THE FUTURE OF TRAVEL THROUGH THE LENS OF SUSTAINABILITY TECHNOLOGY HEALTH

FINN PARTNERS

JUNE 2020

THE FUTURE OF TRAVEL

Since time began, the human race has done its best to predict the future. From soothsayers to crystal balls, we've tried everything. Never more than in a time of crisis have we craved the power to know what's coming next and how we should prepare. This global pandemic is no exception.

Our industry, which is based on delivering joy and happiness to people and is a key source of income for millions around the globe, has been hit by the COVID-19 crisis like no other. Most countries have suspended or restricted travel for several months, even after countries start to open again, the situation will definitely not get back to what we used to identify as 'normal'.

The travel industry has endured many crises, from wars, financial crashes, natural disasters, terrorism and transportation tragedies – in communications, the risk register in travel is always high. But it has been universally

acknowledged that very few were adequately prepared for a pandemic as devastating as COVID-19. What we are experiencing now is unlike anything that has gone before, like the terror attacks of 9/11 and the ash cloud caused by the eruption of Eyjafjallajökull in 2010 – this is a crisis everyone is learning to navigate in real time and the longer the lockdown and travel limitations go on, the louder the questions of 'what next?' reverberate through every business connected to tourism.

What has started to become clear is that there is no straightforward answer and everything has become interlinked, travel cannot happen without developments in health. These developments are aided by advances in the world of technology and many are pointing to how all three industries, tech, travel and health will help to lead the way towards a more sustainably sound and socially aware global future.

Here at FINN Partners, we not only bring together specialists and highly trained travel & tourism professionals from all over the world, we are also in constant conversations with our colleagues from other fields and practice areas. As such, we can mine data across disciplines to see what impact developments in tech might have on sustainability as well as what medical advances will change how we open up to travel once more.

In this white paper, we invited three specialists to give us their views and provide us with some expertise to predict how the travel industry will adapt – from the standpoints of technology, sustainability and health – and illuminate a path to navigate through this global crisis towards our 'new normal'.

1. SUSTAINABILITY

By Jane P. Madden
Managing Partner, Global Sustainability & Social Impact

Jane leads FINN's Global Sustainability & Social Impact Practice and is a trusted advisor to Fortune 500 companies on sustainability strategy, integration and communications. She has extensive international expertise gained from working in more than 30 countries and as a World Bank official. Jane is a sought-after speaker on sustainability issues, particularly human rights, responsible & sustainable tourism and ESG disclosure. The International Institute for Peace through Tourism (IIPT) awarded Jane the Celebrating Her Award for her efforts in promoting CSR & Sustainability.

A POST-COVID-19 WORLD: RECOVERY AND RESILIENCY FOR A MORE SUSTAINABLE TRAVEL AND TOURISM INDUSTRY

FINN PARTNERS

Since global travel came to an abrupt pause as we work to prevent the spread of Covid-19, the travel and tourism industry has been working diligently to determine how it will come back economically while ensuring traveler and employee safety.

Changes are already taking shape. For example, airlines are changing their boarding practices to enforce social distancing. To help build trust and protect customer and employee safety, hotels, airlines and others will need to take even more drastic and innovative steps to adjust operations and communications.

While nobody has a crystal ball to predict the future, one thing we do know is that travel and tourism in its previous form will not exist, at least not in the near term. But the industry must rebound – too many national, regional and local economies and people's livelihoods depend on travel for their survival.

We also know that Covid-19 is not a stand-alone event. There will be other pandemics. There will be other global crises. Though we are enjoying a temporary respite from air and water pollution, climate change remains a global threat. The month of April was the warmest on record. With these considerations, the industry must be prepared if it hopes to grow and adapt.

But where to start? While emissions will ramp up as soon as the economy re-opens and there will be a heighted concern around public heath, there is a unique opportunity to drive investment in building a travel industry that is financially, socially and environmentally sustainable.

