis.com/read/20190910/12/1146563/kemenpar-terbitkan-aturan-manajemen-krisis-kepariwisataan> (accessed 1-3-2021)



### [Q3-2]

In order for Tourism Crisis Management to be a continual initiative, it is essential to secure stable financial resources, and the utilization of taxes is considered to be one of the avenues such as tourism tax collected from tourists. According to our survey, the financial resources for direct infectious disease control are mostly under the jurisdiction of the ministries and agencies in charge of public health. And in most countries, the expenditure of infectious disease control in the tourism field is paid from other financial resources other than the tourist tax. On the other hand, a tourist tax has been used for tourism promotion and marketing campaigns, among other initiatives, which promote safety, health and cleanliness to complement public health initiatives in **Malaysia**. In addition, although **Palau's** tourist tax has a strong nature as an environmental tax, it is a tax system that allows travelers to fulfill their responsibility for environmental burden to a certain extent through their payment and an increase of traveler's engagement.

- ✧ **Malaysia** Tourism Tax (TTX) is a federal tax<sup>120</sup> collected by the hotel operators from foreign guests, and MYR10 per room per night began to be levied since September 2017. A half of the collected amount goes to each state government's revenue. Basically, the usage are (1) maintenance and upgrade of tourist facilities and (2) promotion and marketing of tourist destinations. The system allows specific measures and projects to be reviewed every year, and is also used as a financial resource for infectious disease control in the tourism.
- ✧ The tourist tax in **Palau** is Pristine Paradise Environmental Fee: PPEF, which has been collected with an additional 100 USD per person on flights from overseas since January 2018.<sup>121</sup> The purposes of use are regulated as follows; (1) 10 USD is replenished to The Fisheries Protection Trust Fund, (2) 12.50 USD is allocated to each state government, (3) 25 USD goes to the national treasury for security, operation, maintenance and improvement of Palau International Airport, (4) 30 USD goes to Green Fee (5) last 22.50 USD is distributed to the national treasury. Depending on its content, tourists are required to obtain and carry a permit issued by the state government when participating in local natural activities. The application fee is used to support activities of the environmental protection. PPEF was founded in December 2017 along with Palau Pledge, which is renowned as the world's first eco-promise. Therefore, the background of the establishment of both systems is common. Prior to the introduction of this system, travelers had to pay environmental tax (30USD) and departure tax (20USD) directly at the airport window at the time of departure. These reforms were implemented through a series of sophisticated flows that provide people who visit Palau with a convincing "story" and then take responsibility for the environmental burden through the payment of tourism tax.

As the tourism industry is recognized for its wide coverage, each destination has its own ecosystem consisted with diverse actors. Travelers are also an indispensable actor in those

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<sup>120</sup> Law of Malaysia Act 791 -Tourism Tax Act 2017-, Percetakan Nasional Malaysia Berhad, 2017  
<https://www.myttx.customs.gov.my/CTTax/infopage/APPENDIX%201%20-%20Tourism%20Tax%20Act%202017.pdf> (accessed 1-3-2021)

<sup>121</sup> RPPL 10-2: Pristine Paradise Environmental Fee (Formerly EIF), Republic of Palau National Government, 2017  
<https://www.palau.gov.pw/wp-content/uploads/2017/04/RPPL-No.-10-02-re.-Amendments-to-Environmental-Impact-Fee.pdf> (accessed 1-3-2021)



systems. Originally, one study<sup>122</sup> says that tourist destinations are not existing products, but spaces where tourists can use various local resources. In short, tourists are defined as a “co-producer” in destination. The engagement of tourist is fostered by organically communication between tourists and destination.

Through the experience that tourism exchanges have almost stopped today, destinations recognize the importance of being aware of traveler’s engagement from the perspective of Tourism Crisis Management for sustainability of the industry. In that sense, we also need to keep in mind that tourists are becoming more aware of "responsible tourism" these days. Tourists with such values believed to have the following characteristics and be a highly promising attribute as a “co-producer”. (1) Fully respecting the people and tourism resources (including history and culture) of the destination, (2) Being aware of the environmental burden caused by traveling, and (3) Doing "Responsibility for moving".

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<sup>122</sup> Destination Management and the flow-based approach, Japan Travel Bureau Foundation, 2020 <https://www.jtb.or.jp/tourism-culture/bunka245/245-05/> (accessed 1-3-2021)

### **3.2. Solutions in private sector to embody the “continued growth” in a world that has experienced the COVID-19 crisis**

The previous chapter focused on solutions offered by private sector that were effective in coping with the COVID-19 crisis. In this chapter, the focus is changed to private sector solutions that contribute to “continued growth” in tourism industry. The growth here refers to the rapid development achieved just before the COVID-19 crisis; further quantitative development was expected if the pandemic had not occurred. However, there is growing momentum for realizing sustainable tourism amid occurrence of over-tourism and excessive consumption of tourism resources. In a broader sense, the “continued growth” is not a mere extension of growth.

The “continued growth” begins with a converging period after people would experience the COVID-19 crisis. In this process, the solutions discussed in the previous chapter have been making a significant contribution. Measures to be discussed in this chapter will instead contribute to the “continued growth”, in a society changed after international tourism has recovered to the same level as just before the crisis. In this sense, technologies will actively be utilized.

The structure of this chapter is the same as the previous one, and it is organized according to the customer journey, i.e., “before-travel”, “during-travel”, and “after-travel”.

### **3.2.1. Before-travel**

The two main issues that need to be addressed to realize the “continued growth” in “before-travel”, and the solutions that will contribute to solving them, are illustrated in Table 8 through Table 9.

#### **1) Realizing seamless travel at least starting from the reservation before travel**

Seamless travel has been one of the themes to be discussed during the G20 Tourism Ministers Meeting in recent years; the attending countries confirmed its importance. Even so, it can only be realized by consolidating and sharing a large amount of information across multiple entities in the customer journey, previously disconnected. It is undoubtedly a prerequisite that the data is handled with a high level of information security by utilizing blockchain technology. These tools also provide tourists with a safe and secure experience during before-travel.

#### **2) Information collection should be more efficient and accurate based on individual preferences**

It has been a long time since travel-related metasearch engines appeared on the market, but it may still take some time and effort to find a tour package traveler’s favor. In order to save time and effort, it is first necessary to convert the browsing history and travel history of travelers into big data by linking them to their personal accounts. In addition, the enhancement of AI logic, which is the foundation of the metasearch engine, is also essential. However, until recently, many travel agencies had not been able to build an enough solution. Nowadays, the problems can be solved by building a reservation system that can provide reliable suggestions by linking profiles with big data, and by giving positive recommendations from a trustworthy person who is close to the traveler's own values and preferences, which is why the industry needs such mechanisms.

## Providing Safe, Secure and Seamless Tourism

Some solutions provide safe, secure, and seamless before-travel activities. For example, tourists use platform services that provide useful information that meet their need or platform based on blockchain technology that realize safe and secure payment activity. Another example is useful for tourism suppliers that enable them to improve profitability by dynamic pricing or effective promotion solution.