It's no longer a choice. As of early April, the World Travel & Tourism Council expect that the travel and tourism industry will experience spending losses up to $2.1 trillion by the end of 2020. The only way the travel industry can

protect itself from global disruptions is to build sustainability into the business at its core. Doing so now can:
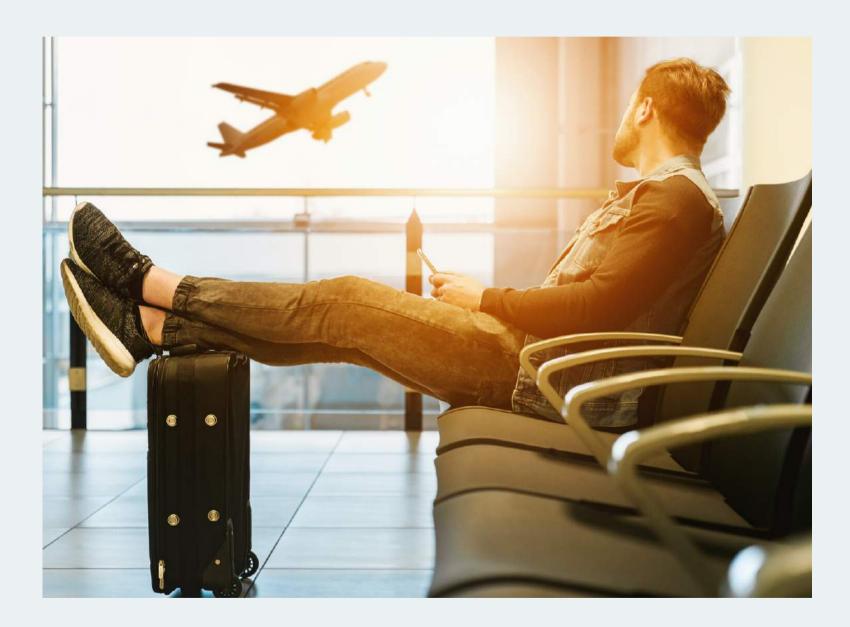
- Help the travel and tourism industry rebound more quickly
- Catalyze resiliency measures
- Position the industry as part of a solution for the global sustainable economic recovery, thus encouraging collaboration, partnerships and new business opportunities.

For these three things to occur, however, the industry must evaluate its practices now, build in environmental and social strategies and instill strong governance to implement and oversee these changes. This applies to each player -- including hotel chains, tour operators, tourism boards, individuals and governments – to ensure sustainability measures are enforced and communicated effectively.

CONSIDERATIONS FOR RECOVERY

- Flexibility is a critical element for the industry and the individual. First, the industry has a responsibility to build flexibility into business to accommodate for health or safety concerns to further build trust with travelers. Empathy, while not part of a traditional business model, here would be a tool to build trust. Secondly, travelers will need to be more flexible with their travel plans to protect themselves and others when issues arise, even if it comes with an increase cost.

- Once individuals arrive at their destination, it's also essential to consider and respect the health and livelihoods of the workers who make travel happen. Covid-19's economic impacts shed a light on how quickly people's livelihoods in the serviceindustry can be disrupted, which can aid in the communication about tipping and the treatment of staff.

- With attention being paid to improved environmental conditions, now is the time to educate individuals or for people to research setting a carbon budget and exploring carbon offsets.

- Lastly, it's critical that countries and attractions be accountable for treatment of communities and the environment. NGOs and media outlets have historically played an important role in educating the public about human rights and animal abuses tied to tourism. Tourism boards can forge deeper partnerships with these organizations to help identify and mitigate these issues.

LESSONS FOR RECOVERY: WORLD CENTRAL KITCHEN

World Central Kitchen, created and run by world-renowned chef José Andrés, was created to help address hunger and poverty in Washington, D.C. What first started as a local solution to a local problem, grew into a well-organized rapid response system to provide food relief and security following natural disasters around the world. The organization's most recent pivot to help people stranded due to Covid-19, health care workers and first responders, has made a huge impact in supporting communities.

World Central Kitchen's ability to be flexible has been key to the successful implementation of a three-pronged model that provides immediate relief and builds resilience:

- Meet immediate need by utilizing what is readily available and healthy while respecting the needs and aspects of local cultures,
- Build capacity to handle subsequent crises through professional training, and
- Foster resiliency by creating jobs and food security systems in distressed communities.

CONSIDERATIONS FOR RESILIENCY

Following the recovery phase, it is critical that businesses in the travel industry and tourism boards maintain the integration of sustainability to protect the business, employees, travelers and the environment on an ongoing basis.

Build Alliances: Public private partnerships can strengthen the industry's ability to mitigate immediate risk and improve the sustainability of the industry going forward. As climate change continues to be a global issue, partnerships can develop effective methods to manage water resources, reduce carbon emissions and shift to eco-tourism models that attract travelers more inclined to visit those destinations. Partnerships can also facilitate new travel models such as local rural tourism or experiential travel, which in the near term may take the place of international travel.

Integrate Flexibility: In addition to being a critical part of recovery, we must also create a system that allows individuals flexibility if they get sick or don't feel safe in the long-term. A more flexible system that addresses public health concerns

as well as other issues, whether it be a terrorist attack or natural disaster, benefits everyone. Though their cash flow may be less predictable, airlines should continue flexible rebooking and free cancellations and consider providing refunds instead of vouchers. Tour operators, hotels and attractions should also build flexibility into their bookings so that travelers feel more comfortable and trust that they can reschedule as needed. The insurance industry has an opportunity to provide insurance for a wider array of issues and honor claims more quickly and easily, further building trust in the industry writ large.

Maintain Vigilance: Developing a reactive crisis management strategy should not be limited only to the immediate aftereffects of a disruptive event. Vigilance and continued integration of sustainability measures through scenario planning is required to ensure we do not return to the status quo. Only when governments, NGOs, businesses and individuals integrate the new way of thinking about sustainable travel will the industry be able to stave an impact like the one being experienced from Covid-19.

LESSONS FOR RECOVERY: CAPE TOWN WATER CRISIS

To help spur community awareness and water literacy during the Cape Town water crisis of 2017/2018, the city aggregated data online about household water conservation via a City Water Map. In parallel with sophisticated climate modeling and scenario planning, this map was used as a "behavioral-change tool" designed to publicly recognize households saving water or overusing water, with the goal to normalize and incentivize water conservation among Capetonians. It not only provided a clear, transparent picture to the Capetonians themselves, but also for tourists and industry leaders who could log on and see the impacts.

When water restrictions were relaxed, the map was no longer used, but The Western Cape government still tracks and publishes the water levels within Western Cape dams online - updated multiple times per week. This helps hold the country accountable for the fact this very well could happen again.

In tandem with government efforts, the travel industry also played an important role in educating the public to change behavior. With strict water use limits, taking a bath was out of the question. One Cape Town hotel required guests insistent on taking a bath to carry a large rubber duck placed in their bathtub to the reception desk to exchange it for a bath plug. While "shame and blame" is not a rule generally followed in sustainability communications, in a serious situation such as the water crisis, it effectively sent the message that individual responsibility was critical to the success of the country's ability to mitigate the serious water scarcity.

Covid-19 and other global issues will continue to be a serious threat around the globe, so we may be seeing more tactics of publicly sharing information to encourage responsibility across the spectrum of the industry. Doing so can help foster a sustainable future for travel.

CONSIDERATIONS FOR RECOVERY

Combined with the heightened sensitivity around health and safety, there is an opportunity for responsible tourism to become the norm only if there's real commitment and leadership both by the private and public sector as well as individuals.

There are several strategies that should be integrated into business as any other financial or organizational decision to support both immediate recovery and lay the foundation for business continuity in the long run.

Mitigate Risk: Addressing immediate risks by providing masks and other health protocols for guests, shifting uniforms to Personal Protective Equipment (PPE), or limiting travelers helps protect guests and employees alike. For airlines, this could mean permanently getting removing the middle seat to encourage in-flight social distancing. Deep cleaning of aircraft and luggage will add hours to trips. We will see limits on the number of people allowed on planes, on trains, local public transport, security lines or in terminals. Health checks at departure and arrival will become the norm. Traditionally packed tourist centers will be limited. Masks in public spaces will be required for some time. It will require huge shifts in operations, investment, and communications; but change is necessary and critical for public safety and fostering a sense of security for travelers and the communities they visit.

Uphold Transparency: To build trust with both leisure and business travelers, who must feel safe about health and safety, communicating cleaning practices, making information about local health care centers available, and sharing warnings of potential risk are paramount. For example, similar to how many hotel chains over the last few years have increased communications about sustainability, such as options to pass on daily housecleaning to conserve water or installing refillable water stations, health information must be visible and easy to access can help customers understand the steps being taken and ease anxiety about potential risks.