**Table8: Notable Solutions**

No.	Solution	Company	Country	Outline
1	FURTHER	Further Network	United Kingdom	Blockchain-based platform for airlines and their industrial business partners to enable a faster and customizable ticketing and travel experience. <sup>123</sup>
2	Civic	Civic	The United States	Decentralized identity platform that offers a variety of live identity verification tools provide travelers with a seamless experience. <sup>124</sup>
3	Yapta	Yapta	The United States	Flight or hotel booking platform providing users with instantly pricing check help them to book at a cheaper. <sup>125</sup>
4	Fly now Pay Later	Fly now Pay Later	United Kingdom	Financial support for travelers in flight booking, allowing them to pay in equal installments over a 3/6/12 months. <sup>126</sup>
5	Fomo travel	Fomo travel	South Africa	One-stop travel platform including flight and hotel booking, searching tours, and buying travel insurance, helping users to buy travel services using a financial savings mechanism. <sup>127</sup>
6	SOCIALPORT	Valise Inc.	Japan	Matching platform services for hotels that want to promote PR between influencers. <sup>128</sup>
7	PickPrize	PickPrize LLC.	Japan	Online platform for supporting to hold "Instagram photo contest" targeting foreign travelers. It helps tourist facilities to promote PR. <sup>129</sup>

✧ **[Example] Blockchain-based platform for completing a seamless travel process (FURTHER, United Kingdom)**

FURTHER offers a Blockchain-based platform that enables faster and customizable ticketing and travel experiences "by combining travel history, health history, and biometric ID data"<sup>130</sup>. FURTHER aims to "help airlines, agencies, hotel wholesalers and travel product producers to solve the Billing, Settlement, and Payment issues while removing the middle-man and completing BSP in real-time"<sup>131</sup>.

<sup>123</sup> Solutions, FURTHER, <https://further.network/en/solutions> (accessed 23-12-2020)

<sup>124</sup> Making Travel Seamless with Digital Identity, Civic, 2018, <https://www.civic.com/blog/making-travel-seamless-with-digital-identity/> (accessed 23-12-2020)

<sup>125</sup> yapta, <https://yapta.com/> (accessed 23-12-2020)

<sup>126</sup> Fly now Pay Later, <https://flynowpaylater.com/gb/> (accessed 23-12-2020)

<sup>127</sup> Fomo travel, <http://www.fomotravel.com/> (accessed 23-12-2020)

<sup>128</sup> Valise Inc., (based on information collected through open recruitment)

<sup>129</sup> PickPrize LLC. (based on information collected through open recruitment)

<sup>130</sup> Exclusive: 9 travel tech startups helping to solve COVID-19 challenges for airlines and airports, FUTURE TRAVEL EXPERIENCE, 2020, <https://www.futuretravelexperience.com/2020/07/9-travel-tech-startups-helping-to-solve-covid-19-challenges-for-airlines-and-airports/> (accessed 23-12-2020)

<sup>131</sup> Solutions, FURTHER, <https://further.network/en/solutions> (accessed 23-12-2020)

## Contributing to Sustainable Tourism through New Experiences

Sustainable tourism has already been valued by tourists and local suppliers even before the pandemic. However, the economic impact of the COVID-19 crisis on many regions has led to a need for solutions that contribute not only to so-called environmental protection, but also to strengthening the local communities' sustainability. One trend in these efforts is represented with platform solutions. Through these platforms, it will be possible to obtain information about travelers and local suppliers more closely.

**Table9: Notable Solutions**

No.	Solution	Company	Country	Outline
1	Local Alike	Local Alike	Thailand	On their marketplace website, it offers various community-based tourism and responsible tourism experiences. <sup>132</sup>
2	Timbuktu travel <sup>133</sup>	Timbuktu travel	South Africa	An online platform for booking safari packages in Africa and Asia.
3	LIVE JAPAN PERFECT GUIDE	Gurunavi, Inc.	Japan	A Tourism information platform service for foreign visitors to Japan. Shops and facilities offer their information through this service. <sup>134</sup>
4	Musement	Musement	Italy	An online platform for buying ticket or booking various local cultural experiences. It even added the possibility to book an audio tour. <sup>135</sup>
5	Travl Join	Travl Join	Brazil	Web-based DaaS (Data-as-a-service) platform based on machine-learning algorithms, it provides travel companies with real-time traveler data. <sup>136</sup>
6	VoiceMap	VoiceMap	South Africa	An online platform for sharing audio-based walking tours. Users can create their own voice tours and others can download and use them for self-guided walking tours. <sup>137</sup>
7	Product data distribution platform	FORCIA, Inc.	Japan	It helps hotels and tourism facilities build product data distribution platforms by making open data and data standardization. The platforms enable facilities to expand sales channels. <sup>138</sup>
8	Beyond Pricing	Beyond Pricing	The United States	Dynamic pricing and revenue management software for over 120,000 Airbnb listings worldwide. <sup>139</sup>

### ✧ [Example] Local excursion platform (Local Alike, Thailand)<sup>140</sup>

Local Alike offers “a wide range of community-based tourism and responsible tourism experiences”. Immersive forms of tourism thread enable travelers to participate in a remote experience and to contribute to the preservation of the environment, culture, and local way of life. Local Alike also reports how it has contributed to generating social impacts such as creating 2,000 jobs for residents and earning 54 million THB (about 1.8 million USD) worth of profit to be distributed to the community in the past 7 years.

<sup>132</sup> Local Alike, <https://localalike.com/> (accessed 23-12-2020)

<sup>133</sup> Timbuktu travel, <https://www.timbuktuttravel.com/> (accessed 23-12-2020)

<sup>134</sup> LIVE JAPAN PERFECT GUIDE, Gurunavi, Inc., <https://livejapan.com/> (accessed 23-12-2020) and information collected through open recruitment

<sup>135</sup> About us, Musement, <https://www.musement.com/uk/about-us-2-p/> (accessed 23-12-2020)

<sup>136</sup> Travl Join, <https://travljoin.com/en/home/> (accessed 23-12-2020)

<sup>137</sup> About us, Voice map, <https://voicemap.me/about> (accessed 23-12-2020)

<sup>138</sup> FORCIA Inc., (based on information collected through open recruitment)

<sup>139</sup> Beyond Pricing, <https://beyondpricing.com/> (accessed 23-12-2020)

<sup>140</sup> About us, Local Alike, <https://localalike.com/about-us> (accessed 23-12-2020)

✧ **[Example] Product data distribution platform for accommodation and tourism facilities (FORCIA, Inc., Japan)<sup>141</sup>**

FORCIA, Inc. utilizes general-purpose demand forecasting and dynamic pricing technology to eliminate lost sales opportunities and maximize sales and profits, considering each product as a finite inventory and a sales expiration date. It creates added value by expanding direct sales channels for accommodation and tourist facilities. The service can also be utilized for regional tourism policies by building a dynamic package infrastructure. For example, it can develop unique travel packaging products by combining the region's distinctive accommodation products, optional tours, and primary transportation and various services provided by transportation and travel businesses.

✧ **[Example] Platform of services and networking to facilitate access to tourism and recreation for people with all types of disabilities (Uppiz, France)<sup>142</sup>**

Uppiz provides a platform service that enables people with specific needs to go on holiday. It does not merely list places labeled as accessible to all but also provides information on accessible accommodation and adaptable activities to people with disabilities.

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<sup>141</sup> FORCIA, Inc. (based on information collected through open recruitment)

<sup>142</sup> Who-we-are, Uppiz, <https://www.uppiz.com/qui-sommes-nous> (accessed 23-12-2020)

### 3.2.2. During-travel

As in the previous chapter, we looked at solutions for the “during-travel” by subdividing them into (1) transportation, (2) accommodations, and (3) other facilities (sightseeing facilities, restaurants, commercial facilities, etc.). The common issue for all of them is needed to discuss technology breakthroughs. The following section focuses on solutions to achieve it.