Redefine Responsible Travel: With the current pent up demand, there is an opportunity for the industry now to help redefine what responsible travel means by educating individuals about personal responsibility and being respectful of the people, culture and our impact on the environment. The industry must also be part of this solution. While responsible travel may take various forms, several aspects are particularly relevant right now:

- **No travel when you are sick** should be the new standard, even if you only have a cold. There should be mandatory measures with enforcement, and it is incumbent on the individual traveler to comply with those measures to protect personal and public health.

2. TECHNOLOGY

By Dr. Karen Panetta

Karen Panetta is an IEEE Fellow and Dean of Graduate Engineering at Tufts University. From 2007 to 2009, she was the worldwide director for IEEE Women in Engineering and she is the editor-in-chief of the IEEE Women in Engineering magazine. She is the faculty adviser to the Tufts student chapters of both the Society of Women Engineers and the IEEE, and is founder of the nationally acclaimed Nerd Girls program, which promotes engineering disciplines to young students. She was awarded the 2013 IEEE Award for Distinguished Ethical Practices for exemplary contributions and leadership in developing ethics and social responsibility in students. She has received several NASA and National Science Foundation research grants, including the NSF CAREER Award. In 2011, President Barack Obama awarded Panetta the Presidential Award for Science and Engineering Education and Mentoring.

INVISIBLE TECHNOLOGIES MAKING IT POSSIBLE TO SEE THE WORLD

The integration of technology and travel isn't a new concept – but it is about to transform like no other time in our history. For the past decade, travel hubs and technology companies have been introducing new ways to keep us informed and safe, whether it is full-body scanners, text alerts on flight status and gate changes, facial recognition software or the approximate time your Uber or Lyft will arrive. Travel technologies keep us moving, updated and on a good day – safe and efficient.

That was before COVID-19.

Technology suddenly has a new travel mandate: keeping us healthy.

According to IEEE Fellow and Tufts University Dean of Graduate Engineering Karen Panetta, the world will eventually return to traveling once the pandemic eases restrictions on personal movement – but it is going to look and feel very different, even if you never notice the intricate system of technology making it all possible. At the same time, visible changes will be taking place as airports in major cities are experimenting with new advancements such as thermal cameras and sanitation booths.

In Dr. Panetta's opinion, social distancing guidelines at airports – known to be crowded and congested – will usher in new methods for using technologies to manage travelers, their possessions and the physical buildings surrounding them. Touchless and contactless guidelines and consumer preferences will stimulate the need for new business models to be deployed, permitting travelers to safely interact with the world around them.

At the center of this dynamic change will be core technologies of artificial intelligence, machine learning and sensors.

The history of artificial intelligence and sensors can be traced back to the last century, evolving in accuracy and adoption for a wide range of industrial, medical and analytical purposes. Today, their functionality and affordability are ready to meet the demand for traveling in the post COVID-19 era. What could those technology scenarios be like? Dr. Panetta explains:

- Intelligent Airports
- Beyond Crowd Control
- What's Next

INTELLIGENT AIRPORTS

Get ready for a contactless future of travel and a much more robust approach to airport scheduling. Airports are famous for long lines, so keeping people at recommended distances may mean that arrival times are far more staggered, as you arrive at the airport and board an aircraft.
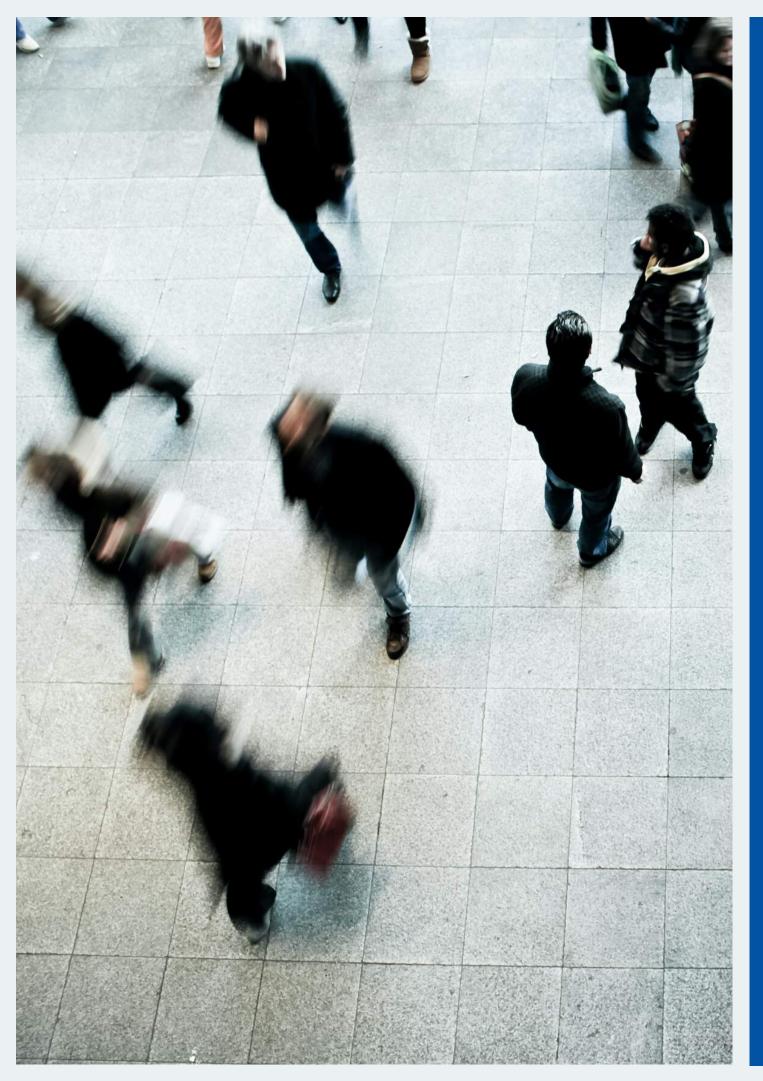
For those travelers who may have already been wary about germs, there will be new technology-enabled solutions to move them through airports – touching the least number of surfaces and items as they go.