#### 1) Transportation

In order to realize the “continued growth”, one of the main issues during travel is to improve traveler’s convenience through digitalization. Solutions addressing this issue are shown in Table 10. These solutions contribute to reduction of contacts while also contributing to a more seamless experience for the traveler. These solutions also save manpower and improve productivity in transport facilities.

**Table10: Notable Solutions**

No.	Solution	Company	Country	Outline
1	Bo	BotsAndUs	United Kingdom	A communication robot, called Bo, autonomously interacts with travelers and supports them. It relieves staff from time-consuming task. <sup>143</sup>
2	Juvo Robotics	Juvo Robotics	The United States	Providing an end-to-end automated baggage handling system at airport that would improve productivity, safety and reduce labor costs. <sup>144</sup>
3	Koala	Koala	France	Data-driven products monitor travel traffic in real-time, alert travelers of any disruption and pay out instantly. It benefits both travelers and airlines. <sup>145</sup>
4	Airport Experience	DASSAULT SYSTEM	France	Virtual twin technology recreates airports in virtual world and helps airport staff to save time and improve accuracy of operation design. <sup>146</sup>
5	TaxiOne	TaxiOne	Russian Federation	Online platform service “that combines all taxi services in the world in one application, so that you can travel to any city in any country of the world in a familiar and safe way.” <sup>147</sup>
6	Ualabee	Ualabee	Argentina	A leading collaborative transportation solution in Latin America that provide users the fastest, safest and most sustainable way to move by public transport. <sup>148</sup>

✧ **[Example] Fully-autonomous service robot that deliver real-time support for customers (Bo, BotsAndUs, United Kingdom)<sup>149</sup>**

BotsAndUs developed a customer experience robot "Bo" to assist passengers at airports. The robot can autonomously engage with passengers and take them wherever they want (gates, lounges, stores, and other facilities etc.). Not only can this robot create a memorable airport experience for passengers, but also it frees staff from simple but time-consuming inquiries, which allows them to focus on more

<sup>143</sup> Bo, BotsAndUs, <https://www.botsandus.com/products/bo#tech> (accessed 23-12-2020)

<sup>144</sup> Juvo Robotics, <https://juvorobotics.com/> (accessed 23-12-2020)

<sup>145</sup> Koala, <https://www.hikoala.co/> (accessed 23-12-2020)

<sup>146</sup> Airport Experience, DASSAULT SYSTEM , <https://ifwe.3ds.com/aerospace-defense/airport-experience> (accessed 23-12-2020)

<sup>147</sup> About us, TaxiOne, <https://tax1one.com/?pid=34> (accessed 23-12-2020)

<sup>148</sup> SOBRE NOSOTROS, Ualabee, <https://ualabee.com/empresa/conocenos/> (accessed 23-12-2020)

<sup>149</sup> Say hello to Bo., BotsAndUs, <https://www.botsandus.com/products/bo> (accessed 23-12-2020)



complex tasks, and their customer service.<sup>150</sup> The robot is also able to collect data on surrounding environment and people who interacts with it.<sup>151</sup>

In some cases, the prompt response to travelers in the event of flight cancellations has helped to ease travelers' tension and reduce costs for airlines.

✧ **[Example] Service tracking all travel data and providing immediate communication and compensation in case of flight disruption (Koala, France)<sup>152</sup>**

Koala tracks all travel data and provides immediate communication and compensation in case of flight delays or cancellations. As a COVID-19 related measure with the expansion of the insurance system related to with/after-COVID, Koala has got paid a lot of attention. Travelers face outdated claims with only 15% of customers receiving payment.<sup>153</sup> Airlines also cost the industry 4 billion Euros annually, which represents an average of 5% of the total operating costs.<sup>154</sup> This solution will benefit both travelers who want to eliminate their concerns when boarding a plane and airlines who want to reduce flight cancellations handling cost. In addition, efforts are being made to use VR technology to improve operations at low cost.

✧ **[Example] Space reproduction system using digital twin technology (Airport Experience, DASSAULT SYSTEM, France)**

For an airport operator, there must be a crisis situation where quick decision is needed. For taking a smooth action, digital twin technology can be used to replicate airport-experience by recreating the interior space of an airport in a virtual space to examine operations. The system improves the accuracy and speed of decision-making.

## 2) Accommodation

The "continued growth" is one of the main issues during travel. Solutions that contribute to improve productivity of hotel operations, such as room reservations, reception, and room cleaning, as well as increasing the convenience of hotel guests through digitalization are illustrated in Table 11.

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<sup>150</sup> Exclusive: 9 travel tech startups helping to solve COVID-19 challenges for airlines and airports, FUTURE TRAVEL EXPERIENCE, <https://www.futuretravelexperience.com/2020/07/9-travel-tech-startups-helping-to-solve-covid-19-challenges-for-airlines-and-airports/> (accessed 23-12-2020)

<sup>151</sup> Exclusive: 9 travel tech startups helping to solve COVID-19 challenges for airlines and airports, FUTURE TRAVEL EXPERIENCE, <https://www.futuretravelexperience.com/2020/07/9-travel-tech-startups-helping-to-solve-covid-19-challenges-for-airlines-and-airports/> (accessed 23-12-2020)

<sup>152</sup> Paris-based Koala grabs €1.6 million to bring travel insurance into the 21st century, EU-Startups, <https://www.eu-startups.com/2020/07/paris-based-koala-grabs-e1-6-million-to-bring-travel-insurance-into-the-21st-century/> (accessed 23-12-2020)

<sup>153</sup> Paris-based Koala grabs €1.6 million to bring travel insurance into the 21st century, EU-Startups, <https://www.eu-startups.com/2020/07/paris-based-koala-grabs-e1-6-million-to-bring-travel-insurance-into-the-21st-century/> (accessed 23-12-2020)

<sup>154</sup> Paris-based Koala grabs €1.6 million to bring travel insurance into the 21st century, EU-Startups, <https://www.eu-startups.com/2020/07/paris-based-koala-grabs-e1-6-million-to-bring-travel-insurance-into-the-21st-century/> (accessed 23-12-2020)

**Table11: Notable Solutions**

No.	Solution	Company	Country	Outline
1	Hotbot.ai	Hotbot.ai	Russian Federation	An Automated, intelligent chat bot for hotels, it helps guests plan their stay, discover things to do, book activities and request personalized services. <sup>155</sup>
2	IZY.ai	IZY.ai	Indonesia	A mobile based concierge platform which helps hotel staff and guests to be communicate remotely during the stay. <sup>156</sup>
3	Vouch	Vouch	Singapore	An AI based app-less digital concierge services elevating guest experience and improving staff productivity. <sup>157</sup>
4	Pure wellness room	MORI TRUST CO., LTD.	Japan	Pure wellness room provides the peace of mind of being in the safest indoor environment through “7-Step Process cleaning operation and including some sanitized facilities.” <sup>158</sup>
5	Henn na Hotel	HIS Hotel Holdings Co., Ltd.	Japan	Providing a contact-less and exciting hotel experiment; for example, dinosaur robots or hologram play a human-less reception operation. <sup>159</sup>

◇ **[Example] Chatbot to save labor and reduce interpersonal opportunities (Vouch, Singapore)<sup>160</sup>**

The digital concierge system can respond to all kinds of inquiries and requests from guests (additional towels, room service orders, spa reservations, etc.).<sup>161</sup> Guests use their personal mobile device to access the bot by scanning the QR code or bringing their mobile phone closer to the NFC tag. “The bot can be updated as needed. When the COVID-19 crisis created the need to monitor the health of guests at the 790-room Pan Pacific Singapore, the luxury hotel added a self-reporting “health declaration” to its bot, so that it could keep tracking guests who were not feeling well without having to deploy a hotel staff<sup>162</sup>.

◇ **[Example] Accommodation service providing an attractive experience while reducing contact opportunities (Hen na hotel, HIS Hotel Holdings Co., Ltd., Japan)**

Different types of robots perform check-in procedures at each branch, realizing minimized contact operations between employees and guests at hotel facilities. In addition, various types of robots and holograms are used for non-personal check-in. The hotel has also incorporated the latest technologies including projection mapping on the floor and VR equipment rental/lease. They have provided a dual experience in prevention from the infectious virus and entertainment. Moreover, a video summarizing the measures against infectious diseases has been released to create a sense of security for travelers.

<sup>155</sup> Hotbot.ai, <https://hotbot.ai/en> (accessed 23-12-2020)

<sup>156</sup> IZY.ai, <https://www.izy.ai/> (accessed 23-12-2020)

<sup>157</sup> Vouch, <https://www.vouch.sg/?#/> (accessed 23-12-2020)

<sup>158</sup> MORI TRUST CO., LTD. (based on information collected through open recruitment)

<sup>159</sup> 変なホテルで安心＆楽しい STAY♪, HIS Hotel Holdings Co.,Ltd., <https://www.hennnahotel.com/special/goto2020/> (accessed 23-12-2020)

<sup>160</sup> Vouch's App-less Hotel Digital Concierge, Vouch, <https://www.vouch.sg/?/>(accessed 23-12-2020)

<sup>161</sup> Touchless tech: How hotels are preparing for a post-COVID guest experience, Phocus Wire, 2020, <https://www.phocuswire.com/contactless-technology-solutions-hotels-covid-19>

<sup>162</sup> Touchless tech: How hotels are preparing for a post-COVID guest experience, Phocus Wire, 2020, <https://www.phocuswire.com/contactless-technology-solutions-hotels-covid-19>

### 3) Other facilities (sightseeing facilities, restaurants, commercial facilities, etc.)

In order to realize the "continued growth", one of the main issues during travel is to add value onsite by utilizing digital technology, and the solutions contributing to are shown in Table 12 and Table 13.

#### Strengthening communication with tourists

AI chatbots or information platforms that instantly respond to a variety of inquiries are introduced in public places. Using these solutions, tourists obtain smoothly information about tourist facilities or how to respond to an emergency case. These also contribute to realize safety mind of travelers.

**Table12: Notable Solutions**

No.	Solution	Company	Country	Outline
1	Bebot	Bespoke	Japan	Travelers can ask this "AI concierge" service different questions and get useful information about sightseeing or COVID-19 information or emergency information. <sup>163</sup>
2	Zenner	Zenner	Israel	"AI-powered travel intelligence and assistance that keeps travelers safe, productive and feeling Zen" <sup>164</sup> .
3	INDIA ASSIST Travel	INDIA ASSIST	India	Online platform for foreign travelers who need any help that enables travelers to get 24/7 assistances from their call center. <sup>165</sup>
4	Explore Outing	Explore Outing	India	Online travel information platform that enables tourists to search and book tourism services and get some useful information such as road conditions or weather information. <sup>166</sup>
5	Mobile Spatial Statistics	DOCOMO InsightMarketing, INC.	Japan	Statistical population mapping based on mobile location helps tourists to avoid congestion. It is also useful for local government to build a tourism plan suitable for "New Normal". <sup>167</sup>
6	Journera	Journera	The United States	Their platform provides a secure, real-time data exchange and enables travel related companies to create seamless travel journeys. <sup>168</sup>
7	LIVE JAPAN PERFECT GUIDE	Gurunavi, Inc.	Japan	Tourism information platform service for foreign visitors to Japan. Shops and Facilities offer their own information by using this service. <sup>169</sup>
8	Smart Hospitality Service	NEC Corp.	Japan	It provides travelers with a contact-less "VIP-like" services from airport to hotel, including a prior hotel check-in at airport using face recognition tech and baggage transport service. <sup>170</sup>
9	Piri guide	Piri guide	Turkey	Online platform for digital tours through a self-guided mobile app, offering more than 3000 audio contents to our customers with 150 tours in 20 countries and 30 cities. <sup>171</sup>
10	3Cs Visualization Solution / Ventilation Visualization Solution	Asahi Kasei Corp.	Japan	Service to visualize that infection control measures are being adequately taken using video analyzing technologies and sensors. <sup>172</sup>

<sup>163</sup> Bespoke Inc, (based on information collected through open recruitment)

<sup>164</sup> Zenner, <https://www.zenner.ai/> (accessed 23-12-2020)

<sup>165</sup> INDIA ASSIST TRAVEL, India Assist, <https://www.indiaassist.com/travel-assist> (accessed 23-12-2020)

<sup>166</sup> Explore Outing, <https://www.exploreouting.com/about-us.html> (accessed 23-12-2020)

<sup>167</sup> DOCOMO InsightMarketing, INC., (based on information collected through open recruitment)

<sup>168</sup> Journera, <https://journera.com/about/> (accessed 23-12-2020)

<sup>169</sup> LIVE JAPAN PERFECT GUIDE, Gurunavi, Inc., <https://livejapan.com/> (accessed 23-12-2020) and information collected through open recruitment

<sup>170</sup> NEC Corp., (based on information collected through open recruitment)

<sup>171</sup> Piri Guide, <https://www.piriguide.com/> (accessed 24-12-2020)

<sup>172</sup> Asahi Kasei Corp., (based on information collected through open recruitment)

◇ **[Example] AI concierge to instantly respond to a variety of inquiries (BEBOT, Bespoke Inc., Japan)<sup>173</sup>**

Bespoke Inc. developed an “AI concierge” to effectively communicate with Japanese and foreign tourists in Japan in multiple languages. The service is available 24 hours a day in multiple languages on smartphones and able to inform tourist information, facility-specific questions and restaurant reservations instead of a real staff. Thus, eliminating queues and contributing to a stress-free experience for customers are possible. BEBOT has also been employed in airports around the world as a countermeasure for the pandemic. In Tampa international in the USA, it answers questions about COVID-19, including flight information, travel restrictions and screening procedures with a 96% accuracy.

◇ **[Example] Tourism information service for foreign visitors to Japan (LIVE JAPAN PERFECT GUIDE, Japan)<sup>174</sup>**

LIVE JAPAN PERFECT GUIDE provides a tourism information on website. The "individual" facilities and stores, which are the core of the culture and attractions of Japan, can disseminate information in real-time and in multiple languages for foreign visitors to Japan. This promotes the sustainability of tourist areas by supporting commercial establishments, restaurants, and tourist facilities that sometimes do not have the capability to transmit information to tourists. In addition to preliminary and detailed information, the website can also include information about the COVID-19. LIVE JAPAN PERFECT GUIDE has also started providing a service to produce "one-minute videos" of facilities and stores' activities related to the COVID-19 in Japanese and English, making viewers understand more easily. It can be utilized in an event of a disaster by providing information on disaster support that the facility wants to share with the visitors.