For example, rather than practicing social distancing while waiting in line for your morning coffee, artificial intelligence systems – with the power of cloud computing - can monitor when you enter the airport, or exit a flight, and start fixing your drink according to your personal preferences. Perhaps the gate you normally use is busy? Your smart phone may overlay with an augmented reality app to re-route you faster to another part of the airport. You'll pay for the coffee right on your app, too. No waiting; no contact; perfect coffee.

Airport services – restrooms being a main concern – will also begin to change. Savvy travelers already know how and where to find the cleanest or least busy bathroom in their airports. But those signs that to used inform travelers about the "last time a restroom was cleaned" have been rendered insufficient. Post pandemic traveling means that cleaning and sanitation of airport restrooms will be critical, and Dr. Panetta believes facility or maintenance managers will begin to deploy new artificial intelligence and imaging systems to monitor the

cleanliness of shared spaces and restrooms. Motion sensors can even be used to inform that airport's intelligence system to adjust, in real-time, cleaning schedules based upon crowds or foot traffic patterns. Dr. Panetta believes we can expect that same system to automatically alert travelers to the nearest facilities that have been recently sanitized.

BEYOND CROWD CONTROL

Sensors will also be used to monitor the airport climate to keep travelers as safe as possible. Scientists continue to study the spread of the novel coronavirus, including the role that heat or humidity plays in its transmission. This means sensors will monitor the weather and atmospheric conditions in our world's airports – which vary greatly – adjusting temperature settings where necessary and possible. According to Dr. Panetta, it is one more layer of an integrated technology system that can contribute to the overall safety measures and personal protection.

What you carry with you will also matter more than ever and machine learning will look at the best configuration for matching travelers with their bags. Rather than waiting at the baggage carousel, there may be a sanitized locker where you can find your suitcase. Or, perhaps luggage from the same flight doesn't all go to the same carousel. Travelers may prefer to start protecting their baggage with an extra layer of plastic or similar covering. Does that protective cover stay on a suitcase or does it get thrown away? If the latter, how will airports start to adopt additional cleaning and trash removal measures to handle all of this new material? With more items to manage, track and clean – sensors and artificial intelligence will play an increasingly critical role.

WHAT'S NEXT

Two vital issues need to be addressed for this safer state of future travel: integration and compliance. Dr. Panetta said both can be solved, again, with the right technologies.

Travelers are already accustomed to enjoying some level of efficiency and connectivity between their flight, hotel or car reservations. What's missing is extending that same end-to-end experience for the entire travel journey. Artificial intelligence and machine learning systems must be fully integrated with all airport operations to truly protect travelers, and this does not currently exist.

Compliance will be accomplished on two different levels – personal and technological. Individuals will be expected to meet whatever local health guidelines exist for social distancing or personal protective equipment in the world's airports when they travel. Social norms and behaviors will have to adjust for the safety of everyone and the most vulnerable among the world's populations, especially for those who travel.