◇ **[Example] Service to visualize that infection control measures are being adequately taken (3Cs Visualization Solution / Ventilation Visualization Solution, Asahi Kasei, Japan)<sup>175</sup>**

This patented service uses live cameras and sensors to detect an airy environments (CO2 concentration, humidity, temperature) to deliver information via internet to end-users to check if a tourist facility is respecting “three Cs” principle. It would be an invasion of privacy with ordinary live cameras if a person's face is shown, but this service solves this problem by outlining the person. Another benefit is the Ventilation Visualization Solution, a small device equipped with a highly accurate ventilation monitoring sensor which visually shows whether ventilation is sufficient with an objective measure of ventilation. The device can be used for various purposes, for instance providing adequate ventilation in response to changes in conditions, or issuing alerts when necessary and showing the device to facility users, so that they can cooperate with ventilation and feel secure.

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<sup>173</sup> AI チャットボットで多言語対応, Bespoke Inc. , <https://www.be-spoke.io/jp/index.html/>(accessed 23-12-2020)

<sup>174</sup> 株式会社ぐるなび (LIVE JAPAN 事務局) (based on information collected through open recruitment)

<sup>175</sup> Asahi Kasei (based on information collected through open recruitment)

## Contributing to Sustainable Tourism through New Experiences

The use of digital solutions can help tourists to enjoy a more exciting tourism experience by providing information that promotes understanding of the community and contribute to the profitability of tourist facilities by improving the operational efficiency. Thereby, contributing to the sustainability of the region's tourism resources is possible.

**Table13: Notable Solutions**

No.	Solution	Company	Country	Outline
1	ON THE TRIP <sup>176</sup>	ON THE TRIP	Japan	Smartphone app providing tourists with audio guides of various sightseeing facilities for free. It contributes to increasing added value of these spots. <sup>177</sup>
2	GetYourGuide	GetYourGuide	Switzerland	Digital ticket and payment platform helping tourist facilities to create contactless operation. It also help them to monetize by supporting adopting dynamic pricing or priority admission. <sup>178</sup>

◇ **[Example] Smartphone app providing tourists with audio guides of various sightseeing facilities for free (ON THE TRIP, ON THE TRIP, Japan)<sup>179</sup>**

The smartphone application service allows tourists to listen to official audio guides of various facilities free of charge. In the COVID-19 situation, it has successfully increased the added value of tourist facilities and improved their attractiveness to tourists by utilizing contactless technology. The company ON THE TRIP also proposes to tourist facilities to increase an admission price because of the added value of providing free audio guides, and to pay a portion of the increased revenue to the company as income. In this way, the facilities are able to increase their income for capital investment, preservation qualities of the facilities, and to contribution to cultural establishment's sustainability.

In the midst of the COVID-19 crisis, people are looking for more engaging experiences when planning their travel. Therefore, in realizing the "continued growth," efforts are being made to improve the value of the traveler's experience in various ways. Tables 14 to 16 show examples of solutions for the tourism industry that utilize technology during travel. Many of them use "robotics," "AR/VR," and "gamification," thereby creating a new style of experience.

<sup>176</sup> WHO WE ARE, ON THE TRIP, <https://on-the-trip.com/en/> (accessed 23-12-2020)

<sup>177</sup> コロナ禍でも来場者増、経営難の観光施設を売上 11 倍に。スマホをガイドに地域のオリジナルを旅人視点で伝える ON THE TRIP の物語, 堀内祐香, やまごころ, 2020, [https://www.yamatogokoro.jp/inbound\\_interview/41041/](https://www.yamatogokoro.jp/inbound_interview/41041/) (accessed 23-12-2020)

<sup>178</sup> GetYourGuide, (based on information collected through open recruitment)

<sup>179</sup> コロナ禍でも来場者増、経営難の観光施設を売上 11 倍に。スマホをガイドに地域のオリジナルを旅人視点で伝える ON THE TRIP の物語, 堀内祐香, やまごころ, 2020, [https://www.yamatogokoro.jp/inbound\\_interview/41041/](https://www.yamatogokoro.jp/inbound_interview/41041/) (accessed 23-12-2020)

## Offering Attractive experience through the use of robots

The first solution is "the use of robots" in Table14. Examples illustrate how robots can be used to improve the value of people's experiences. For instance, communication robots are placed in facilities to help improve staff's work efficiency by reducing the number of opportunities to serve customers while allowing people to enjoy a fun experience. There are also cases where avatar robots are operated from a distance and placed in tourist spots allowing people to enjoy touring the place even when they are far away.

**Table14: Notable Solutions**

No.	Solution	Company	Country	Outline
1	Contact-free theater	CJ-CGV	Republic of Korea	CGV, a multiplex chain run by South Korea's entertainment giant CJ Group. Creating a completely contactless theater including a digital ticket solution and self-driving communication robots. <sup>180</sup>
2	New me	Avatarin	Japan	Communication robots that people can control remotely enables people to interact with each other despite the distance. <sup>181</sup>
3	Double3	Double Robotics	The United States	Self-driving, two-wheeled videoconferencing robot that revolutionizes the way you work or learn remotely. <sup>182</sup>
4	Communication Robot Sota	NTT EAST Corp.	Japan	Multilingual communication robot installed in tourist facilities providing tourism or transit information. <sup>183</sup>
5	Keenon Robotics	Keenon Robotics	China	Robots placed in hotels, restaurants, stores, etc., providing delivery and navigation services, equipped with multi-sensor fusion tech, voice recognition system and AI-interactive engine showing human-like emotions. <sup>184</sup>
6	Delitower <sup>185</sup>	Woowa Brothers	Republic of Korea	The country's top food delivery app owner developed a self-driving delivery robot that enable customers to order through a QR code, "and the robot, called Delitower, would pick up food from the restaurant or a delivery rider and bring it straight to the customer's location" <sup>186</sup> .

### ◇ [Example] Remote-controlled communication robot (newme, Avatar-in Inc., Japan)<sup>187</sup>

Avatar-in Inc. offers a remote-controlled communication robot, "newme", which enables users to experience "instantaneous movement" at tourist facilities, commercial facilities, cultural facilities etc. During a demonstrative experiment, people were able to connect to "newme" installed at distant sightseeing spots, commercial facilities or museums, etc., from their homes during times where it was difficult to go outside due to the COVID pandemic.

<sup>180</sup> Digitalized movie theater coincides with new contactless trend stemming from coronavirus, The Korea Times, ,2020, [https://www.koreatimes.co.kr/www/art/2020/04/689\\_288708.html](https://www.koreatimes.co.kr/www/art/2020/04/689_288708.html) (accessed 23-12-2020)

<sup>181</sup> Avatarin Inc., (based on information collected through open recruitment)

<sup>182</sup> Double3, Double Robotics, <https://www.doublerobotics.com/> (accessed 24-12-2020)

<sup>183</sup> NTT 東日本、みなとみらい駅で多言語対応ロボットによる観光・施設案内、トラベル Watch , <https://travel.watch.impress.co.jp/docs/news/1244136.html> (accessed 24-12-2020)

<sup>184</sup> Who are we? , Keenon Robotics Co., Ltd. , <https://www.keenonrobot.com/EN/About.html> (accessed 24-12-2020)

<sup>185</sup> Woowa Brothers corp., <https://woowahan.com/> (accessed 23-12-2020)

<sup>186</sup> "Armed with disinfectant and admonishments, South Korean robot fights coronavirus spread , Hyounhee Shin , REUTERS, 1 June 2020, <https://www.reuters.com/article/us-health-coronavirus-southkorea-robots/armed-with-disinfectant-and-admonishments-south-korean-robot-fights-coronavirus-spread-idUSKBN23816M> , (accessed 23-12-2020)

<sup>187</sup> Avatar robot, Avatar-in Inc., <https://avatarin.com/avatar/newme/> (accessed 24-12-2020)

◇ **[Example] Communication robots (Sota, NTT East, Japan)<sup>188</sup>**

A tri-lingual communication robot, “Sota” provides tourist, transit and facility information etc. in Japanese, English and Chinese languages. By talking to "Sota" or an operating tablet, tourists can get tourism spots and transportation. The result is displayed on the screen and is conveyed by voice message. The users can take the information home by scanning the QR code of the displayed information with their smartphone.<sup>189</sup>

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<sup>188</sup> みなとみらいエリアへの来訪者を対象に、多言語対応ロボットを活用した観光・施設等案内の実証実験を行います, NTT 東日本, <https://www.ntt-east.co.jp/kanagawa/information/detail/20200331.html> (accessed 24-12-2020)

<sup>189</sup> NTT 東日本、みなとみらい駅で多言語対応ロボットによる観光・施設案内, トラベル Watch, <https://travel.watch.impress.co.jp/docs/news/1244136.html> (accessed 24-12-2020)



## AR / VR solutions offering exciting experience to tourists

AR and VR technologies are drawing attention to increase people's immersion and enhance their engagement. VR spaces are used as a platform where people can communicate with each other despite the distance. Especially in tourism, it is used by tourists to learn about tourist attractions remotely and in an immersive fashion. It helps local supplier to monetize in such a travel restriction situation. There are also examples of AR used to create added value by making attraction tour more pleasing experiences.

**Table15: Notable Solutions**

No.	Solution	Company	Country	Outline
1	Digital Stamp collection Orienteering using AR tech	Ricoh Japan Co., Ltd.	Japan	Using its AR service called "RICOH Clickable Paper", it provides contactless digital Stamp collection Orienteering service. <sup>190</sup>
2	Louis Vuitton Travel book	Louis Vuitton & Google	France & The United States	Using Google's AR Technology, Louis Vuitton provides people with each cities' fascination more excitingly when reading "Travel Book". <sup>191</sup>
3	cluster	cluster	Japan	"cluster" is a Japanese Social Networking service on VR space. <sup>192</sup> In the COVID-19 era, cluster is used to create the "Virtual SHIBUYA". <sup>193</sup>
4	A hybrid retail platform using VR technology	ABAL	Japan	ABAL Inc. creates a retail area in their VR platform and invites people who sell local products in tourist areas to the VR area. Customers can interact with local people and buy products in the VR space. <sup>194</sup>
5	Remote Diving Tour in Hachijojima using underwater drones	JTB Global Marketing & Travel	Japan	Remote travel to "places where the human body cannot go" is provided by using 5G communication and simple terraforming technology (i.e. drones). <sup>195</sup>
6	Virtual School Trip 360	JTB	Japan	VR tour enables Japanese elementary school students to experience the charm of the local area more intimately, even though you have not visited it by accompanying conversations with local people and experiencing traditional culture and souvenirs. <sup>196</sup>
7	PORT	H.I.S	Japan	PORT makes online travel tour more exciting by helping customers to move camera devices attached tour guide and communicate with guide more easily. <sup>197</sup>
8	Providing new cultural asset exhibit style by 3D scan and VR tech	NTT DoCoMo	Japan	Reproducing cultural or Industrial heritages in VR space using 3D scan and digital archive technology. <sup>198</sup>
9	Skyzup	Skyzup	France	Providing VR 360° aerial images of different French islands and remote regions to motivate people to visit these places. <sup>199</sup>
10	Emirates airlines' 3D model	Emirates airlines	United Arab Emirates	Using VR technology, it provides 3D seat model and display an immersive 3D 360-degree view of the interior of their airplane on its website. <sup>200</sup>

<sup>190</sup> Ricoh Japan Co., Ltd. (based on information collected through open recruitment)

<sup>191</sup> TRAVEL BOOK SEOUL VIA GOOGLE LENS, Louis Vuitton, <https://eu.louisvuitton.com/eng-e1/magazine/articles/travel-book-seoul-google-lens> (accessed 23-12-2020)

<sup>192</sup> cluster, <https://cluster.mu/> (accessed 24-12-2020)

<sup>193</sup> 渋谷区公認、配信プラットフォーム「バーチャル渋谷」を5月19日からオープン, KDDI, 2020, <https://news.kddi.com/kddi/corporate/newsrelease/2020/05/15/4437.html> (accessed 24-12-2020)

<sup>194</sup> ABAL Inc., (based on information collected through open recruitment)

<sup>195</sup> JTB Global Marketing & Travel inc. (based on information collected through open recruitment)

<sup>196</sup> JTB Corp., (based on information collected through open recruitment)

<sup>197</sup> H.I.S. Co.,Ltd., (based on information collected through open recruitment)

<sup>198</sup> NTT Docomo Inc. (based on information collected through open recruitment)

<sup>199</sup> Skyzup, <https://skyzup.com/> (accessed 23-12-2020)

<sup>200</sup> "The Emirates Fleet in 3D, Emilates Airlines, <https://www.emirates.com/english/experience/3d-seatmap/> (accessed 23-12-2020)

11	SAUDIA VIRTUAL WORLD / ALFURSAN VIRTUAL WORD	Saudi airlines	Saudi Arabia	On its website, they provide VR technology-based 3D 360-degree view allows users to navigate through the Economy, Business and First-Class cabins <sup>201</sup> as well as in the Alfursan club lounge. <sup>202</sup>
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◇ **[Example] Virtual SNS (cluster, Inc., Japan)<sup>203</sup>**

cluster, Inc. has developed and been operating a virtual SNS service “cluster”. The application examples include the use of VR space to hold a Japanese animation event that was difficult to hold on-site due to the COVID-19 crisis. The company launched the “Virtual Shibuya” in the “Shibuya 5G Entertainment Project” involving 50 companies including KDDI (a Japanese telecommunications company) and the Shibuya City Tourism Association.<sup>204</sup>

◇ **[Example] A hybrid retail platform using VR technology (ABAL Inc., Japan)<sup>205</sup>**

ABAL Inc. creates a retail area in their VR platform and invites people who sell local products in the VR area where visitors can interact with vendors and buy products. They are planned to conduct a demonstrative experiment in cooperation with JR East Group at Tokyo Station in February and March 2021.

This service is expected to contribute to revitalizing local community by promoting the attractiveness of the local area more than before through purchase of local products and contact with local people in the VR space.

◇ **[Example] Virtual tour activity (JTB Group, Japan)<sup>206</sup>**

Remote travel to “places where the human body cannot go” is now possible thanks to 5G communication and simple terraforming technology (i.e., drones, underwater drones, radio-controlled cars, small satellites, etc.). JTB group uses a remote machines that can be controlled without delay and with high operability utilizing 5G communications (and in the future, carrier 5G) and provides an experience as if people were there while avoiding physical contact. Using underwater drones for a remote tour is another example. With these technologies, adding the value of “going where people cannot go” using 5G and drones are realized.