To ensure an airport is compliant in the way it is tracking travelers and all safety procedures, data from motion sensors or even telepresence robots will be constantly collected and analyzed. Imaging systems can monitor travelers or traffic patterns. AI will always be looking at best possible configuration within our airports at any given time. Dr. Panetta admits this monitoring may seem scary or intrusive, but that ultimately, it will become as routine as removing your shoes.

As the world gets back to travel, the obvious changes to our airports will be those that are visible – a new seating configuration, temperature checks or sanitizing booths. Just as important, the invisible technological ecosystem that connects and supports these advances will be there too. You may not always see them, but their presence will allow us to continue to see the world, and, each other.

3. HEALTH

By James E.K. Hildreth

Dr. James Hildreth is the President/ CEO of Meharry Medical College, located in Nashville and the largest historically black academic health sciences center in the US. He received his training at Harvard, Oxford and Johns Hopkins Universities and served on the Johns Hopkins and University of California, Davis faculties before coming to Meharry. A world-renowned infectious disease expert and HIV researcher, he is a leading national voice on COVID-19 and its outsized impact on people of color.

SCIENCE MUST INFORM TRAVEL "AFTER" COVID-19

As a scientist, I have devoted my career to understanding and working to mitigate infectious diseases. Thus, I approach the subject of "after" COVID-19 travel from the lens of public health.

COVID-19 is likely to be not the only pandemic many adults will face in our lifetimes. As humans travel to and explore new habitats, they inevitably encounter new pathogens. The world has become smaller, and the population has become larger. We are more connected than ever before. With the incredible increase of global travel comes pandemic risk—as we have seen with the emergence of new viruses every decade in the recent past. We would be wise to seize this unprecedented moment to make scientifically informed, far-reaching changes to the way we travel for the sake of worldwide health.

The good news is that the research community has made great advances toward developing vaccines rapidly. Many are hopeful that we'll find ourselves face-to-face with a vaccine in 18 months. I share this hope, but I also look to the past to see what science can teach me. The quickest vaccine, for Ebola, took seven years to develop. Others took 100+ years, and still others, like HIV, have been under research for decades with few promising answers.

Still, I remain hopeful — as do many scientists — that the continued development of our processes and our incredible access to super computers and other technologies will result in a successful vaccine candidate soon. But we don't just need a vaccine. We need one that works and is widely available for all members of our society. Until that is the case and we reach herd immunity of 70% of the population

exposed to COVID-19, societies cannot in good conscience resume "life as usual"—and travel as usual — knowing what we do about this virus. With this in mind, we must reframe the question of what travel and other aspects of our everyday lives will look like "after" COVID-19. Until we have a vaccine in hand, there is no such thing as "after."
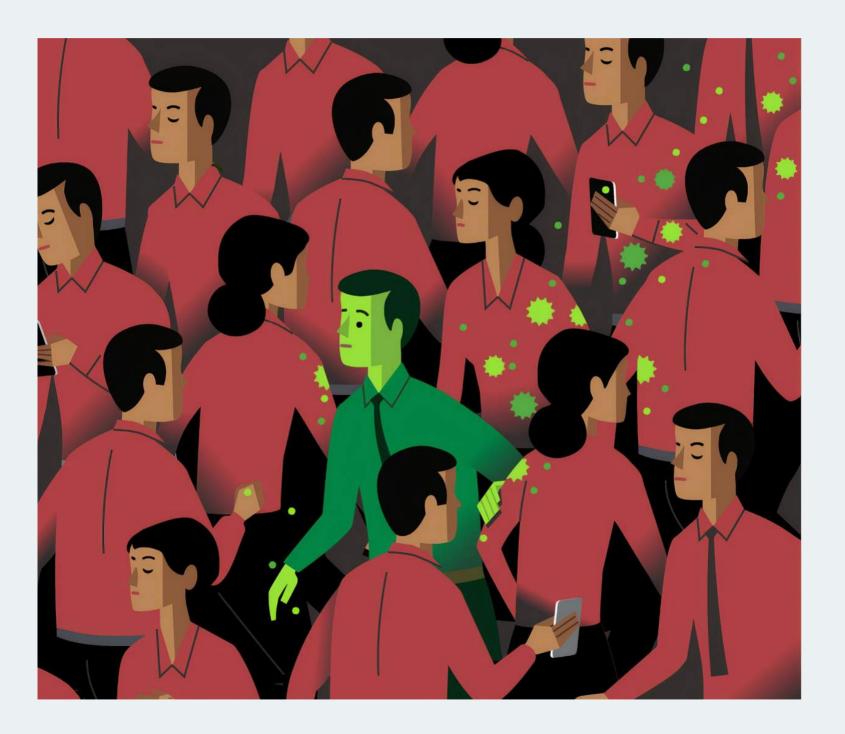
HUMAN AS VECTORS