In the COVID crisis, JTB also developed a product called “Virtual School Trip”. The product enables students to experience beauty of the local areas more intimately by having conversations with local people and sharing traditional culture and souvenirs, even though they have not visited there.

<sup>201</sup> SAUDIA VIRTUAL WORLD, Saudia Airlines , <https://www.saudia.com/experience/explore/360-saudia-vr> (accessed 23-12-2020)

<sup>202</sup> ALFURSAN VIRTUAL WORLD, Saudia Airlines , <https://www.saudia.com/experience/explore/alfursan-virtual-world> (accessed 23-12-2020)

<sup>203</sup> cluster, Inc., <https://corp.cluster.mu/> (accessed 24-12-2020)

<sup>204</sup> 渋谷区公認、配信プラットフォーム「バーチャル渋谷」を5月19日からオープン, KDDI, 2020, <https://news.kddi.com/kddi/corporate/newsrelease/2020/05/15/4437.html> (accessed 24-12-2020)

<sup>205</sup> ABAL Inc., (based on information collected through open recruitment)

<sup>206</sup> JTB、リアルとVR融合の新感覚体験型旅行「バーチャル修学旅行360」発表, 観光経済新聞, 2020, <https://www.kankokeizai.com/%EF%BD%8A%EF%BD%94%EF%BD%82%E3%80%81%E3%83%AA%E3%82%A2%E3%83%AB%E3%81%A8%EF%BD%96%EF%BD%92%E8%9E%8D%E5%90%88%E3%81%AE%E6%96%B0%E6%84%9F%E8%A6%9A%E4%BD%93%E9%A8%93%E5%9E%8B%E6%97%85%E8%A1%8C-%E3%80%8C/>(accessed 24-12-2020)

✧ **[Example] Application providing 360° aerial images of virtually unusual place for trip motivation (Skyzup, France)**

Skyzup facilitates the preparation of trips to French islands or remote regions in the spirit of sustainable and local tourism through 360° aerial images offering viewers to virtually discover unusual places (i.e., rural areas and remote islands) and to motivate the choice of a trip.

✧ **[Example] VR solutions provided by airlines (Saudia Airlines<sup>207</sup>, Saudi Arabia / Emirates<sup>208</sup>, United Arab Emirates)**

These mid-east airplane companies provide VR based 360 degree view which are more immersive than photographs are introduced to show what it's like inside an airplane or lounge in advance in order to motivate people to use these airplanes.

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<sup>207</sup> SAUDIA Virtual World, Saudia Airlines, <https://www.saudia.com/experience/explore/360-saudia-vr> (accessed 23-12-2020)

<sup>208</sup> The Emirates Fleet in 3D, Emirates, <https://www.emirates.com/english/experience/3d-seatmap/> (accessed 23-12-2020)

## Provide new experience using “gamification”

Game-based solutions are also gaining extra attention to make tourist attractions more appealing. There have been some efforts to enhance the feel of an excursion by providing mechanisms for tourists to visit various facilities in game tricks. Tourism suppliers are able to use these solutions to improve the attractiveness of tourist destinations.

**Table16: Notable Solutions**

No.	Solution	Company	Country	Outline
1	Castle Revitalization Project	UM.Succeed,Inc.	Japan	Drawing for history lovers in the areas famous for historical tourism facilities, like Japanese traditional castles, through their smartphone orienteering game app “NIPPON SHIRO MEGURI”. <sup>209</sup>
2	“KASANE OSHI” Stamp collection Orienteering	Shachihata Inc.	Japan	Installing stamps to tourist facilities and motivating tourists to visit different places. It is a stamp rally where you can create a colorful work of art by stamping illustrations and photos in different colors, one color at a time, onto a base paper. <sup>210</sup>
3	Questo	Questo	Romania	City exploration games that helps travelers and locals explore destinations by going on tours in game form, called quests. Now it is available in 70 cities worldwide. <sup>211</sup>

### ◇ [Example] Platform for city exploration games (Questo<sup>212</sup>, Romania)<sup>213</sup>

Questo, a city exploration game platform, supports travelers and locals take a game-style tour to enjoy their destinations, also functions as a solution to combat COVID-19 pandemic using virtual technology. The participation of a local guide and tour operators are helping the platform expand into more cities. As of March 2021, the service is available in about 110 cities around the world. It allows travelers and locals to chase clues, solve challenges, explore destinations and discover new places and stories.

<sup>209</sup> UM.Succeed,Inc. (based on information collected through open recruitment)

<sup>210</sup> Shachihata Inc., (based on information collected through open recruitment)

<sup>211</sup> About us, Questo, <https://questoapp.com/about> (accessed 24-12-2020)

<sup>212</sup> Bucharest-based Questo raises €300K to grow its gamified tours fit for a post-COVID world, EU-Startups, <https://www.eu-startups.com/2020/07/bucharest-based-questo-raises-e300k-to-grow-its-gamified-tours-fit-for-a-post-covid-world/> (accessed 24-12-2020)

<sup>213</sup> Questo, <https://questoapp.com/about> (accessed 24-12-2020)

## **New MICE facilities and solutions corresponding to the COVID-19 pandemic**

The importance of MICE in tourism has always been emphasized. In the MICE business, online and hybrid forms have been attracting attention during the COVID-19 crisis. Studios specializing in hybrid forms of MICE, including ICT equipment and solutions to facilitate communication in hybrid forms, are gaining a reputation as the go-to technologies to realize the "continued growth."

**Table17: Notable Solutions**

No.	Solution	Company	Country	Outline
1	Hybrid event broadcast studio	Marina Bay Sands resort	Singapore	Marina Bay Sands Singapore launched a state-of-the-art broadcast studio designed for a hybrid meeting. <sup>214</sup>
2	Using TEMI for MICE operation	H.I.S. Co., Ltd.	Japan	Self-driving robot, called TEMI, have voice recognize function and can be controlled remotely. It is useful for contact-less MICE operation. <sup>215</sup>

✧ **[Example] A broadcast studio for hybrid event (Marina Bay Sands resort, Singapore)**<sup>216</sup>

In the COVID-19 crisis, the MICE industry shifted its focus to hybrid formats with both online and on-site participants. In order to achieve "continued growth," it is considered essential to provide suitable venues for hybrid events, which enhance the competitiveness of the MICE destination. For example, the Marina Bay Sands resort in Singapore set up a studio ideal for hybrid format events and has already started using it. In the space features a three-dimensional studio stage with an immersive backdrop. That is a suitable circumstance for hybrid form of MICE. In addition to the outstanding facilities, Sands has a pool of tech-savvy convention employees and they will support MICE organizers to hold their MICE smoothly. The studio already was used for some virtual events.<sup>217</sup>

<sup>214</sup> Marina Bay Sands launches industry's first hybrid event broadcast studio, Marina Bay Sands resort, 2020-  
<https://jp.marinabaysands.com/content/dam/singapore/marinabaysands/master/main/home/company-information/media-centre/Aug2020/marina-bay-sands-launches-industry%E2%80%99s-first-hybrid-event-broadcast-studio-14-Aug.pdf>, (accessed 23-12-2020)