One of the most concerning aspects of COVID-19 is that four out of five of those who are infected caught the virus from asymptomatic carriers. What the mosquito is to malaria, humans are to COVID-19. People are the vectors, or carriers, often unknowingly. Research tells us that every person infected with COVID-19 could infect up to four more individuals. At that rate of spread, the number of people infected could possibly double every six days. The math leads us to the simple conclusion that after 60 days, one person could be responsible for a million infections.

A "safe to travel" certificate for those who have developed antibodies to COVID-19 seems like a good idea in theory, but the science is just not there yet. At this time, researchers are still fine-tuning testing, and without accurate tests, we cannot ensure safety — for the individual or those they will encounter. And with a pandemic, a false sense of security can have deadly and far-reaching consequences.

I would like to underscore that these assertions are not speculative. They are backed up by rigorous research conducted by scientists like myself — individuals deeply concerned about public health and committed to protecting it.
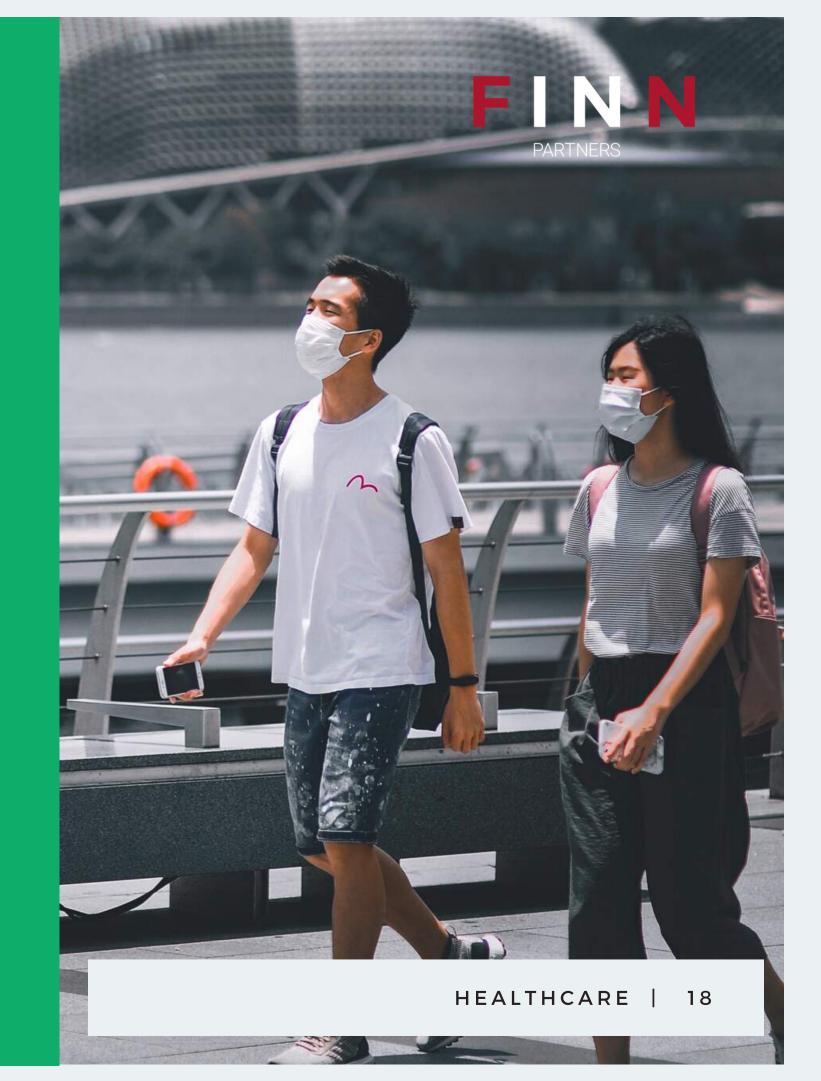
TRAVEL INFORMED BY SCIENCE

Humans rely on science to make thousands of conscious and unconscious decisions every day. We trust the laws of physics for our very movement, never questioning if gravity might release its grip. The laws of nature govern our calendars — we accept that the sun will continue to predictably rise and set. If we have a deep wound, we stop the bleeding — never wondering if we should let it run its course. Whether we consider it or not, scientifically proven facts guide our actions and protect our lives all day, every day. When we base our decisions on tested and trusted knowledge, we are free to live more fully — and safely.