<sup>215</sup> H.I.S. Co., Ltd., (based on information collected through open recruitment)

<sup>216</sup> Marina Bay Sands launches industry's first hybrid event broadcast studio, Marina Bay Sands resort, 2020-  
<https://jp.marinabaysands.com/content/dam/singapore/marinabaysands/master/main/home/company-information/media-centre/Aug2020/marina-bay-sands-launches-industry%E2%80%99s-first-hybrid-event-broadcast-studio-14-Aug.pdf>, (accessed 23-12-2020)

<sup>217</sup> Marina Bay Sands Gets Creative with Conventions, Debuts 'Mixed Reality' Studio, Casino.org, 2020,  
<https://www.casino.org/news/marina-bay-sands-gets-creative-debuts-mixed-reality-conventions/> (accessed 16-03-2021)

### 3.2.3. After-travel

The previous chapter illustrated the importance to understand how the travelers' dynamics during their travel where some prompt actions in the event of a COVID-19 cluster are necessary. However, even in normal times, from the perspective of customer relationship management efforts to deepen, maintain, and improve customer's perceptions while complying with each country's laws and regulations will have to continue to be strengthened. Table 18 shows examples of solutions that contribute to those efforts. These solutions provide a platform for two-way transmission of information between tourist attractions and travelers. Local suppliers can offer an attractive information to people who visited there in the past and enhance their engagement. These solutions also contribute stimulate people to travel again in the future.

**Table18: Notable Solutions**

No.	Solution	Company	Country	Outline
1	POPCHAT	POPCHAT,Inc	Japan	Data collection solution, through free Wi-Fi accessibility in an area or facility. When travelers connect to Wi-Fi, providers can collect users' information and can distribute advertisement during/after their travel.
2	QuaQua	QuaQua	India	An end-to-end travel platform from inspiration, to planning, booking, on the ground support and post-travel memories. <sup>218</sup>
3	Comprehensive Cooperation agreement for promoting DT in local area	JTB Corp., and salesforce.com Co., Ltd.	Japan	JTB and salesforce.com use Salesforce, an integrated cloud platform, to support the creation of digital businesses in local regions, focusing on the tourism business and collaborating with various service fields to develop sustainable local communities. <sup>219</sup>

◇ **[Example] Service that can acquire user information while providing free Wi-Fi in the community or in a facility (POPCHAT, POPCHAT, Japan)**

POPCHAT service provides free Wi-Fi network in an area or facility. A possible client of POPCHAT is a local Wi-Fi network provider; local government, hotel, restaurant and tourist facility. With this system, the provider can collect Wi-Fi users information (date, time, MAC address, gender, age, country, language, etc.) when they connect to Wi-Fi network. If a questionnaire function is added at the time of authentication of the Wi-Fi, more information can be obtained. For each segment of information obtained, it is possible to distribute advertisements later to "users with Wi-Fi connection experience," and there is also a function for targeting ads that can be expected to be relatively effective. Local suppliers using these functions improve a customer relation management process and after-travel marketing.

◇ **[Example] end-to-end travel platform that incorporates the entire life-cycle of a travelers (QuaQua, India)<sup>220</sup>**

"QuaQua is an end-to-end travel platform that incorporates the entire travel journey at a single place – from inspiration to planning, booking, ground support and post-travel

<sup>218</sup> QuaQua, <https://www.quaqua.com/> (accessed 16-3-2021)

<sup>219</sup> JTB とセールスフォース・ドットコム、地域 DX 推進のための『包括的連携・協力に関する協定』を締結, 株式会社セールスフォース・ドットコム, 2020 <https://www.salesforce.com/jp/company/news-press/press-releases/2020/08/2008261/> (accessed 25-12-2020)

<sup>220</sup> QuaQua, <https://www.quaqua.com/> (accessed 24-12-2020)

memories”<sup>221</sup>. The company is aiming to deliver real and immersive travel experiences, which inspire people to travel through storytelling. The company’s offers products for each travel phase (i.e., inspiration, planning, booking and profile).<sup>222</sup> This solution strengthens customer engagement and improves after-travel relationship between travelers and tourist destinations.

Nevertheless, there is still a much room for further development in methods to connect travel communication in the after-travel and creation of economic impacts such as revisits and consumption. Notably, the advancement of digitalization should be a key attribute to the scene. Although still at the experimental phase, some businesses are already utilizing VR to boost local tourism and to boost consumption, for instance, selling local products, enjoying local meals, and communicating with local people in a virtual space. In context of medium to long term, it may be desirable for local regions to increase the engagement of tourists after their travel to the tourist area by synergistically connecting with visitors online. This may raise the possibility of revisiting those regions in reality.

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<sup>221</sup> QuaQua: Your Go-To Place for Everything Travel, Insights success, 2020, <https://www.insightssuccess.in/quaqua-go-place-everything-travel/> (accessed 24-12-2020)

<sup>222</sup> QuaQua: Your Go-To Place for Everything Travel, Insights success, 2020, <https://www.insightssuccess.in/quaqua-go-place-everything-travel/> (accessed 24-12-2020)



## 4. Conclusion

According to Johns Hopkins University<sup>223</sup>, the total number of people have infected with the COVID-19 all over the world has reached about 119.5 million as of March 15. This means that the infection has spread to the extent that approximately one in every 100 persons worldwide has been infected. Though it has already been over a year since the COVID-19 outbreak, the prospects of the tourism industry are still unclear. However, various kinds of challenges, services and products have emerged to revive tourism exchanges, especially in countries and regions where the infection situation is relatively calm. Some of these efforts are described in this report. As the COVID-19 vaccination progresses around the world, it is expected that these efforts will move forward.

With the intention of contributing to the revival of tourism exchanges from the COVID-19 crisis, JTA is planning to hold a Tourism Ministers Meeting in 2021. In the questionnaire survey, JTA asked each country or region and international organization what topics would like to be discussed. The result of the responses was organized into the following topics.

- Building resiliency of the tourism sector
- Strengthening international and national co-ordination
- Develop sustainable tourism
- Digital transformation in tourism
- Safe and seamless tourism

The research result suggests that even though the geographical conditions and cultures are different, the problems are generally similar among countries and international organizations that are facing the common challenge of the COVID-19 and its devastating impact on the society. On this occasion, through sharing experiences and insights of dealing with the COVID-19 and working together to confront the obstacles in reviving tourism exchange, resiliency in the tourism sector is hoped to be efficiently and concretely strengthened. In addition, given the nature of infectious disease risks, it is essential that "leave no one behind," a key principle of the SDGs, in order to fully recover international tourism exchanges. It is also expected to advance and deepen sustainable tourism through solidarity based on the values of the SDGs.

The COVID-19 crisis have provided two things in the tourism industry. The first is "Time for introspection" and the second is "Opportunities for transformation based on the reflection". The process of reviving tourism exchanges from the disaster could be taken as the opportunity for the tourism industry to realize various changes. JTA will continue to devote themselves to maximize the opportunities through collaborating with the private sector and supporting their innovation. JTA sincerely hope that this research report will contribute to the advancement of the tourism industry.

In closing, JTA would like to pay our deepest respect for all people who are dedicated to revive tourism exchange.

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<sup>223</sup> COVID-19 Dashboard, Johns Hopkins University, <https://coronavirus.jhu.edu/map.html> (accessed 15-3-2021)