The same goes for pandemics and the spread of infectious disease. With COVID-19, our global population has embarked on a collective crash-course in virus transmission. The importance of hygiene and personal protective equipment is inarguable. Our understanding of how COVID-19 is transmitted—and what we can do to prevent it—is concrete. With that knowledge comes incredible responsibility for governments, businesses, the scientific community and individuals. We are responsible for protecting ourselves, and we are responsible for extending that protection to others.

Some of the most memorable early news coverage of COVID-19 involved cruise ships on blue seas; their idyllic environments a stark contrast to the terror onboard as the virus ran rampant. We will not soon forget the global biotechnology conference in Boston, where ideas were shared along with the invisible illness. I believe these recollections will inform how we think about travel for years to come.

The verdict is out on how the leisure and business travel industries will adjust their practices as we navigate this global pandemic. My great hope is that those industry leaders will go back to their boardrooms with a heightened understanding of and respect for the scientific facts and basic truths of pandemics. Armed with that knowledge, they will be better equipped to begin imagining a new and safer future for travel.

CONSUMER ACTIONS SPEAK VOLUMES

From a public health standpoint, it is unthinkable for a business to ask employees to work in conditions where they are unable to protect themselves or others. With hospitals, government agencies and the food industry still scrambling to find and stock sufficient masks, guards, gloves and disinfectants, one can only expect that the travel and entertainment industries will face similar hurdles.

Polling data recently released by The Washington Post and the University of Maryland reveals that most Americans are in favor of a cautious approach to reopening businesses. Seventy-four percent of those polled opposed reopening dine-in restaurants and 82 percent were against allowing movie theaters to resume showings. These numbers are similar for consumers in states with strict and loosened regulations.

If Americans will stay the course with CDC recommendations such as social distancing, wearing masks in public and handwashing, we stand to save an untold number of lives. Let me be very clear—we are nowhere near close to "after COVID-19" until a vaccine has been discovered and herd immunity is achieved. The poll numbers tell me that American citizens have accepted this reality. Their actions will determine how businesses respond.

As consumers, we must remember that we do not have to patronize a business or industry just because it is reopening. I encourage those in my circles to tread carefully, only supporting businesses demonstrating adherence to research-based practices. Particularly for non-essential endeavors such as travel and entertainment, the onus is on businesses and consumers to do their respective parts. Businesses are tasked with making every effort to protect employees and customers, and customers have a social responsibility to return the favor.

These are unprecedented times, and we are all being called to higher standards. My hope is that scientific knowledge and a unifying sense of community responsibility will catapult us into a new era of ethical travel. Only by embarking on that journey with a strong grip on the facts and science, can we confidently and cautiously move forward.

ABOUT FINN PARTNERS, INC.

Founded in 2011 on the core principles of innovation and collaborative partnership, FINN Partners has more than quadrupled in size in eight years, becoming one of the fastest growing independent public relations agencies in the world. The full-service marketing and communications company's record setting pace is a result of organic growth and integrating new companies and new people into the FINN world through a common philosophy. With almost 800 professionals, FINN provides clients with global access and capabilities in the U.S., Europe and Asia. In addition, FINN provides its clients with access to top tier agencies around the world through its membership in the global network PROI. Headquartered in New York, FINN's other offices are located in Boston, Chicago, Detroit, Hong Kong, Fort Lauderdale, Frankfurt, Jerusalem, London, Los Angeles, Munich, Nashville, Paris, Portland, San Francisco, Seattle, Shanghai, Singapore and Washington D.C. Find us at finnpartners.com and follow us on Twitter and Instagram at @Finnpartners.

For more insights, please contact:

DEBBIE FLYNN
Managing Partner, Global Travel Practice Leader
debbie.flynn@finnpartners.com